Keresan Pueblo Indian Sign Language

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In one small Keresan-speaking pueblo in central New Mexico 15 out of 650 tribal members have severe to profound hearing loss, which is a little over twice the national average and reflects a generally high rate of hearing impairments among American Indians (Kelley, 2001; Hammond & Meiners, 1993; LaPlante, 1991). American Indians have been found to be almost three times more likely to be hospitalized for conditions of the ear than the general population (Hammond & Meiners, 1993). Estimates range that 20 to 70% of American Indians have been found to have middle ear problems such as otitis media (McShane & Plas, 1982). Otitis media is the inflammation of the middle ear cavity (behind the ear drum), usually resulting from the closing of the Eustachian tube due to swelling and to loss of ventilation and fluid drainage in the middle ear cavity (Scaldwell, 1989). Otitis media continues to affect Southwestern Indian tribes at high rates leading to hearing loss, especially among children (Johnson, 1991). The failure to detect hearing loss has caused many Indian children to miss opportunities for appropriate educational and therapeutic interventions.

Keresan Pueblo Indian Sign Language (KPISL) is a means of communication developed and used among many of the residents of this one New Mexico pueblo. It is one of many North American Indian sign languages found in the United States, and one of two in Southwestern United States that have been studied and documented—the other being Navajo (Davis & Suppala, 1995). A literature review suggests that signed languages were also used among Apaches and Hopis (West, 1960). KPISL is believed to have developed on one pueblo by family members in order to communicate with their offspring, siblings, and relatives who were deaf (Kelley, 2001). It is not at all uncommon for deaf children and their family members to invent a home-based sign system for such a purpose. However, KPISL does not fit the framework for home-based sign systems set forth by researchers such as Frishberg (1987) who states that home signs do not have a consistent meaning-symbol relationship, do not pass on from generation to generation, are not shared by one large group, and are not considered the same over a community of signers. KPISL was passed on from one family's eldest brothers and sisters to their hearing and deaf siblings, nephews, and nieces. KPISL is also used among non-family members living on the pueblo. It has been found to function in two significant ways: (a) as an alternative to spoken language for hearing tribal members and (b) as a primary or first language for deaf tribal members.

KPISL didn't originate for the same purposes as the well known Plains Indian Sign Language (PISL), which was primarily developed to facilitate intertribal communication between the American Indian tribes that spoke different languages in the Plains region of the present United States and Canada—a region extending from what is now the state of Texas northward to Canada and, at its widest point, stretching from Arizona through Oklahoma (Taylor, 1978). Signs were used during hunting and trading among the different tribes and were also

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used for storytelling and a variety of ceremonies. Plains tribes known to use signed language included the Cheyenne, Comanche, Kiowa, and Sioux. Signed languages were also used as a means of communication by the Iroquois in the state of New York, the Cherokee in the Southeastern United States, the Eskimos in Alaska, and the Mayan in Mexico (Johnson, 1994; Scott, 1931; West, 1960).

Signed language is reported to have been carried from Mexico to the Southwestern region of the United States by the Kiowa (West, 1960). The Spaniard Cabeza de Vaca recorded the earliest accounts of signed languages in the sixteenth century (Tomkins, 1969). De Vaca made a brief mention of a meeting in the Tampa Bay area of Florida with American Indian people who could communicate in a signed language. As he traveled, he was able to ask questions and receive answers through the use of signs with various Indian tribes who spoke different languages. Francisco de Coronado, another Spanish explorer, reported signs being used in the western part of Texas (Tomkins, 1969). In 1540, he encountered the Tonkawa and Comanche people and was able to communicate with them, using signs without the assistance of an interpreter. As the Spanish returned back to their mother country, priests went along and are thought to have shared the signs that they had learned from American Indians people. Perhaps, from the priests, monks who had taken a vow of silence picked up signs and used them between themselves for they were not allowed to speak with each other inside their monasteries (Fischer & Lane, 1993). From the monks, the signs were probably borrowed by educators who saw it as a tool to communicate with the Deaf/Hard-of-Hearing in Spain and neighboring France. And, perhaps the signs followed travelers from France to America where it evolved into American Indian Sign Language (ASL).

With the arrival of the United States military in the Plains region in the late 1800s, formal studies were conducted on the signed language used among various Indian tribes on the Plains (Clark 1885/1982; Dodge, 1882/1978; Seton, 1918). In the late 1900s, Cody (1970) and Tomkins (1969) among others developed a comprehensive dictionary of the signs. Recently Farnell (1995) and McKay-Cody (1998) have conducted studies on what is left of PISL.

Both KPISL and PISL have become endangered languages. KPISL is not much used among the pueblo's younger generation owing to their learning school English, ASL, or signs that follow the spoken English word order. Before the 1990s, American Indian Deaf/Hard-of-Hearing tribal members usually left home to attend a residential school for the deaf located far away (Baker, 1997; Lane, Hoffmeister, & Bahan, 1996). At the school, there was usually no formal instruction of American Indian or American Indian culture and signs; only Deaf culture and ASL were taught, leading many American Indian students to join the "Deaf World." After graduation, the students had to make difficult decisions about where and how to establish themselves: on the pueblos with hearing families and friends, in urban areas with other Deaf/Hard-of-Hearing people, or in border towns with limited access to both groups.

English has now become the dominant language for many Pueblo Indians. Its use, as well as continued contact with and influences of the dominant culture,

has served to erode some of the traditions and values of the Pueblo Indian culture (Downs, 1972). As a result, KPISL, a valuable piece of American Indian heritage, may be slipping into extinction as well. An immediate step to record this unique language would be to develop illustrations of the signs found on the pueblo for a dictionary that can be placed in the pueblo's library and museum. Many individuals in the pueblo are willing to demonstrate the signs to be illustrated. Documentation of the signs will assist in preserving KPISL and will provide an opportunity for studying it within its historical and socio-cultural context. Understanding KPISL can provide a more complete understanding and appreciation of the cultural heritage of the people living in this small Keresan-speaking pueblo. Examples are given in the appendix of some KPISL signs (Figures 1a, 2a, 3a, and 4a) as compared to one PISL signed language, that of the Cheyenne (Figures 1b, 2b, 3b, and 4b), and to ASL (Figures 1c, 2c, 3c, and 4c). Linguistic differences among the three languages are indicated. The chosen meaning-symbol relationship signs (corn, dancing, eagle, and singing) are widely used among the Pueblo people, especially during feast days and holidays.

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Appendix

"Corn" (KPISL noun)

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Figure 1a
Keresan Pueblo Indian Sign Language (KPISL)
"Corn" (noun)

Linguistic Analysis of KPISL

1. Handshape:
   closed "S" handshapes
2. Location (place of articulation):
   in front of signer's chest level
3. Movement:
   "S" hands with an alternate upward
   motion indicating ears of corn
   on the stalk
4. Palm Orientation:
   toward mid-sagittal plane
5. Point of Contact:
   none

"Corn" (CISL noun)

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Figure 1b
Cheyenne Indian Sign Language (CISL)
"Corn" (noun)

Linguistic Analysis of CISL

1. Handshape:
   closed "O" handshapes
2. Location (place of articulation):
   in front of signer's chest level
3. Movement:
   dominant hand in twisting motion
   as if shelling corn
4. Palm Orientation:
   toward mid-sagittal plane
5. Point of Contact:
   touching each other

"Corn" (ASL noun)

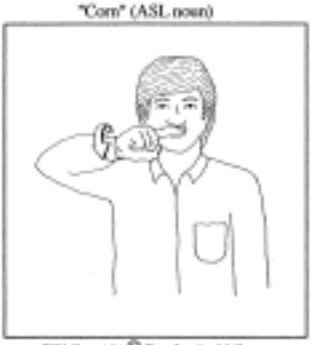

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Figure 1c
American Sign Language (ASL)
"Corn" (Noun)

Linguistic Analysis of ASL

1. Handshape:
   open "1" handshape (one hand)
2. Location (place of articulation):
   in front of signer's mouth area
3. Movement:
   rotate back and forth
4. Palm Orientation:
   facing down
5. Point of Contact:
   none

"Dance" (KPISL noun)

Figure 2a
Keresan Pueblo Indian Sign Language (KPISL)
"Dance" (verb)

Linguistic Analysis of KPISL

1. Handshape:
   "A" handshapes
2. Location (place of articulation):
   in front of the signer's chest level,
   in a slightly outward position
3. Movement:
   upward and downward motion
   alternately
4. Palm Orientation:
   toward mid-sagittal plane

"Dance" (CISL noun)

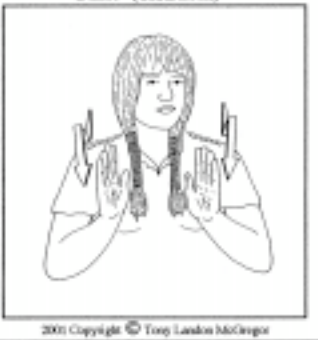

Figure 2b
Cheyenne Indian Sign Language (CISL)
"Dance" (verb)

Linguistic Analysis of CISL

1. Handshape:
   closed 5 handshapes
   (upward position)
2. Location (place of articulation):
   in front of signer's chest level
3. Movement:
   slightly upward and downward
   simultaneously
4. Palm Orientation:
   toward mid-sagittal plane

"Dance" (ASL noun)

Figure 2c
American Sign Language (ASL)
"Dance" (verb)

Linguistic Analysis of ASL

1. Handshape:
   "V" handshape and closed 5
   handshape
2. Location (place of articulation):
   in front of signer's chest level
3. Movement:
   dominant hand moves back and forth
   in swinging position
4. Palm Orientation:
   facing each other with little open
   space between dominant hand
   facing downward and
   non-dominant hand facing
   upward

"Eagle" (KPISL noun)

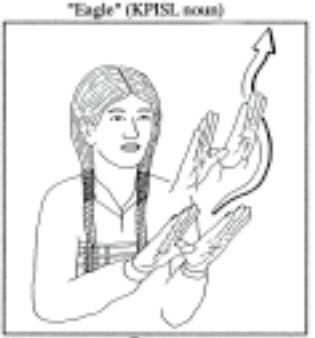

Figure 3a
Keresan Pueblo Indian Sign Language (KPISL)
"Eagle" (noun)

Linguistic Analysis of KPISL

1. Handshape:
closed 5 handshapes
2. Location (place of articulation):
in front of signer's chest level
3. Movement:
wavy upward path
4. Palm Orientation:
facing away in forward direction
and partially downward
5. Point of Contact:
thumb tips of both hands
touching

"Eagle" (CISL noun)

Figure 3b
Cheyenne Indian Sign Language (CISL)
"Eagle" (noun)

Linguistic Analysis of CISL
Note: a) beak and b) wings

1. Handshape:
a) closed 5 handshapes
b) "G" handshapes
2. Location (place of articulation):
a) in front of signer's shoulder level
b) in front of signer's face level
3. Movement:
a) "flapping" motion
b) downward curve, indicating
curved bill of the eagle
4. Palm Orientation:
a) facing down
b) toward mid-sagittal plane
5. Point of Contact:
a) none
b) eyes to upper chin area

"Eagle" (ASL noun)

Figure 3c
American Sign Language (ASL)
"Eagle" (noun)

Linguistic Analysis of ASL

1. Handshape:
"X" handshape
2. Location (place of articulation):
nose
3. Movement:
None (Possible minimal
movement away from and to contact
like a "bouncing" of the sign
4. Palm Orientation:
facing away from signer
5. Point of Contact:
back of bent index finger
touches tip of nose

"Sing" (KPISL verb)

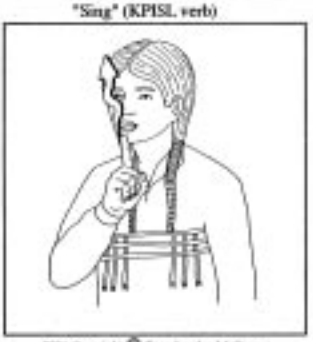

Figure 4a
Keresan Pueblo Indian Sign Language (KPISL)
"Sing" (verb)

Linguistic Analysis of KPISL

1. Handshape:
   "I" handshape
2. Location (place of articulation):
   in front of signer's face level
3. Movement:
   wavy upward path from lip to
   just above head
4. Palm Orientation:
   facing toward face
5. Point of Contact:
   slightly touching the lips

"Sing" (CISL verb)

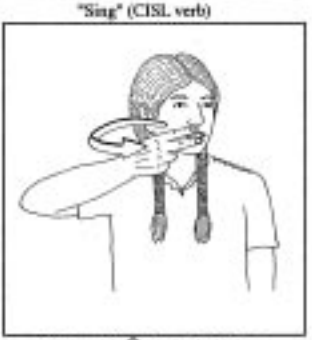

Figure 4b
Cheyenne Indian Sign Language (CISL)
"Sing" (verb)

Linguistic Analysis of CISL

1. Handshape:
   "V" handshape
2. Location (place of articulation):
   in front of signer's face level
3. Movement:
   dominant hand moves briskly in a
   circular position
4. Palm Orientation:
   toward mid-sagittal plane
5. Point of Contact:
   none

"Sing" (ASL verb)

Figure 4c
American Sign Language (ASL)
"Sing" (verb)

Linguistic Analysis of ASL

1. Handshape:
   closed 5 handshape
2. Location (place of articulation):
   in front of signer's chest level
3. Movement:
   dominant hand moves back and
   and forth above non- dominant
   hand
4. Palm Orientation:
   non-dominant hand facing upward
   and dominant hand slightly toward signer
5. Point of Contact:
   none