

Comprehension and Production of Personal Reference Terms in Thai-speaking Children with Autism Spectrum Disorders

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Background: Children with autism spectrum disorders (ASD) have been observed to have difficulties with pronouns, as compared to fixed identity, especially in the form of pronoun reversal errors between ‘I’ and ‘you’ (See, for instance, Bartak & Rutter 1974; Charney 1980b; Chiat 1982; Fay 1979; Kanner 1944; Loveland 1984). Most of studies on the topic focused on the English language, leaving gaps on how such difficulties would manifest themselves in other languages with a personal reference system with higher complexity. Personal reference system in Thai can be one example of being highly complex. It involves not only personal pronouns, but also kin terms, occupational titles, and personal names (Bandhumedha 1971; Bandhumedha 2011; Cooke 1968; Iwasaki & Ingkapirom 2009 among others). Moreover, adult native speakers of Thai may also use *deictic shifting*, reversing ‘I’ and ‘you’ by default while talking to young children, e.g., a sentence like ‘*Do I want ice cream?*’ can be used for asking whether the child hearer wants ice cream or not. This study attempts to investigate the comprehension and production of various personal reference terms in Thai-speaking children with ASD compared their typically-developing (TD) controls.

Participants: Children with ASD and their age-, gender- and non-verbal IQ matched controls were recruited from Kasetsart University Laboratory School, Center for Educational Research and Development and La-or Utis Demonstration School (See Table 1 for details). All the children with ASD had previously received a clinical diagnosis with a proper medical record prior to attending each school. The non-verbal IQ was tested using the Ravens Standardized Progressive Matrices (Raven et al. 2003, 2004).

Design: The main design of this project is the adaptation of the Fishing Task (Girouard et al. 1997; Legendre et al. 2011) which will test the list of eight Thai personal reference terms (one first-person, four second-persons (three for each participant, depending on their gender), and three third-persons). The order of items was created according to Latin Square design. In the version of the task in this study, there were five participants, including the author, the child (tested individually), a cardboard boy, a cardboard girl, and a cardboard monkey. In the beginning of each block, the children were first asked to name pictures of commonly known animals and objects. The picture cards were then distributed to each participant. For the production task, the children were asked ‘*Who is holding X?*’. The comprehension task involves the familiarization phase using the question ‘*What is name of X holding?*’, while the test phase changed *name of X* to different pronouns. The scoring sheets were designed and created in advance to ease the online coding of the answers.

Preliminary Analysis of the Results: For the comprehension task, the results show that children with ASD performed significantly less accurate than their TD controls as seen in Figure 1. The third-person reference terms in both of the participant groups yielded the least accurate results. The pattern of accuracy for ASD and TD groups are reversed, i.e., children with ASD performed worse on first-person reference terms than on the second-persons, while TD children performed in the opposite direction. Since personal reference terms in Thai have many internal dimensions, this presentation explores other possible factors that contribute to the accuracy rate. Results from the production task along with errors analyses for both tasks will also be presented.

Table 1 Participant Information

	ASD N=30	TD N=68
Male <i>N</i>	25	55
Age <i>M</i>	9;10	9
Age <i>Min</i>	6;7	6;1
Age <i>Max</i>	12;2	12;8
Ravens IQ <i>M</i>	30.53	36.93
Right-handed	28	65

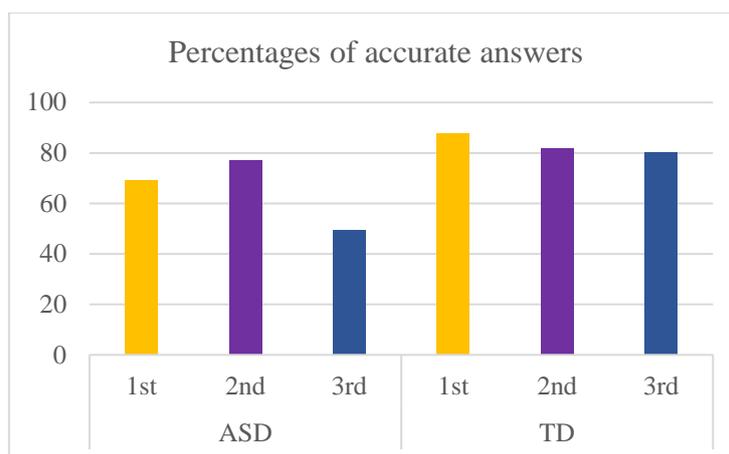


Figure 1. Percentages of accurate answers of different persons of personal reference terms across groups.

Discussion and Extensions: Based on Heim (1991)'s theory of lexical presuppositions and the results from Legendre et al. (2011), it is predicted that third-person pronouns yield lower performance than other persons because third-person pronouns lack lexical presuppositions, but rather contain implicated presuppositions, inferring that the addressee is non-participant. The preliminary analysis of the results in this study seems to support the theory since both of the participant groups performed worst in the third-persons, although children with ASD performed in a much lower accuracy rate. The analysis will also extend to the effect of deictic shifting in Thai and the properties of the personal reference terms being content or function words on the acquisition of personal reference terms in Thai. Comparisons between the production and comprehension task results will also be discussed.

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