The Emergence of Pronominal Pointing in Greek Sign Language

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Abstract. Even though much has been published on the acquisition of personal pronouns in spoken language, the study on the acquisition of personal pronouns in signed language has been limited to the American Sign Language. The study of the acquisition of the INDEX, directed to self and others as first and non-first person pronoun in Greek Sign Language offers additional evidence, and most significantly, confirms that language modality plays a restricted role in language acquisition.

Keywords: Deaf children, Greek Sign Language, personal pronouns, pointing, pointing gesture, pointing signs, reference, sign language acquisition.

1 Introduction

In hearing children’s spoken language, the first reference to the world emerges from pointing, and is expressed by specific lexical items with no obvious relation to the form of pointing [1], [2], [3]. In signed languages, some of the first signs for reference to objects, persons and self do show a close resemblance in form to the pointing gesture [4], [5]. Examples of such lexical signs in Greek Sign Language are the pointing signs directed to self and other entities whose form closely resembles the form of the pointing gesture [5]. The similarity in form that pronominal signs have with the pointing gesture and the transparency in meaning that they seem to exhibit, bring forward some questions about the process and timing of their acquisition in the deaf child’s sign language.

2 Theoretical background

Research on the acquisition of personal pronouns in hearing children’s language reveals the following similarities: (1) the first-person pronoun occurs before the second-person pronoun [6], [7], [8], [9], after the age of 18 months [6], [10], (2) reference to others with proper names or common nouns precedes reference to self [7], [8], (3) hearing children make non-systematic pronominal reversal errors, [6], [7], [8].
Pronominal systems in signed languages seem to be different from those found in many spoken languages (e.g. ASL: [11]; BSL: [12], Danish Sign Language: [13] Greek Sign Language [5]). The form of the pointing sign functioning as the first-person pronoun seems to be a highly similar form in ASL, Danish Sign Language, Swedish Sign Language and Greek Sign Language. The same is probably true for the forms of the pointing signs functioning as a non-first-person pronoun.

Until recently, the only research that had been carried out on the acquisition of pointing signs used for reference to persons and self by deaf children of deaf parents was in ASL [4]. In ASL acquisition, despite the transparency in meaning that pointing signs seem to exhibit, their emergence in deaf children’s language coincides with, rather than precedes, the emergence of personal pronouns in hearing children’s language. According to Petitto [4] the transition to the linguistic usage of the pointing as a pronoun is characterized by

1. a period of discontinuity in which the deaf child avoids using the index finger for pointing to persons and self and
2. the emergence of reversal errors in the production of the pointing signs directed to persons and self, similar to those found in hearing children’s production of personal pronouns [4].

The necessity for cross linguistic investigation on the acquisition of pronominal signs has been apparent by researchers [14].

3 Aim and methodology

The aim of the present study was to provide empirical evidence on the acquisition of pointing for reference to persons and self in Greek Sign Language. The issues investigated were: (a) the manner and the age at which pronominal pointing signs emerge, (b) the use of other signs for reference to persons and self, and (c) the occurrence of reversal errors in the child’s early use of pointing.

Naturalistic data have been collected for the accomplishment of the present study. The interaction of a third-generation deaf child with his deaf parents and his deaf relatives has been videotaped every fortnight, from the age of 12 to 36 months. The main material of the study consists of the child’s utterances, which have been transcribed in ELAN [15] using a gloss-based notation system in Greek. A thorough analysis of the child’s pointing behaviour, name signs and common nouns by which he referred to persons has been conducted from the age of 12 to 29 months.

4 Results

Four developmental stages have been identified in the deaf child’s use of pointing for reference to persons and self, from 12 to 27 months.
Table 1. Percentage of pointing gestures/signs directed to persons relative to the total number of pointing directed to entities in each developmental stage in the acquisition of pointing.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Minutes</th>
<th>No. of Pointing Gestures/Signs</th>
<th>Mean No. of Pointing /Minute</th>
<th>INDEX-person (incl self)</th>
<th>Percentage of INDEX-person</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt;</td>
<td>141</td>
<td>60</td>
<td>0.42</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt;</td>
<td>103</td>
<td>115</td>
<td>1.10</td>
<td>13</td>
<td>11.30%</td>
</tr>
<tr>
<td>3&lt;sup&gt;rd&lt;/sup&gt;</td>
<td>354</td>
<td>391</td>
<td>1.10</td>
<td>4</td>
<td>1.02%</td>
</tr>
<tr>
<td>4&lt;sup&gt;th&lt;/sup&gt;</td>
<td>964</td>
<td>1,256</td>
<td>1.30</td>
<td>127</td>
<td>10.11%</td>
</tr>
</tbody>
</table>

At the first developmental stage extending between the age of 1;0,11 - 1;1,19, the first reference to objects by pointing emerges (see Table 1). The child directs the index finger towards objects, but not towards other persons or himself. The boy’s early pointing behaviour is comparable to the early pointing behaviour of his hearing [1], and deaf peers [4].

At the second developmental stage in the acquisition of pointing (1;2,10 - 1;3,03), reference to persons and self emerges for the first time. The frequency with which the pointing gesture occurs is greater than the frequency recorded in the previous stage (Table 1), and this is in accordance with the findings about hearing children [16], [2].

At the third developmental stage (1;4,00 - 1; 8,00) a crucial difference is observed. The boy continues to use pointing to refer to persons but in a restricted manner, whereas he shows no hesitation in using it for reference to objects or locations (Table 1). In addition, he uses a relaxed (B-)hand configuration to refer to himself and proper names (name signs) and mouth movements to refer to others. The milestone of 50 words of the child’s lexicon is accomplished and the length of his utterances is expanded. At the third stage, the boy’s transition to the linguistic period takes place.

At the fourth stage in the acquisition of pointing (1;8,07 - 2;3,01), the deaf toddler acquiring Greek Sign Language gradually uses pointing directed to self (INDEX-self) and other entities (INDEX-non-self) systematically, with the same meaning that these pointing signs have in adults’ language, thus justifying the attribution of linguistic status in his pointing after 20 months. The form of pointing the deaf child produces is very close to the adult form. Pointing for reference to persons and self is used without errors. Moreover, pointing is used for reference to non-present persons. The relaxed (B-)hand is used for reference to self as an alternative form of the index finger hand configuration. Name signs and common nouns are used for reference to persons and self as well. The child’s productive lexicon is enhanced far beyond 50 signs.

5 Discussion

In the present study on a child acquiring Greek Sign Language, the general developmental pattern of the acquisition of pointing signs used for reference to persons and self seems to be the same as the one found in the acquisition of ASL. However, in contrast to the findings of ASL, the autonomy of language and gesture is not supported.

In Greek Sign Language, the emergence of the pronominal pointing signs takes place as a continuous smooth process without evidence of discontinuity in the child’s transition from the early communicative to the linguistic use of the pointing. The existence of just one possible erroneous pointing sign directed to self instead of being directed to an object, does not support the “name hypothesis” [6], [4]. On the contrary, it suggests that the deaf child acquires from the beginning the correct meaning and reference of the indexical signs directed to persons and self.

These differences clearly indicate the necessity for more research on pronominal pointing signs, not only by a larger number of deaf and hearing children exposed to ASL and Greek Sign Language, but also to other signed languages.

References