

Linguistic Incompetence to Stand Trial: A Unique Condition in Some Deaf Defendants¹

McCay Vernon, Ph.D. & Katrina Miller, M.A.
Lamar University

Abstract

Deaf individuals in the United States who have a severely constricted understanding of English, little knowledge of the court system, a basic lack of information, and limited ASL skills are often unable to understand the charges they face in court, nor can they participate in their own defense. As a consequence, they are legally incompetent on linguistic grounds. Thus, as in the case of a person who is legally insane or severely mentally retarded, they cannot stand trial unless and until the condition can be successfully treated. This concept of linguistic incompetence is relatively new to the courts and poses a major problem. In this paper, this concept is explained and documented and its prevalence in the deaf population is discussed. Solutions for the dilemma it creates for the courts and interpreters are discussed.

In order to be declared competent to stand trial in the United States, Canada, Great Britain, and most democratic countries of the world, defendants in a criminal case must be able to understand the charges against them and have the ability to participate in their own defense. Those who are unable to do this by virtue of mental illness or mental retardation are considered legally incompetent. They are generally hospitalized until their mental illness or retardation is mitigated sufficiently to enable them to stand trial. Otherwise, they must be released unless they constitute a danger to themselves or others as a consequence of their mental illness (Vernon, Steinberg, and Montoya, 1999).

Between 25 and 40 percent of prelingually deaf or hard of hearing persons are at risk for being found incompetent to stand trial, not because of mental retardation or mental illness, but due to an insufficient primitive linguistic level (King & Vernon, 1999). This is a problem of significant magnitude in every country of the world because it deprives a considerable percentage of hearing impaired people of the right to receive justice in their nation's courts.

This paper will examine the magnitude of this problem, its consequences, and options for correcting the present injustices that derive from it. Forensic, linguistic, and interpreting factors related to the issue are discussed, and related data are presented.

Reasons for Linguistic Incompetence in Deaf and Hard of Hearing

Prelingual Deafness

When individuals become deaf or hard of hearing prior to 3 years of age, it has a profound and lifelong effect on their understanding of English or any other oral language. For example, hearing children have, on the average, vocabularies of 8,000 to 14,000 words and can use and have mastered almost all the rules of syntax by age 6 years (Carey, 1977). By contrast, prelingually deaf children at age 5 have, on the average, a vocabulary of about 161 words and so little understanding of syntax that even simple two- and three-word sentences are difficult or

impossible for them to form or understand (Griswold & Cummings, 1974; Center for Assessment and Demographic Studies, 1996).

From this marked retardation in language at age 5, the retardation continues throughout the school years. For those profoundly deaf, by age 17 the median or average reading level is between third and fourth grade (Allen, 1986; Allen & Schoem, 1997). Thirty percent of deaf students leave school functionally illiterate, i.e., they read at grade level 2.8 or below. Only 5 percent achieve at a 10th grade level or better and most of those who do reach this level are not prelingually deaf, but hard of hearing or adventitiously deafened (Trybus & Karchmer, 1977). Although these data are from the United States, the results are comparable internationally (Conrad, 1979). This linguistic incompetence continues throughout the balance of the lifespan (Hammermeister, 1971). This does not mean that they are communicatively incompetent because they lack proficiency in English. In ASL, they may be excellent communicators in everyday normal social discourse. However, when the subject area is specialized, such as in the law, microbiology, physics, linguistics, etc., and fingerspelling must be employed, people who are deaf and hard of hearing are at an extreme disadvantage.

Looked at somewhat differently, the average deaf child gains 8 months in reading achievement from age 10 to age 16. By contrast, the average hearing student gains 6 years over the same timespan (Vernon, 1972).

It is both important and surprising to note on Table I that those who are hard of hearing (described in Table I as having severe or less-than-severe losses) also have markedly low reading levels approximating those of profoundly deaf persons. This is especially true if the hearing loss occurs prelingually (before age 3 years).

Implications of the Low Reading Levels of Prelingually Hearing Impaired Defendants for Interpreting Court Procedures into Sign Language

In order to know what these reading levels mean when it comes to interpreting court proceedings into sign language, let's look at some research done by Steinberg et al., (1998) on an instrument called the Quick Diagnostic Interview Schedule III, Revised (Q-DIS-III-R). This instrument is a set of questions designed to find out about a person's mental status or mental health. Most questions are fairly direct requests for information about everyday life activities and emotions. In order to ensure that the items were interpreted in a clear, understandable way, they were back-translated. This involves each question being first signed to the deaf individual. The deaf person to whom it was signed then signs it to another person, one who is fluent in sign language and who does not know the question. If that person can then write or sign the original question, it proves that the original interpreting was understandable to the deaf person to whom it was originally signed.

The goal of their research is to put this test into sign language and validate it on deaf people. Steinberg and colleagues (1998) have translated the Q-DIS-III-R into American Sign Language (ASL) and administered it to 39 deaf subjects, all of whom were fluent signers and 41% of whom had some post-secondary education. Compared to the general deaf population, only 9% of whom have any post-secondary education (Steinberg et al., 1998), this was an elite, relatively well-educated group of deaf and hard of hearing adults.

They found that even with this above-average sample, certain types of concepts were hard to convey into sign language (ASL). For example, time and duration expressions such as "at least a month" and "for 6 months or more" were not understood (Table I). Also, concepts of

time within time were not understood, e.g., the question "Have you experienced headaches for one month or more during the past year?" As those of you who have dealt with court trials involving criminal cases are aware, time concepts are critical in many instances.

Another area of difficulty that most of you would have predicted is idioms. Expressions such as "feeling on edge" and "keyed up" were extremely difficult to interpret accurately and understandably.

Take the example of the Minnesota Multiphasic Personality Inventory (MMPI), a paper-and-pencil test of personality involving 566 short questions easily understood by the general population. It requires a sixth-grade reading level for hearing persons (Dahlstrom & Welch, 1960). Research at Gallaudet University found that for deaf college students at Gallaudet to understand the MMPI required a tenth-grade reading level, even though they were deaf college students (Rosen, 1967).

Other researchers (McAnally et al., 1987; Quigly & Paul, 1984; Wood, 1984) found that deaf readers impose a subject-verb-object word order (the syntax of ASL) on English sentences even when it is inappropriate to do so. This leads to incorrect interpretations of English structures such as subordinate clauses and the passive voice. Thus, deaf readers fail to get the correct meaning when reading sentences using these structures.

Another source of error comes from the Minimum Distance Principle used by deaf readers (Wood, 1984). Applying this principle, the deaf person assumes that when there are two nouns in a sentence, such as in a subordinate clause, the noun closest to the verb is intended to complete the action. The sentence "John promised Mary to kill Frank" would be interpreted as if Mary was the one to do the killing.

These kind of systematic errors result in the deaf person misunderstanding not only print, but sign language that is put into English word order.

Other examples involve tag questions, such as "He will work, won't he?" This would be interpreted by deaf readers as "He won't work."

An even more serious error very prevalent with deaf readers has to do with the word "have."

"I have a dog."

"I have been playing."

Deaf readers interpret the word "have" in the second sentence as indicating possession.

Another difficulty faced by deaf readers has to do with using indefinite pronouns such as "anyone" or "everyone" (Wilbur & Goodhard, 1985). When pronouns such as he, she, it, they, etc., are used in sentences, deaf readers often do not know the antecedents to which these pronouns refer. For example: "Jeff, Joe and Mary were playing with a cat when a ball rolled by. Joe and Mary chased it. He found it first." Many deaf readers would have trouble understanding that it was Joe who found the ball.

All of these factors contribute to very low reading levels in prelingually deaf and hard of hearing individuals. As was indicated earlier, 30 percent are illiterate and the median reading level for all deaf school leavers is between third and fourth grade. The data are similar for hard of hearing youth (Table I). In addition to these quantitative measures of reading deficits, there are also qualitative differences in terms of certain syntactical structures as indicated in Table II. A command of these and other similar syntactic structures is critical to understanding criminal court proceedings. They cause many deaf people to misunderstand when reading print or receiving signs in English syntax (Tables III-XII).

Characteristics of the Sign Languages of the Deaf in Relationship to Interpreting

American Sign Language and most sign languages developed by deaf people around the world were, for many years, repressed languages. Even today they are forbidden in many classrooms and dormitories worldwide where prelingually deaf and hard of hearing children study and live. This repression of sign language in academic settings has resulted in the delayed development of specialized terminology in ASL.

A second characteristic of the sign languages of the deaf is that they are the only languages in the world that children do not learn from their parents unless their parents are signing deaf people. Only 10 percent of deaf children have deaf parents (Vernon & Andrews, 1990).

A third characteristic of sign languages is that they have no written form that anyone uses. A few scholars have devised written versions, but they only gather dust on library shelves. The fact that no one writes in sign language means there are no law books, other technical or professional texts, or books of any kind written in this vernacular.

A fourth characteristic of sign languages is that the populations that use them are, on the average, poorly educated (Table I). As previously indicated, this is true for Great Britain, Canada, the United States, and other countries where such information is reported (Conrad, 1979).

Primarily for these four reasons, the vocabularies of sign languages are severely constricted. This is especially true of words used in legal situations such as courtrooms, trials, and related settings (Charmatz et al., 2000). Consequently, in court, in police stations, and in sessions between deaf suspects and defendants and their lawyers, interpreters have to fingerspell, mime, draw pictures, or act out many of the words and legal terms used in these situations. Fingerspelling words and legal terms to deaf people who are illiterate or reading on a third- or fourth-grade level may look impressive to some judges, policemen, lawyers, or jurors who are unfamiliar with deaf people and who do not know sign language, but it conveys little or no information to the average deaf defendant or suspect. This is especially true if what is spelled is presented in English word order, not the syntax of sign language.

Another characteristic of sign languages is that it takes longer to interpret into sign language what a hearing person is saying in English than it takes for the person speaking English to say it. For example, a deaf psychologist, Dr. Barbara Brauer, put the short form of the MMPI into sign language on videotape (Brauer, 1993). To read it aloud in English took 42 minutes. The sign language version took about 2 hours. In other words, it took about three times as long to sign it as to say it.

It is important to note that the items on the MMPI require only a sixth-grade reading level, and in the deaf group in her study, 25 percent were deaf professional personnel at Gallaudet University and the other 75 percent were deaf graduate students at Gallaudet. Furthermore, 28% had deaf parents. Therefore, the interpreter could fingerspell many of the words for which there were no signs. If the audience were 30 percent functionally illiterate and the rest read at a third to fourth-grade level, as is the case with 40 to 60 percent of prelingually deaf and hard of hearing people, it would take 5 to 10 hours to make the questions in the MMPI understandable to these individuals. Many of the words for which there were no signs would have to have been mimed or acted out and countless examples given, pictures drawn, or long explanations provided. This process is known as "expansion." Based on the senior author's 40 years of experience, in some cases it would be impossible to convey the concepts at all in ASL, short of going through a prolonged educational program.

In research with another personality type test, the Diagnostic Interview Schedule, which is

also a set of short questions used to help diagnose mental disorders, the researchers found two facts relevant to interpreting the test questions (Montoya, 2000). One was that it was not even feasible to try to present it in an ASL form that minimal language subjects (at least 25 percent of the deaf population) could understand. Secondly, whereas it takes 4 hours to administer it to a hearing person orally, it would take 16 hours to administer it in ASL. This was for a sample of deaf people fluent in sign language, 41 percent of whom had some post-secondary education. Only 8 percent of the deaf population achieves this educational level (Steinberg, et al, 1998).

Another issue in interpreting is that because ASL is so different in its syntax from spoken and written English and so limited in its vocabulary, interpreters have to make highly subjective decisions about the way to express what is said when they translate it back and forth from English to ASL. They must interject major modifications and editorial judgements into the process. This is clearly evident when the information is back-translated, i.e., converted back into English from the signed version. This puts the deaf suspects and defendants at a tremendous disadvantage relative to understanding the charges against them, participating in their own defense in court, or communicating with their attorneys. Compounding this difficulty is the fact that, on occasion, interpreters may reject certain responses by a deaf defendant because they feel they are not relevant or that they reflect a lack of understanding of the question.

The Court System

Based on the average reading levels of prelingually deaf and prelingually hard of hearing individuals, delayed evolution of vocabulary, and the unique syntax of sign languages, the next issue to be addressed is the language level that occurs in court. To facilitate this process, Professor Michele Levigne of the University of Wisconsin Law School selected a set of representative transcripts from three major types of court proceedings involving criminal defendants. These were a plea and sentence hearing, a motion for suppression hearing, and four jury trials.

A reading specialist, Professor Jean Andrews of Lamar University, took the transcripts of these legal proceedings and analyzed the reading levels required to understand them. To do this, she applied seven different readability formulas to the analysis (Table III). These data are presented in Tables IV–XIII.

Certain facts in these tables deserve special attention. First of all, plea and sentence hearings represent a high percent of criminal trials and settings in which the defendant must make crucial decisions (Table IV). The analysis shows that these hearings require the highest language level, one that reflects a grade 9.2 readability level. This level is reached by only 5 or 6 percent of the deaf population (Center for Assessment and Demographic Studies, 1996).

Overall, the average grade level required for jury trials, plea and sentencing hearings, and motions for suppression is 7.4. Only 10 percent of deaf people are at this level or above (Vernon & Andrews, 1990). As will be explained later, these figures have tremendous implications relative to most deaf people's linguistic competence to stand trial.

In determining the reading levels of these court proceedings, Dr. Andrews did an analysis of every tenth page in those which were under 80 pages in length (two cases) and every twentieth page for longer cases. The second analysis Dr. Andrews did with these data was to run a program called "Vocabulary Assessor," which identifies potentially difficult words for fifth-graders and below.

These words are listed under each of the tables IV–XI. As only every tenth or twentieth page

was analyzed, the words listed represent only a small percent of the total words difficult for fifth-grade readers. For many of these words, there are no signs. For others there are signs, but ones that would only be understood by well-educated deaf people who represent a small minority of the prelingually deaf and hard of hearing population.

When interpreting these tables, it is critical to keep in mind the aforementioned fact that that more than half of prelingually deaf and hard of hearing people read at or below fifth-grade level. One third are functionally illiterate, meaning they read at grade level 2.9 or below.

Another point to remember is that while many normally hearing people have low reading levels, for them this is not relevant to understanding court proceedings because they can hear and understand what transpires. By contrast, the deaf defendants cannot hear or understand court discourse. They must depend upon an interpreter. This poses two serious problems.

First, for the many English words for which there are no signs in ASL, the interpreter must either fingerspell them or provide expansions and give examples. Many cannot be defined due to the limitations of the vocabulary of sign languages. This is especially true of legal terms and other technical terminology used by attorneys and experts who may be called to testify.

We know from the previously cited research of Brauer (1993) and Steinberg et al., (1998) that it takes two to four times longer to express in sign language what is said orally when the deaf audience has post-secondary or graduate-level educational attainment. With the 50 percent of deaf defendants who are functionally illiterate or at a third-, fourth-, or fifth-grade level, it is obvious that it will take eight or ten times longer to interpret the normal discourse that occurs in a court proceeding. This is especially true when relay interpreters are employed (Montoya, 2000). However, relay interpreters are often an excellent and needed resource.

When one considers the impatience of many judges, the pressure of courts to turn cases over quickly, the high cost of court time, etc., it is unlikely that courts and judges will voluntarily allow four to ten times longer for trials of hard of hearing and deaf defendants.

What is happening today in courts all over the world is that, in some cases, no interpreter at all is being supplied. This leaves deaf defendants totally unable to participate in their own defense, to understand the charges they face, or to have any grasp of trial proceedings. When interpreters are provided, they are required to do simultaneous interpreting, which means keeping up with the normal rate of speech. As the research shows (Brauer, 1993; Steinberg et al., 1998; Montoya, 2000), this is impossible based on information provided by legal interpreters and by the senior author's observations in 40 years of forensic work in courts in the United States.

What actually happens is that the interpreters are forced to do three things: First, they must leave out significant amounts of what is said. Second, they have to fingerspell terms for which there are no signs despite the fact that they know the defendants cannot understand many of these words. Third, in an effort to keep up with the speed of speech, they are forced to use a lot of English word order (syntax), rather than taking the time to change to sign language syntax.

As a consequence of having to make these three adjustments, the average and below average deaf people who are reading at less than a fifth-grade level have little understanding of what is transpiring at their trials. Interpreters know this, but feel helpless to do anything about it. Deaf defendants are aware that they are not grasping what is transpiring, but may have internalized stereotypes about deaf intelligence and feel the problem is their own stupidity. Not understanding what is going on around them is something to which they are accustomed and have come to accept. Our experience in courtroom settings and in discus-

sions with legal interpreters is that they find this to be extremely stressful because they cannot control it (Dean & Pollard, 2001; Vernon & Rich, 1997).

Evidence for this lack of understanding on the part of deaf defendants comes from the work of Trina Miller (Personal communication, 5/4/00) with approximately 80 deaf inmates in Huntsville, a prison within the Texas Department of Justice. She found that an overwhelming majority of them were not aware of the exact charges that caused them to be in prison. Well over half of the prisoners had no interpreter when they waived their Miranda rights. This means they did not understand the procedure. Many of them never saw an interpreter at all until 10 minutes before their trial, meaning no interpreter was made available to them to consult with their attorney prior to trial. This ensures inadequate pre-trial preparation. It is particularly important that interpreters be allowed to meet with and assess a deaf client's language prior to beginning an interpretation.

Suggested Solutions

Unfortunately, most countries of the world, including the United States, have judicial systems that are unaware of the issue of linguistic incompetence to stand trial in deaf and hard of hearing defendants. When the problem is recognized, it can be addressed in various ways. In Great Britain, in addition to a barrister, an individual is appointed as the deaf defendant's guardian or "responsible adult" in the court system. This person has basic knowledge of the law and of deafness and has the duty and authority required to see that the deaf defendant knows what is going on and that his or her rights are protected. A universal use of this type of system would be one possible way to ensure that deaf people the world over get fairer treatment in court and throughout the judicial process.

Another approach would be to permit consecutive interpreting instead of simultaneous interpreting. In simultaneous interpreting, the interpreter signs what the speaker says at the same time it is being spoken. The problems with this system have already been discussed. In consecutive interpreting, the speaker says a few sentences and stops. The interpreter then puts what was just said into sign language. Usually, while doing this, the interpreter does not vocalize what is being interpreted.

The advantage of this system is that the interpreter can take as much time as necessary to explain what was said, to define the words, give examples, draw pictures, act out situations, use mime, etc. This procedure goes a long way toward ensuring defendants can understand their court proceedings, participate in their own defense, and understand the charges against them. However, it has two disadvantages: One is that it is extremely slow, often taking 5 to 10 times longer than simultaneous interpreting. Secondly, the subjectivity and opportunity to editorialize provided to the interpreter is extensive. Because the interpreter generally does not vocalize while signing to the deaf person, the attorneys, judge, and jury have to assume what she is signing is an objective, accurate translation of what was said. This tends to take a lot of the control out of the hands of the attorneys, judges, and juries. Having an additional interpreter to voice what is being conveyed is a possible solution to this difficulty.

A third approach has been used in three homicide cases with which I am familiar involving deaf defendants. It involves sending the deaf defendant to a facility (in these cases a mental hospital) where they are taught basic legal signs, other signs related to their case, and a rudimentary understanding of the legal system, taking them through mock trials, etc. The goal is to enable them to become competent to stand trial. In two of these cases the effort was unsuccessful. In one it was effective and the defendant was tried and found guilty (Vernon, Steinberg, & Montoya, 1999).

When the deaf defendant is close to being linguistically competent to begin with, providing education in legal language and concepts can sometimes work, but for many deaf defendants it fails because they cannot master the basic language skills required to become competent.

Summary

This paper has introduced the concept of linguistic incompetence to stand trial. This incompetence is found primarily in prelingually deaf and prelingually hard of hearing defendants. It is prevalent in 30 to 40 percent of this population. Currently in the United States and most countries of the world, the condition is not recognized by the judicial system or the field of psychology. Consequently, hearing impaired individuals are frequently denied the justice others routinely receive because their linguistic and legal incompetence is not recognized and addressed.

The effects of early onset hearing loss leave the overwhelming majority of its victims with the lifelong handicap of grossly constricted vocabularies and limited understanding of the spoken and written languages of their native country. Thus, many of them lack the capacity to understand what transpires in court, i.e., they are unable to understand the charges against them or participate in their own defense.

Deaf and hard of hearing people in every country develop a sign language that enables them to communicate manually with others like themselves and with the few normally hearing individuals who learn the language. However, these sign languages are often repressed by the hearing culture and forbidden to be used in schools. They have no written form and are generally learned by children from other children, as few parents master them with any degree of competency. In fact, sign languages are the only languages children do not typically learn from their parents. Consequently, these sign languages have severely constricted vocabularies and syntactical structures markedly different from spoken tongues.

These characteristics of sign languages, coupled with the problems prelingually hearing impaired people have learning the oral and written languages of their native lands, leave many of them unable to understand the terminology and syntax of court trials and related proceedings. This holds true even when these defendants are supplied with interpreters whose purpose is to translate the trial dialogue into sign language, and the sign language of the deaf into the oral language used in court. An interpreter needs to be familiar with legal language in order to render an accurate interpretation.

¹The field of deafness has a unique and specialized vocabulary. For this reason, a glossary of terms is included at the end of this paper, which defines some of these terms and the specific context in which they are used in this paper. It is suggested that the reader look at the glossary prior to reading the paper. ■

References

- Allen, T.E. 1986. Patterns of academic achievement among hearing impaired students: 1974 – 1983. In A.N. Schildroth & M.A. Karchner, eds., *Deaf Children in America*, (pp 161-206. San Diego: College Hill Press.
- Allen, T.E., & Schoem, S.R. 1997. *Educating Deaf and Hard of Hearing Youth: What Works Best*. Gallaudet Research Institute: Washington, D.C.
- Bauer, B.A. 1993. Adequacy of translation of the MMPI into American Sign Language for use with deaf individuals: Linguistic equivalency issues. *Rehabilitation Psychology* 38 (4): 247-260.
- Carey, S. 1977. The child as word learner. In M. Halle, I. Bresnan, & G. Muller eds., *Linguistic Theory and Psychological Reality*. Cambridge, MA: MIT Press.
- Center for Assessment and Demographic Studies 1996. Score Summary for Stanford Achievement Tests, Hearing Impaired Version, 9th Edition. Washington, D.C.: Gallaudet University Press.
- Charmatz, M., Greer, S., Vargas, M., Brick, K., & Peltz, K. 2000. *Legal Rights: The Guide for Deaf and Hard of Hearing People*. Washington, D.C.: Gallaudet University Press.
- Conrad, R. 1979. *The Deaf School Child*. London: Harper & Row.
- Dahlstrom, W.G., & Welsh, G.S. 1960. *An MMPI Handbook: A Guide To Use in Clinical Practice and Research*. Minneapolis: University of Minnesota Press.
- Dearn, R.K., & Pollard, R.Q. 2001. Application of demand-control theory to sign language interpreting: Implications for stress and interpreter training. *Journal of Deaf Studies and Deaf Education* 6(1):1-14.
- Griswold, E.E., & Commings, I. 1974. The expressive vocabulary of deaf children. *American Annals of the Deaf* 119: 16-28.
- Hammermeister, F. 1971. Reading achievement in deaf adults. *American Annals of the Deaf* 116: 25-28.
- King, N., & Vernon, M. 1999. Unique legal issues facing deaf defendants. *The Florida Defender* VII (1):11-15.
- McAnnally, P.I., Ros, S., & Quigley, S.P. 1987. *Language Learning Principles with Deaf Children*. Boston: Little Brown and Company.
- Montoya, L. 2000. Personal communication
- Quigley, S.P., & Paul, P.V. 1984. *Language and Deafness*. Boston: College Hill Press.
- Rosen, A. 1967. Limitations of personality inventories for assessment of deaf children and adults as illustrated by research with the MMPI. *Journal of Rehabilitation of the Deaf* 1: 47-52.
- Steinberg, A.G., Lipto, D.S., Eckhardt, E.A., Goldstein, M., and Sullivan, V.J. 1998. The diagnostic interview schedule for deaf patients on interactive video: A preliminary investigation. *American Journal of Psychiatry* 155 (11): 1603-1604.
- Trybus, R.J., & Karchner, M.A. 1977. School achievement status of hearing children: National data on achievement status and growth patterns. *American Annals of the Deaf* 122 (1): 62-69.

- Vernon, M. 1972. Mind over mouth: A rationale for total communication. *Volta Review* 74: 529-540.
- Vernon, M., & Andrews, J.F. 1990. *The Psychology of Deafness: Understanding Deaf and Hard of Hearing People*. White Plains, NY: Longman Press.
- Vernon, M., & Rich, S.B. 1997. Pedophilia and deafness. *American Annals of the Deaf* 142 (4): 302-313.
- Vernon, M., Steinberg, A.G., & Montoya, L.A. 1999. Deaf murderers: Clinical and forensic issues. *Behavioral Sciences and the Law* 17: 495-516.
- Wilbur, R.B., & Goodhart, W.C. 1985. Comprehension of indefinite pronouns and quantifiers by hearing impaired students. *Applied Linguistics* 41: 4-14.
- Wood, D. 1984. Aspects of language competence of deaf children. *Journal of Audiology* 18: 22-40.