East Asian Relatives Revisited: On the Disunity between Gapped and Gapless Relatives

Relative clauses in Japanese, Korean, and Chinese have been controversial since a mixture of gapped (e.g. (1)) and gapless (e.g. (2)) relatives are found throughout ([1], [2], [3], [4], [6], [7], more recent ones). The central issue in this domain has been how best to characterize the two kinds of relatives. Syntactic approaches mainly deal with the former with operator movement or copy operation and treat the latter 'peripheral' (with [1] being an exception). In contrast, pragmatic approaches offer various uniform accounts subsuming the two under a set of common semantic-pragmatic factors. In any case, the past research were preoccupied with the presence/absence of a 'gap' (trace) and have not recognized or touched upon the significance of 'obligatoriness' of such a gap vis-à-vis the properties of head nouns.

Drawing mostly on Japanese data, this paper proposes a new approach that upholds the division between gaped and gapless relatives. Specifically, the latter is rendered as an appositive construction. The present account focuses not merely on the presence/absence of a gap but rather on *how obligatory* such a gap is. What determines OBLIGATORINESS here is the notion of argument saturation: The relatives in (1a,b) with a transitive verb (*kaku* 'write') are incomplete propositions (i.e. gap filling is semantically obligatory) but the clauses in (1c), (2), and (3) are complete, regardless of the possibility of locating a gap or not. In particular, the gap in (1c) is adverbial and optional and there would be no plausible gap in (2) or (3).

When different head nouns are coordinated, distinct patterns emerge modulo obligatoriness (gap optionality is indicated with parentheses): (i) head nouns corresponding to obligatory arguments (either the subject or object here) can be coordinated, e.g. (4a-c); (ii) head nouns corresponding to obligatory and optional elements separately cannot be coordinated, e.g. (4d); (iii) head nouns corresponding to a gapless head and optional element can be coordinated, e.g. (4e); (iv) even those corresponding to a gapless head and appositive noun can be coordinated, e.g. (4f), while those corresponding to an obligatory element and appositive noun cannot be coordinated, e.g. (4g). If a gap is obligatory, all the head/appositive nouns are forced to fill it, rendering (4d,g) semantically ill-formed. The coordination facts here are rather surprising if the division of gapped vs. gapless relatives is drawn merely based on presence/absence of gaps. But the patterns of head noun coordination are quite expected given that the division is attributed to obligatoriness of gaps vis-à-vis head nouns.

The account proposed. First, the examples with a gap (1a,b) and (4a,b) are regular noun modification and rendered as, e.g. (1a): $\lambda x[\textbf{write}'(\text{book}, x) \& \textbf{novelist}'(x)]$, i.e. a CN ($<e,t>$). The novelist is identified as the writer. Second, the instances requiring no gap (1c), (2), and (3) are appositives with the clauses being a nominalized proposition: $p \in D_{<s,t>} \Rightarrow {}^{\cap p}(p) \in D_{<e>}$ (following [5], ${}^{\cap p}(p) = [\iota^p: \forall w \in p, w \leq x^p]$ with 'ι' being a definite operator; a nominalized proposition is indicated by SMALL-CAPs). The appositive construction mediates (via pragmatically oriented Contextual-Relevance function establishing an appositive relation between the head noun and a nominalized clause based on the head noun semantics, cf. [3], [4], [7]) rendering (1c) as $\lambda x[\textbf{method}'(x) \& \text{C-Rel}(x)(x, \text{AUTHOR-WRITE-BOOK})]$ (where $\text{C-Rel}(x) = \text{MEANS}$, i.e. x is a method and means to achieve ${}^{\cap p}(p)$); (2) as $\lambda x[\textbf{book}'(x) \& \text{C-Rel}(x)(x, \text{READER-BECOME-SMART})]$ (where $\text{C-Rel}(x) = \text{EFFECTER}$, i.e. x is a book and an effecter for ${}^{\cap p}(p)$); (3) as $\lambda x[\textbf{fact}'(x) \& \text{C-Rel}(x)(x, \text{READER-BECOME-SMART})]$ (where $\text{C-Rel}(x) = \text{EQUALITY}$). Thus, (1c), (2), and (3) fall into the appositive category, accounting for (4).

Unlike in pragmatic accounts, 'relatives' are non-uniform, and 'gapless relatives' are not peripheral as in syntactic accounts. The gapped relatives belong to a filler-gap construction where a gap is filled obligatorily, while the so called 'gapless relatives' and even 'relatives' with optional gaps are appositives with no gap to be filled. If what is proposed here is correct, it not only significantly simplifies an account for relatives but also signals the end of one of the enduring disputes, namely, the one concerning gapped and gapless 'relatives'.

Data

(1) relative clause with a *gap* (aka a 'trace'):

a. [$_S$ *gap$_i$* hon-o kai-ta] sakka$_i$ b. [$_S$ sakka-ga *gap$_i$* kai-ta] hon$_i$
 book-ACC write-PAST novelist novelist-NOM write-PAST book
 'the novelist [that wrote the book]' 'the book [that the author wrote]'

c. [$_S$ sakka-ga hon-o (*gap$_i$*) kai-ta] hoohoo$_i$ (*gap* = adverb, i.e. optional)
 novelist-NOM book-ACC write-PAST method
 'the method [that the novelist wrote the book by]'

(2) relative clause without a *gap*: (3) appositive clause with 'fact'
[$_S$ atama-ga yokunar-u] hon [$_S$ atama-ga yokunar-u] zizitu
head-NOM become.good-PERS book head-NOM become.good-PERS fact
'the book [that (the reader) becomes smart]' 'the fact [that (someone) becomes smart]'

(4) 'head/fact-noun' coordination:

a. [$_S$ *gap$_i$* hon-o kai-ta][sakka to kyoozyu]$_i$ 'the novelist and professor [that wrote the book]'

b. [$_S$ sakka-ga *gap$_i$* kai-ta][hon to kizi]$_i$ 'the book and article [that the author wrote]'

c. [$_S$ (sorezore) *gap$_i$* *gap$_j$* kai-ta][sakka$_i$ to hon$_j$] 'the novelist [that wrote the book] and the book [the novelist wrote], respectively'

d. *[$_S$ sakka-ga *gap$_i$* (*gap$_j$*) kai-ta][hon$_i$ to hoohoo$_j$] '(Int.) the book [that the novelist wrote] and method [that the novelist employed writing the book]' (OK, if [hon to hoohoo]$_i$ i.e. both being the object)

e. [$_S$ atama-ga (*gap$_i$*) yokunar-u][hon to hoohoo$_i$] 'the book [that (the reader) becomes smart (reading it)] and method [that (the reader) becomes smart (due to it)]'

f. [$_S$ atama-ga yokunar-u][hon to zizitu] 'the book [that (the reader) becomes smart (reading it)] and fact [that (the reader) becomes smart]'

g. *[$_S$ *gap$_i$* hon-o kai-ta][sakka$_i$ to zizitu] 'the novelist [that wrote the book] and the fact [that he did so]' (likewise for an object gap)

References

[1] Ishii, Toru. (2017) Japanese "Gapless Relatives Clauses": A Movement Approach. Paper given at CLS 53.

[2] Kubota, Yusuke & Jungmee Lee. (2015) The Coordinate Structure Constraint as a discourse-oriented principle: Further evidence from Japanese and Korean. Language 91, 642-675.

[3] Lee, Jeong-Shik & Chungmin Lee. (2012) Gap in "gapless" relative clauses in Korean and other Asian languages. Proceedings of the 26th Pacific Asia Conference on Language and Computation, 640-645.

[4] Matsumoto, Yoshiko (1997) Noun-modifying construction in Japanese. Amsterdam: John Benjamins.

[5] Potts, Christopher. (2002) The lexical semantics of parenthetical-as and appositive-which. Syntax, 55-88.

[6] Tsai, Hui-Chin Joice (2008) On gapless relative clauses in Chinese. Nanzan Linguistics: Special Issue 5, 109-124.

[7] Yoon, Jae-Hak (1995) The semantics of relative clauses in Korean. In Noriko Akatsuka (ed.), Japanese/Korean Linguistics Vol. 4. Stanford: CSLI, 413-428.