**Verb Use in a Child Previously Diagnosed with ASD: Dense Recordings Reveal Typical and Atypical Development**

Research on children with autism spectrum disorder (ASD) has found that they tend to make more omission errors in marking progressive and past tense compared to typically developing (TD) children (Roberts, et al., 2004). However, past studies have been limited in using elicitation tasks and short-term spontaneous speech sessions. The Speechome Recorder (Roy, 2011) collects home-based dense, daily recordings of child-adult interactions, allowing the examination of the development of verb morphology in tense and agreement in one child, "Audrey," who was diagnosed with ASD at 22 months but no longer met diagnosis at 32 months. Our question was, did her language development 'match' her change in diagnosis?

The Speechome recorded Audrey's activities between the age of 33-37 months. Data collection yielded 35 sessions and 34.14 hours of recorded interaction. Transcripts were coded for verb use, including tense and verb-particle constructions ("I'm standing up.") Audrey primarily produced verbs in the present tense, with 83% of present tokens being correctly unmarked (e.g., "I want scissors"). Of the tokens referring to past events, 62% involved correctly marked irregular verbs and 21% correctly marked regular verbs (Table 1). Three instances of overgeneralizations, "throwed," "dided," and "broked" were produced.

Audrey used an unusual frame "I'm a verb" (e.g., "I'm a walk") to express future events (41 tokens and 20 verb types). While this frame has been found in African American English (Green, 2002), the family is not African American nor were there attested uses by the parents. Audrey also correctly produced "going to" (60 instances) and "will" (66 instances) frames to express the future. While preliminary analysis shows that caregivers used "going to" more than "will," ($M_{going\ to}$ = 23.5, $M_{will}$ = 15) Audrey nonetheless acquired "will," with it later becoming the dominant frame (Figure 1). Audrey's production of verb-particle constructions revealed 322 instances with 35 different verb types, consistent with findings that suggest verb-particles emerge at this age for TD children (Snyder & Stromswold, 1997).

Both atypical and typical language development was found. Audrey's focus on the present and use of more irregular past tense versus regular forms are comparable to TD children's tense use (Hoff, 2008; Brown, 1973). More importantly, her overgeneralizations suggest that she abstracted beyond the input and applied rule-based forms. Her use of verb-particle constructions also demonstrates that typical development was not limited to only tense. However, Audrey's production of the erroneous "I'm a verb" frame suggests some atypical development of future tense. With unattested findings of this frame and the absence of it in the preliminary analysis of the first 5 hours of a TD child, Samantha, it seems that it may be an innovation created by Audrey. Additional analyses involving Samantha will be needed to compare her tense use with that of Audrey's to determine whether the use of "I'm a verb" is remnant of ASD or whether it is a typical phenomenon that requires more dense sampling to be revealed.

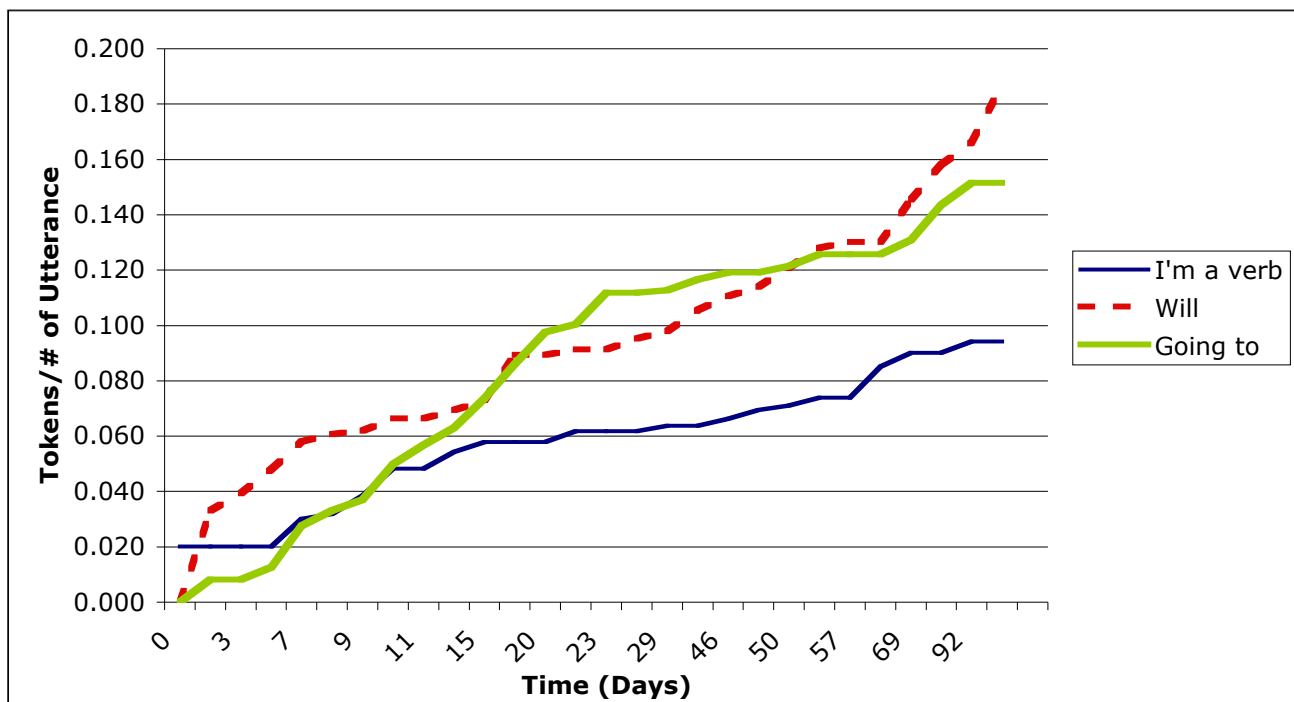| Verb Tense | | Tokens | % of Total | | | Tokens | % of Total |
|---|---|---|---|---|---|---|---|
| **Present** | **Total Present Tokens** | **4123** | 100 | | | | |
| **Correct:** | Unmarked | 3422 | 83.00 | **Errors:** | 3rd Person Singular | 38 | 0.92 |
| | Marked | 175 | 4.24 | | Infinitive | 23 | 0.56 |
| | Auxiliary +*verb*-ing | 296 | 7.18 | | (No Auxiliary) *verb*-ing | 132 | 3.20 |
| | **Total Correct** | **3893** | 94.42 | | Other | 37 | 0.90 |
| | | | | | **Total Incorrect** | 230 | 5.58 |
| **Past** | **Total Past Tokens** | **341** | 100 | | | | |
| **Correct:** | Unmarked | 19 | 5.57 | **Errors:** | Unmarked | 29 | 8.50 |
| | Irregular | 210 | 61.58 | | Overgeneralizations | 3 | 0.88 |
| | Regular | 73 | 21.41 | | Other | 7 | 2.05 |
| | **Total Correct** | **302** | 88.56 | | **Total Incorrect** | **39** | **11.44** |
| **Future** | **Total Future Tokens** | **155** | 100 | | | | |
| **Grand Total of Tokens** | | 4619 | | | | | |
| **% Present Tokens/Grand Total** | | | **89.26%** | | | | |
| **% Past Tokens/Grand Total** | | | **7.38%** | | | | |
| **% Future Tokens/Grand total** | | | **3.36%** | | | | |

Table 1. Distribution of verb tokens produced.



Figure 1. Uses of future tense.