

***Rendaku* and the Japanese *Goyo* Test**

Rendaku ('sequential voicing') is a productive Japanese morpho-phonological process which governs the voicing of the initial consonant of the non-initial portion of a compound or prefixed word (see examples in (1)-(5)). In this paper, based on pioneering work on Specific Language Impairment (SLI) in Japanese by Fukuda and Fukuda (F&F) (1994, 1999a, 1999b, 2001), it is hypothesized that SLI children will have more difficulties in applying *rendaku*, conjugating verbs, or using appropriate case markers than non-SLI children since the former apparently rely on explicit declarative memory in regulating such morphological/phonological processes whereas the latter rely on implicit procedural memory. To test the hypothesis, we developed a Japanese *goyo* ('language misuse') test (JGT) that can easily be applied to individual subjects as well as simultaneously to large groups of subjects. We argue that JGT can be used to help distinguish *potential* SLI candidates from non-SLI individuals. Theoretically, the test is based on work by Gopnik (1994), Tallal et. al. (1991), among others, who argue that whereas SLI individuals exhibit no difficulties with morphology applied in the lexicon, their ability to apply morphological rules outside of the lexicon is impaired (e.g., in English, the past tense marker *-ed* is often omitted).

JGT is divided into 3 parts: (i) new compound formation (*rendaku*), (ii) true and fake verbs inflection, and (iii) case marking. This paper will mostly discuss the first part of JGT (testing time 10 mins) and the results obtained on this scale. It is a merging task involving 2 and 3 member compounds in which the *rendaku* operation either should or should not apply. The test consists of 17 items arranged into 5 categories: (1) no voiced obstruents; (2) second compound contains a voiced obstruent (cf. Layman's Law); (3) first compound contains a voiced obstruent; (4) nonfrequent/novel compounds; (5) complex compounds (cf. the left branch constraint).

The second part of JGT (testing time 15 mins), which deals with inflectional morphology and Case particles, will be also discussed briefly. The inflectional forms considered in the second part of JGT are: Past, Past-negative, Progressive, Conditional, Desiderative, Passive, and Causative. The test items included 2 true verbs, one consonant-final, and one vowel-final (*kak-* and *tabe-*) as well as 4 novel/non-existing verbs (*furom-*, *hakur-*, *gugur-*, *per-/pe-*). We also tested inflections of 2 verbal adjectives and 2 adjectival nouns (e.g., *kirei*, *izui*). Additionally, we looked at the use of the dative Case marker *ni* and the use of Case particles in passive and causative constructions.

An experiment was conducted with 91 first grade students at a junior high school in Kanagawa prefecture, Japan. Of these, 4 bilingual students were excluded from the study. The mean age of the participants was 12 years. We expected average to good performance on all the scales by the majority of the group and a significantly lower performance by any SLI candidates, perhaps up to 5-7%, based on existent norms of Merrill Advanced Studies Center, USA. To this day, it seems that there have been no large scale screenings for SLI in standard Japanese primary or secondary schools. According to F&F (1999) it could be the case that 12 year old SLI children, if there were any in the addressed sample, would learn the frequently found compounds, but they will still have problems in using *rendaku* when combining new, previously unknown compounds.

The results did show a significant difference between a small minority (8%) of students who scored well behind the rest of the students on both frequent and novel compounds, and who might be considered as potential SLI subjects. However, a rather interesting and unexpected pattern also emerged: Contrary to F&F assumptions, a significant number (45%) of the students who scored well on frequent items chose not to apply *rendaku* at all in the case of nonfrequent (novel) compounds, even in contexts where the rule should have applied according to standard morpho-phonological theories of *rendaku*. In other words, we observed a significant individual difference among normal (non-SLI) speakers of Japanese with respect to nonfrequent (novel) compounds, a fact that apparently hasn't been addressed in previous discussions of *rendaku* in the developmental literature.

- (1) No voiced obstruents:
nise + kane → nise-gane
yae + sakura → yaezakura
- (2) Second compound contains a voiced obstruent:
onna + kotoba → onnakotoba (*onnagotoba)
- (3) First compound contains a voiced obstruent:
naga + kutsu → nagagutsu
- (4) Nonfrequent /novel compounds:
nise + tanuki → ?, hosi + suna → ?
- (5) Complex compounds □ cf. left branch constraint):
shin + [sakura + matsuri] → shinsakuramatsuri
[shin + sakura] + matsuri → shinzakuramatsuri

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