Information Structure of Relative Clause in Japanese and Mandarin

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Introduction  This paper discusses the relation between information structure and the order of relative clause (REL) and head noun (N), and proposes an explanation of why RELN order is not hard to process. In Japanese, the relative clause corresponds to assertion (focus) rather than presupposition, and the following head noun and main verb do not contribute to the main proposition of the sentence. Typical relative clauses which have been discussed mainly in English are rare in Japanese. In Mandarin, on the other hand, word order changes to resolve the processing difficulty; topicalized relative clauses are preposed and focused relative clauses are postposed, both of which are outside the main clause.

Japanese  Hawkins (1994) predicts that in RELN languages, heavy NPs tend to be preposed so that the hearer can process the sentence easily. Yamashita and Chang (2001) showed that this is actually the case in Japanese through production experiments and a corpus study. However, the corpus Yamashita and Chang (2001) used is relatively formal and might not reflect the tendency of everyday conversations. I measured the frequency of the head NP and the main verb in everyday conversations. I claim that relative clauses like Yamashita & Chang discussed are rare and that the function of relative clauses in everyday conversation is assertion which is followed by the head NP and possibly the main verb, which indicate background information. The corpus I used is the dialogue part of Corpus of Spontaneous Japanese, which is the largest corpus of spoken Japanese. I randomly selected four sessions, each of which consists of 10-minute conversation. After cleaning up the transcription using Perl scripts, I morphologically analyzed the transcription using MeCab and extracted relative clauses by the pattern ‘verb + noun’ using Perl. Finally, I annotated the lemma of the head NPs and the main verbs.

Result  I identified 239 relative clauses in the corpus. Figure 1 shows the 10 most frequent head NPs. Figure 2 shows the 10 most frequent main verbs, where only eight types are shown because the verb ‘there is’ corresponds to three types of verbs: *iru* ‘there is (animate)’, *aru* ‘there is (inanimate)’, and *(i)nai* ‘there isn’t’. As shown in Figure 1, the semantic content of the head NPs is light: ‘thing’, ‘person’, ‘place’, etc. As shown in Figure 2, the semantic content of the main verbs is also light: ‘there is’, ‘COP (copula verb)’, etc. In the two most frequent use of relative clauses the relative clause itself is a predicate or it functions as an adverbial clause (e.g., ‘when’, ‘before’, and ‘after’).

The claim that relative clauses are easy to process when the semantic content of the main clause is light is related to the observation in Gibson (1998), where relative clauses are easier to process when the embedded nouns are already accessible in the discourse. Given that one sentence generally conveys only one new proposition, in the case of sentences constituted from more than one clause, we can expect that only one of the clauses will actually convey new information. Extreme cases like (1), where the main verb is not explicitly uttered, clearly indicate that it is the relative clause that conveys the important content rather than the main clause.

(1)  L1: nanka tigaku-te syokku-mitaina koto ari-masi-ta
    ‘Are there something you got shocked because it’s different?’
Figure 1: Head NP (180 out of 239)

Figure 2: Main V (196 out of 239)

R3: tonikaku [hito-ga  arui-te-nai]-no-ga
   anyway  person-NOM walk-PROG-NEG-thing-NOM
   ‘The fact that nobody was walking on the street (shocked me).’

Mandarin In Mandarin, heavy relative clauses have to be postposed outside the main clause when they are foci and have to be preposed when they are topics. It seems difficult to process heavy relative clauses in the main clause except for wh-split in focus constructions. Focused heavy relative clauses has to be postposed outside the main clause. They cannot precede the main clause in this context. (2) is an example of heavy object relative clause.

(2) wǒ xǐhuān de shí nèi zhī bǐ, [Zhāng sān liǎng nián qián zài shūniúchéng gěi wǒ] de (néi I  like REL COP DEM CL pen Zhang  san two year before in Buffalo  gave me REL DEM zhī)
   ‘The one I like is that pen, the one Zhang-san gave me two years ago in Buffalo (not this pen).’

Topic heavy relative clauses, on the other hand, has to precede the main clause as in (3).

(3) [Zhāng sān liǎng nián qián zài shūniúchéng gěi wǒ] de néi zhī, wǒ xǐhuān néi zhī bǐ
    Zhang  san two year before in Buffalo  gave me REL DEM CL I  like DEM CL pen
    ‘Talking about the pen Zhang-san gave me two years ago in Buffalo, I like it.’

Unlike focused relative clauses, the content of the relative clause (in this case, that Zhang-san gave me the pen two years ago in Buffalo) is presupposed, i.e., it is assumed that the content is shared by the speaker and the hearer.

References