

Stuttering in L1 and L2

Karen Takizawa

二カ国語使用者の吃音

滝 沢 カレン

吃音については、原因やその矯正についていろんな考え方がある。原因は環境と体質との複雑な要因が関わっているように思われるが、いまだ明確な定説はない。このレポートでは、まず母国語の吃音についての種々な学説や矯正法を紹介し、次に、二カ国語使用者の場合を調査した。吃音者が、外国語を話すときどうなるであろうか。同じようにどもるであろうか。この調査の結果、外国語を話す際には同じようにはどもらないことが分った。さらにいくつかの二カ国語使用者のケーススタディー（イギリスとイスラエルにおける二カ国語併用の吃音児のケース、アメリカ、インド、ナイジェリアにおける二カ国語を併用する成人吃音者のケース）を検討し、吃音の本質に迫りたい。

Introduction

Fluency is the *flow* of speech. In order to clearly convey meaning, the flow of speech should be neither distorted nor interrupted. For the most part, human beings become fluent speakers of at least one language in the first few years of life. People who have difficulty maintaining the necessary flow of speech are referred to variously as stutterers, stammerers, or the disfluent.

What happens when a stutterer is dealing with more than one language? Does he stutter in his first language (L1) and his second language (L2) in exactly the same way? In this report, the causes of stuttering and some case studies of stuttering in bilinguals will be discussed.

Part 1 : What is stuttering ?

Basically, it is not known exactly why people stutter. In fact, there may be nearly as many theories about and therapies for stuttering as there are stutterers. At the root of the controversy is the question of whether stuttering is of a psychological or neurological nature. However, the following general statements can be made :

- Stuttering has been mentioned throughout history in all languages and all cultures.
- Approximately 1% of any given population stutters.
- There are approximately three male stutterers to every female stutterer.
- The onset of developmental stuttering is most likely to occur between ages two and five, but it may occur at any time during childhood, from the beginning of multiple utterances (eighteen months) to puberty (eleven or twelve years old).
- For the vast majority, stuttering begins in childhood under quite normal conditions of living and communicating without any apparent link to a conflict, illness, shock, frightening experience, or other stutterer to imitate.
- The location of stuttered disfluencies is not random. It has been observed that adults stutter more frequently a) on consonants, b) on sounds in word-initial position, c) in contextual speech (rather than on isolated words), d) on nouns, verbs, adjectives, and adverbs (rather than on articles, prepositions, pronouns, and conjunctions), e) on longer words, f) on words at the beginnings of sentences, and g) on stressed syllables.
- Identical twins show a higher incidence of stuttering than fraternal twins, which indicates a strong genetic component.
- Different stutterers can stutter for different reasons, a fact that accounts for much of the conflicting data in the speech literature.
- Nothing like stuttering has been observed in animals.

Stuttering is not simply a disorder of making sounds, but a problem related to using spoken language in meaningful communication. Everybody stutters at times, especially when they are confused, hurried, or upset. To the listener, it is the amount of disfluent speech that separates the normally disfluent from the stutterer. Before we

consider abnormal disfluencies, let us take a look at some examples of normal ones :

- Part-word repetition ki-kind
- Single-syllable word repetition I ... I want some.
- Multisyllabic word repetition Mommy ... Mommy is over there.
- Phrase repetition I want ... I want a hamburger.
- Interjection He had a big ... uh ... dog.
- Revision-incomplete phrase I can' t find my ... When are we going ?
- Prolongation I like teeeeelevision.
- Tense Pause Can I go to the (lips together ;
no sound coming out) movies ?

There is a non-fluent stage in the normal speech development of many preschool children. This usually takes the form of repetition at the beginning of words. Older children who are normally disfluent are more likely to show revisions and multi-syllable whole-word repetitions. Part-word repetitions, prolongations, and tense pauses are more characteristic of stuttering children. Peters and Guitar estimate that the average normally disfluent preschool child has about ten disfluencies in every one hundred words spoken, mostly interjections, revisions, and word repetitions. The normally disfluent do not exhibit secondary escape or avoidance behaviors or experience the frustration or embarrassment due to their disfluencies that the stutterer is prone to.

We live in a verbal world. There is no doubt that stuttering has a tremendous emotional impact upon a person's life, because debilitated speech severely restricts freedom of communication. The accompanying emotional pain generates feelings of inferiority, frustration and isolation, resulting in frequent periods of self-doubt, insecurity and unhappiness. For the stutterer who lives in constant fear of stuttering, the simplest interactions, such as asking for information, using the telephone, or reading aloud in class, can be fraught with difficulties. There is little doubt that education, personality development, and social involvement are all affected by disfluent speech.

Environmental and Constitutional Factors in Stuttering

Historically, most research on stuttering has concentrated on the outward aspects of stuttering, i.e. the disfluencies in the stutterer's speech and the stresses in the stutterer's environment. In the 1940s and 1950s, for example, the Diagnosgenic Theory, developed by Wendell Johnson at the University of Iowa, was the most widely accepted explanation of stuttering. It was a strong indictment of environmental factors in the onset of stuttering, which placed the blame solely on the negative reactions of parents and other listeners and implied that constitutional, or physiological, predisposition played little part. Recently, however, more research has been done within the domain of neuroscience, and stuttering is now being looked at as a problem of motor control. Stuttering (along with asthma, migraine, and certain other disorders) is being seen as the result of both constitutional and environmental factors acting together, with elements of chance thrown in. Rather than causing stuttering, environmental factors precipitate, or maintain, the abnormal disfluency.

Stuttering may result from irregularities in the brain itself. Observations of language changes in stroke patients in the mid-nineteenth century by French neurologist/anthropologist Paul Broca and German neurologist Carl Wernicke were particularly important in the study of the neural basis of human language. The human brain is divided into two hemispheres. For most functions, the right hemisphere controls the left side of the body, and the left hemisphere controls the right side of the body, but the neural mechanisms for language are usually lateralized to one hemisphere. For most people, it is the left, and this is designated as the dominant hemisphere. Another feature of this model is that only certain areas of the dominant hemisphere, which have been named after Broca and Wernicke, are important for language. The following functions are thought to be lateralized to the dominant (usually left) hemisphere :

- Spoken and written language output.
- The ability to organize material in sequences and the control of sequential movements.
- Recent verbal memory.

The following functions are thought to be lateralized to the non-dominant (usually

right) hemisphere :

- The ability to relate the body image to things in space.
- The ability to manipulate objects in space,
- Recent memory for spatial tasks.

A relationship has been found between language lateralization and handedness. Almost all right-handed people, and about 70% of left-handed people, are left-brain dominant for language. The remaining 30% of left-handers are almost equally divided between those who are right brain dominant for language, and those who have bilateral representation for language. The ratio of left-handers is proportionally higher among stutterers, and dysphasic and learning disabled children, and there is some evidence that certain disorders of language, particularly stuttering, may be more frequent in the group with bilateral representation.

Many predominantly-male disorders, including stuttering, dyslexia, and autism, are the result of a delay in left hemisphere growth during fetal development. This delay is thought to be caused by a male-related factor, such as the hormone testosterone. Other conditions that could delay the development of left hemisphere speech and language structures are genetic inheritance and brain damage (from slight to severe) before, during, or just after birth.

In explaining possible constitutional bases for stuttering, Peters and Guitar use the metaphor of an inefficient telecommunications center. There will be problems, particularly in times of stress or excitement, if the equipment is put into a room that is still under construction (an immature left hemisphere), if it is put into a room that was designed for another purpose (the right hemisphere), or if it is divided between two rooms (bilateral representation in both the left and right hemispheres). Anything that creates uncertainty and insecurity in a vulnerable child may result in less efficiency in the telecommunications center and result in fluency breakdowns. Following this analogy, children who begin to stutter because of the slower development of their left hemisphere may seem to spontaneously recover when their left hemisphere development catches up. Stuttering may also be the result of a breakdown in the efficiency of the nested feedback loops that exist between the ear, the vocal organs, and the brain. Speech is a motor act which requires coordination between the laryngeal, respiratory, and articulatory motor systems. It involves a complicated series of events between input and output, offering a number of possibilities for breakdown and error. Recent

studies have shown that stutterers, no matter why they stutter, have an abnormal speech-motor control system, and are unable to make appropriate motor adjustments at the rate required for normal speech. Because auditory feedback also plays an important role in speech production, auditory dysfunction in stutterers has been suspected for the following reasons :

- Fluent speakers become disfluent when listening to their own speech on a delayed auditory feedback machine.
- Many stutterers become fluent when their own speech is masked by broad-band noise.
- The quality of the speech of people who become totally deaf changes.
- Damage to auditory cortex connections can result in the disappearance of stuttering.

Stuttering Therapy

Clear, fluent speech has been a prized human characteristic since ancient times. Demosthenes, for example, the third century B.C. Athenian statesman, was described by Plutarch in his *Parallel Lives* as having had “an inarticulate and stammering pronunciation.” So great was his desire to prosecute the guardians who had cheated him out of his inheritance that he exercised his voice by speaking with pebbles in his mouth, recited poetry while running, and practiced speaking in front of a mirror. He was able to overcome his stutter, and he went on to become Athens’ most famous orator.

Over the centuries, speech therapists have come up with more methods for treating stuttering than any other speech defect. The recorded failure rate has also been high, possibly due to the great variety of opinions as to the nature of the problem. Modern treatment programs generally include a preliminary assessment battery, which might include reading aloud, describing a picture, and conversing with a previously unknown person. All of these speech samples are recorded on audio and/or video tape. They are later analyzed for the number of disfluencies, the percentage of disfluencies, repetitions and prolongations (both silent and audible), and associated secondary behaviors. These tests are then used to design a program of therapy which will aim for either helping the client “speak more fluently” or “stutter more fluently”, taking into consideration the severity of the stutter and the client’s age and personal-

ity, and may include counseling for psychological problems.

It is important for the therapist to establish a good relationship with the client and show by her behavior that stuttering does not bother her. The stutterer will need help in identifying the core behaviors, secondary behaviors, and feelings and attitudes that characterize his stuttering. If the stutterer is to change, he must become aware of what to change. Clinical activities include oral reading, discussion, modeling of stuttering behaviors by the therapist, self observation in a mirror, and audio and video recordings. During therapy sessions, the therapist should at all times be warm, understanding, and accepting of the client's stuttering behaviors and feelings. However, the therapist should also be confronting and challenging when she thinks the stutterer is avoiding facing certain aspects of his problem. This will help the process of desensitization.

There does not seem to be a particular stuttering type of personality, though stutterers are frequently low in self-confidence and self-esteem. People who view stuttering as a sign of a weak character which prevents them from attaining their full potential, who are depressed, feel generally inadequate, or are socially alienated will need to re-evaluate their own self-image if they are to put themselves wholeheartedly into improving their speech. Therapists can expect more improvement from clients who are highly motivated, willing to participate actively in therapy, and are open to change.

One of the aims of therapy is to give the client sufficient experience in producing fluent speech. Counter-conditioning in speech treatment includes a carefully constructed hierarchy of people and situations where the client was previously disfluent. Associating fluent speech with many situations helps to counteract the previous conditioning and prevent these stimuli from triggering disfluency, frustration, and the tension response. It has been found that stutterers become more fluent under the following conditions :

- speaking when alone
- speaking when relaxed
- speaking in unison with another speaker
- speaking in time to a rhythmic stimulus (metronome)
- speaking in another dialect
- speaking while simultaneously writing

- speaking in a slow, prolonged manner
- speaking under loud masking noise
- speaking while listening to delayed auditory feedback
- speaking to an animal or infant
- when repeating after another speaker
- when singing
- when swearing

In addition to working with the client, the therapist must also work with parents and other important people in the child's life. They need to be aware of the fact that most children who will become stutterers are probably affected by environmental pressures. Typically, these are attitudes or events that occur in their homes, for example, a listener's critical reaction when they are speaking slowly and haltingly, or unrelieved sibling rivalry. In dealing with stuttering, the important factors in their child's environment that could be contributing to his problem need to be identified, along with possible predisposing constitutional factors. It is important for parents and other important people in the child's life to realize that they can be a crucial influence in helping the child respond to the stuttering in such way that it becomes no more than a minor problem.

Part 2 : How do studies on bilingual stutterers confirm observations on monolingual stutterers ?

In this section, young bilingual stutterers in Britain and Israel and adult bilingual stutterers in the United States, India, and Nigeria will be discussed. In all cases, English is the L 2.

The Languages of Asian Immigrants and English in Britain

Milloy wrote about the incidence of stuttering reported by speech therapists in Leicester, England. During the 1960s, the overall incidence of child stutterers in the area fell dramatically, possibly due to the more relaxed attitudes of British parents at that time, which removed some of the pressures that had previously triggered stuttering in children predisposed to stutter. In contrast to this, in recent years there has been

a remarkably high incidence of stuttering in the children of Asian immigrants, whose families have very high expectations for them, educationally and culturally, and who may have exerted sufficient stresses on them to activate stuttering in those children predisposed to it.

Duncan reported on a similar situation in Manchester, England, where 3.35% of the total population have household heads born in Pakistan, India, or Bangladesh. Within central Manchester, there is a higher density of Panjabi/Urdu-speaking Pakistanis and Panjabi-speaking Indians, and pre-school children from this population make up approximately 25% of the total referrals for speech therapy. Therefore, a special clinic for Panjabi/Urdu-speaking children was considered necessary. When seen by speech therapists, the majority of these preschool children are primarily monolingual in their first language. They have received passive exposure to the L2, but it is generally not spoken directly to them.

When a child or adult is referred for speech therapy, the stages of case-history taking, assessment, and therapy must be gone through, but in both of the client's languages, which often requires assistance from someone who can speak the other language(s) concerned. It is not possible to assess problems in one language through the medium of another because of the different linguistic systems. It is also necessary to compare the child's fluency in both languages and in different contexts. Family members must often be relied on to supply this information.

When working with a child from a minority language background, the therapist must bear in mind the linguistic, communicative, and sociocultural aspects of the problems facing a person in a bilingual environment. In the section on therapy for children, "solo play", "tangential play", and "cooperative play" were described. When working with monolingual British children, play-based assessment and intervention are fairly straightforward. When working across languages and cultures, however, the therapist must be aware of the possibility that the concept, methods, and materials of play may differ, and be sensitive to religious taboos, such as orthodox Islam's prohibition against dolls.

In normal first language acquisition, conceptual development and language development progress at the same rate. In second language development, the conceptual development of the learner will usually be ahead of the knowledge of syntactic and semantic structures in the second language, creating frustrations in both input and output. According, to Duncan,

Pre-school Asian children in Britain will of course, sooner or later be exposed to, and learn, English. Happily, the time has passed when clinicians automatically assumed from this that *sooner* was always preferable. Now the importance of maintaining the child's mother tongue is recognized for children's cognitive and communicative development. Speech therapists are becoming increasingly aware of the linguistic diversity existing in multicultural Britain, and acquainting themselves with, for example, the social and semantic differences which are important when assessing language competence. (p. 135)

After the assessment has been completed, Duncan suggests small group therapy rather than individual therapy for this population. There is controversy about which language should be used in therapy for bilingual children with speech problems. Some researchers recommend that the severely language-handicapped child should be taught only one language and that it should be used both at home and at school whenever possible. Duncan disagrees and says that "input in both languages promotes language learning in both languages." (p. 186)

Hebrew and English in Israel

In her article, Karniol describes the case of a child in Israel who was raised in a home where both Hebrew (L 1) and English (L 2) were used by the parents, and Hungarian was spoken by the maternal grandparents during their visits. At twenty-five months, just as he was at the point of transition to grammatical sentence construction, he began to stutter severely in both languages, though nothing notably traumatic had happened to him to precipitate the stuttering. Within a month, he could barely say anything in either language without stuttering, at home, day-care, and all other contexts. He began to favor Hebrew, and would either claim not to understand English or ask his family members not to use it. The child was aware of the fact that he was using two different languages before he began to stutter, and he was aware of his disfluency after he began to stutter.

Following his requests, his parents decided to stop addressing him in English, and the English produced by the child decreased drastically. Over the next four months, he stopped stuttering. Karniol commented that "... the child recognized his own difficulty in staying bilingual and purposely shifted his production to Hebrew

whenever possible, most likely because this was the dominant language outside the home.” (p. 264) Towards the end of these four months, the child developed a coping strategy that is directly related to being bilingual, switching languages in mid-sentence. The child began to use English again without stuttering at thirty-nine months while attending a summer camp in Canada.

Karniol's survey of the relevant literature included the following :

- ... stutterers require a greater amount of time for making syntactic choices than do non-stutterers.
- Bilingualism may ... serve to reduce working memory capacity since both languages appear to be loaded into working memory at the time of processing.
- ... there is some evidence that VOT (voice onset time) for the same sounds differs across languages, (which means that) bilinguals need to make additional decisions involving the motor output system that monolinguals do not need to make.

Karniol's conclusion was that, for this child, the stuttering was caused by a cognitive overload. She feels that a child should not be exposed to a second language until he has acquired good control of a first language, particularly in a case such as the one reported.

Puerto Rican Speaker of Spanish and English in the United States

Bernstein-Ratner and Benitez analyzed the stuttering behavior of a 50-year-old man who was bilingual in English and Spanish. He was from Puerto Rico, and had an English-speaking father and a Spanish-speaking mother. He said that he had stuttered in both languages from the time he learned to speak, and he had spoken both languages at home, school, and work all his life, in other words, he considered himself a balanced bilingual. Before a syntactic and phonemic analysis of a spontaneous speech sample was made, the subject and both researchers had thought that he was equally disfluent in both languages. In actuality, they found that he was almost twice as disfluent in English, though they can find no logical explanation for this. The loci of his disfluencies were not random ; in both languages, they were most likely to occur before the initiation of the verb phrase. They referred to research on stuttering at the verb

phrase boundary that postulated that the need for more time to syntactically plan, and then produce, an utterance, disrupted fluency.

Bernstein-Ratner and Benitez emphasized the fact that they did not wish to generalize the behavior of the one subject of their study to all stutterers, but they affirm the necessity of cross-linguistic studies. "Otherwise," they write, "we may find that our elegantly derived models account beautifully for the behaviors of American English-speaking stutterers, but say little about the nature of stuttering itself." (p. 219)

Kannada and English in India

Jayaram studied the stuttering behavior of bilingual speakers of English and Kannada, a Dravidian language of southern India. In both of his articles, he compared ten male bilingual stutterers with ten male monolingual (Kannada) stutterers. The bilingual stutterers had to pass a proficiency test in English to qualify for the study. In the first of his two articles, Jayaram focused on phonetic influences. The subjects read lists of words, each of which contained words beginning with a certain phoneme. Spontaneous speech samples were also collected. He found that most, but not all, stuttering was word-initial. There were three differences between oral reading and spontaneous speech on different sound groups :

- Voiceless fricatives were stuttered the most in spontaneous speech ; voiceless stops were stuttered the most in oral reading.
- The ratio of stuttering to words uttered was much higher in oral reading than in spontaneous speech, which was contrary to his expectation because the control and coordination of phonation and articulation are more complex.
- The bilinguals stuttered more on voiced fricatives in oral reading in English, but more on voiceless fricatives in spontaneous speech.

In spontaneous speech, he found that the monolingual group exhibited more stuttering than the bilingual group, and the bilinguals seemed to stutter more in Kannada than in English.

In the second of his two articles, Jayaram studied the loci of stuttering in long and short sentences using a group of ten male monolingual speakers of Kannada and ten male bilinguals speakers of Kannada and English. The short sentences appeared

as either the initial or final clause in the long sentences. He found that the position of the clause in the sentence had an influence on how much it was stuttered on. He found the most stuttering on a clause a) when it appeared in a long sentence in the initial position, next b) when it stood alone as a short sentence, and least c) when it appeared at the end of a long sentence. This was true for both languages, and was consistent with other research findings that most stuttering tends to occur at or near the beginning of a sentence. In general, the monolingual speakers stuttered more than the bilingual speakers, but his conclusion was that sentence length and clause position effects on stuttering were not dependent on the language of the speaker or the number of languages spoken.

Igbo and English in Nigeria

In her report on bilingual stuttering in Nigeria, Nwokah reports a higher frequency of stuttering in West African countries, from 3.5% to 9.2% in various studies. In Nigeria there are four hundred languages and accompanying dialects, so bi- or multilingualism is, in fact, the norm. About 10% of the total population of over eighty million is estimated to be bilingual in Igbo and English, the languages of the subjects in her study. The use of Igbo and English overlap and involve a considerable amount of code-switching, but generally they are associated with different situations. Igbo tends to be used among close friends and family, in rural areas, and when speaking to less-educated persons; English is used for education, speeches, mass-media, and when communicating with non-Igbo-speaking people.

She analyzed the stuttering behavior of sixteen balanced bilinguals in Igbo and English. All had received at least five years of high school education, and were students, teachers, or in business. Her finding was that nearly all of the subjects stuttered more in one language than the other in both reading and spontaneous speech. In the case of balanced bilinguals, who begin to acquire their second language at an early age, it could be either language. Her data correctly reflected the conscious awareness of nearly all subjects concerning the language in which they were most fluent.

The definite trend was for the subjects to stutter most in the language with which they had had more negative experiences. In English, the negative experiences were associated with school, and included unsympathetic teachers and attempts to

correct the problem, in one case, by putting pebbles in a girl's mouth, à la Demosthenes. Negative experiences with Igbo at home and school included ridicule and verbal and physical punishment. These were closely tied to beliefs that the child's stuttering was intentional, or an imitation of another stutterer, and the traditional belief in reincarnation. Igbo society highly values oratory skills, especially in first-born sons, and is intolerant of disability, so families are concerned about the possibility of poor speech from an early age. Nwokah describes a traditional cure for stuttering in the area :

Parents . . . attempted to correct the stuttering traditionally using the *ogene*, a black metal musical gong, rather like a flattened ice-cream cone, that the stutterer uses as a personal cup to drink from as long as the stuttering continues. . . . In some areas, the child had to say its first words of the day into the *ogene* (usually "good morning") and beat it, the belief being that their voice would become as clear as the musical note of the instrument. (p. 369)

Nwokah posed two hypotheses :

- The "same" hypothesis, that there will be similar behavioral patterns in any language.
- The "difference" hypothesis, that behavior will vary from one language to another.

The "same" hypothesis is based on the theory that stuttering is a reinforced pattern of disfluent speech that can be altered by teaching the person breath management skills, and correct voicing and articulation. The "difference" hypothesis is based on the theory that the social-psychological situation of the stutterer and his personal concepts and attitudes are likely to vary in different languages. The perceived social status of the languages in the community and even the differences in the linguistic structure or phonology might account for differences in stuttering behavior.

In her study, none of the subjects stuttered in only one language in spontaneous speech, and her data reflected the conscious awareness of almost all subjects as to the language in which they were more fluent. In asking them to assess their own fluency, they referred to problems with vocabulary or syntax. Some of them, for example, said that English was easier for them to speak because it required more planning ; some of

them said that English was harder for them to speak, and for the same reasons. None of them referred to motivational or emotional factors, or to the phonetic characteristics of either language as causing difficulty, though West African languages are tonal and include some of the less common phonemes, such as labiovelar implosives and velar fricatives, and a different vowel-consonant word formation from English.

Nwokah recalls Krashen's Monitor Theory :

Learning, conscious knowledge, serves only as an editor, or Monitor. We appeal to learning to make corrections, to change the output of the acquired system before we speak or write (or sometimes after we speak or write, as in self-correction). . . . two conditions need to be met in order to use the Monitor : the performer must be consciously concerned about correctness ; and he or she must know the rule. . . . While focusing on form may result in somewhat more grammatical accuracy, it does take more time. (p. 1-2)

The concept of a "Monitor" in second language acquisition is not new. Nwokah suggests that the same system is also likely to be involved in monitoring stuttering speech. She wondered, then, how use of the monitor resulted in more stuttering in some subjects, but less in others. In some, it served as an inhibitor of stuttering, when the subject would not only plan his utterance, but also anticipate and control his motor output. In others, it served as an activator of stuttering because the process of monitoring the language produced tension and anticipation associated with fear, rather than confident control.

Conclusion

Stuttering is a complex phenomenon that is not yet perfectly understood in monolinguals, and even less so in bilinguals. The cases described in this report, however, have confirmed some important points about the nature of stuttering :

Stuttering may be caused by a cognitive overload. Returning to the metaphor of the telecommunications center used by Peters and Guitar, children who stutter may be disfluent because their circuits are simply overloaded. In the case of the child in Israel, the L2 created the overload. The child himself was aware of the difficulty he was having with two languages, and he refused to use the L2 until he felt he was able

to handle it. In the case of the Puerto Rican stutter in the United States, the difficulty and extra time needed for syntactic planning in the L 2 may have accounted for the greater amount of disfluency in English.

Environmental stresses may precipitate stuttering in children who are predisposed to it. In both the cases of the children of Asian immigrants in England and adults in Nigeria, their stuttering was exacerbated by the pressure the parents and other members of their communities put on them to achieve. In the study made in Nigeria, the relationship between negative experiences with language and the amount of disfluency in that language could clearly be seen. This supports Nwokah's "difference theory", that the stutterer and his personal concepts and attitudes are likely to vary from one language to another, and suggests the possibility of using the study of a foreign language which has no negative associations for the individual as therapy for stuttering in some cases.

Bilingual stutterers are not equally disfluent in both languages. There were no reports of bilinguals who stuttered in only one language. There was also no clear trend as to which language, L 1 or L 2, was less fluent. In the research done in India, the loci of stuttering (at or near the beginning of the sentence) was the same for speakers of both Kannada and English, but the amount of disfluency in each language was different.

The field of speech therapy is a much wider one than I had imagined before I began my study of this subject. It deals with problems as diverse as helping people overcome stuttering, teaching children with cleft palates to articulate, and helping people change or eliminate a foreign accent. In the past two decades, the field of speech therapy has been influenced by work in pure linguistics and the field of applied linguistics concerned with language teaching, such as grammar, functions, the communicative approach, discourse analysis, and pragmatics. Studies in language acquisition and psycholinguistics have also had a special importance in speech therapy assessment, interpretation, and remediation. I end this report with a new appreciation for a sister field.

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