Illusionary disjunctive interpretations for DP conjunctions

(1a) is construed as (1b); thus, the denotations of Japanese phrases like a ya b and a, b nado are understood to be (2). Hereafter, we refer to a phrase like these as DP$^{\text{conj}}$. In some cases, however, DP$^{\text{conj}}$ receives a disjunctive interpretation. (3a), for example, is construed as (3b) in addition to (3c), suggesting that it may be interpreted as (4).

This paper argues that the disjunctive interpretation associated with DP$^{\text{conj}}$ is illusionary. To this end, we demonstrate (I) and (II).

The evidence for (I) obtains when we compare conditionals to other complex sentences. For example, (5a) allows DP$^{\text{conj}}$ to take either the matrix IP or the embedded IP as its scope; thus, it is associated with (5b) and (5c). But DP$^{\text{conj}}$ in (5a) does not appear to denote (4) in either case. Given that DP$^{\text{conj}}$ can take the matrix IP as its scope, (3a) should also have the wide scope interpretation in (6), and this is consistent with the fact that DP$^{\text{conj}}$ in the embedded clause can bind a DP in the matrix clause, see (7). Notice that (6) is logically equivalent to (3b) while (5c) is not to (8). We thus conclude that DP$^{\text{conj}}$ appears to have its disjunctive interpretation when it takes the matrix IP as its scope via logical equivalence.

The next question is how to derive this wide scope interpretation. First, quantifier-raising in the sense of May 1977 and its variants do not give rise to it. (9) is taken to mean that each instance of earthquake or disaster dispatched two or more fire-fighter teams, suggesting that mittu-no zisin and tatsu-no saigai can be construed as a quantifier. However, when they are placed in the embedded clause of the conditional above, their scope is restricted to the embedded IP. (10), for example, cannot mean that the alarm operates after each disaster.

Second, the reading under discussion is not due to focus-movement in the sense of Chomsky (1976). The phrases said to undergo focus-movement are marked with A-accent in the sense of Jackendoff (1972). One of the situations that accommodate A-accent is when the speaker is asked to choose one proposition out of possible answers (cf. Rooth 1985), and one such situation is (11). In Japanese, the accent pattern most suitable in (11) is (12) (where the emphatically accented mora is capitalized), the one in which the emphatic accent falls on the DP that denotes the relevant individual. If the same accent pattern is employed for DP$^{\text{conj}}$, however, the disjunctive interpretation disappears. With (13), for example, Mika cannot be rest assured unless both Taro and Jiro quit.

Luckily, however, by further examining the possible accent patterns for the sentences under discussion, we obtain a clue to the current issue. Jackendoff (1972) points out the contrast between (14) and (15) and maintains that in discussing focus, we must acknowledge another accent pattern called B-accent, characterized with the fall-rise. In accounting for the contrast, Büring (2003) assumes that sentences including an A-accented phrase presuppose a set of propositions (cf. Rooth 1985) and those with a B-accented phrase a set of questions. The locations of A- and B-accents play a role in determining what forms the propositions and questions have, respectively, in such a way that Fred ate the beans A presupposes (16), and Fred ate the beansB (17). The contrast between (14) and (15) is thus expected.

Hayashishita (2007) recognizes two accent patterns in relation to focus in Japanese. Besides the above mentioned pattern, the emphatic accent may fall on the case-marker of a DP (henceforth B-accent), and they are said to correspond to A- and B-accents in English, respectively. In fact, when the Japanese counterpart of who ate what? is replied with a pair-list answer, the sorting key items may employ B-accent but not the other focus accent. Hayashishita (2007) furthermore notes that in adopting Büring’s assumptions, cases where a plural-denoting DP employs the B-accent are problematic. For example, the context in (18) makes (19) felicitous, but the individuals under consideration are alternative not to John and Bill, but to John or Bill. As a solution to the problem, Hayashishita claims that (19) is the shorthand of (20a) and (20b) – in uttering (19), the speaker interprets (20a) and (20b) instead.

We claim that the wide scope interpretation for DP$^{\text{conj}}$ above is associated with a sentence α because α is the shorthand of two or more other sentences. For instance, (3a) is associated with (6) (↔ (3b)), because it is the shorthand of, for example, (21a), (21b), and (21c), where X in (21c) is another member of the set relevant to the context. One piece of evidence is that (22) facilitates the disjunctive interpretation, contrasting with (13) and its variant where the DP does not employ any focus accent. In addition, (22) is felicitous in the context of (23), and in fact the most suitable among the three accent patterns.

In sum, the disjunctive interpretations for DP$^{\text{conj}}$ are illusionary but may pose a serious challenge to the fundamental assumption of generative grammar in regard to sentence interpretation.


(1) a. {kazi ya zisin / kazi, zisin nado}-ga okotta.
   ‘(Last year) things like a fire and an earthquake occurred.’
   b. \( \exists X \( X \text{ is a set including a fire and an earthquake} \) \forall x (x \in X) [x \text{ occurred}] \)

(2) \( \lambda P \exists X (X \text{ is a set including } a \text{ and } b) \forall x (x \in X) P x \)

(3) a. {kazi ya zisin / kazi, zisin nado}-ga okottara kono keihooki-ga sadoosuru (hazuda).
   ‘If things like a fire and an earthquake occurs, this alarm (should) operate.’
   b. \( \exists X (x \text{ is a set including a fire and an earthquake}) \exists x (x \in X) [x \text{ occurred}] \rightarrow \text{this alarm operates} \).
   c. \( \exists X (x \text{ is a set including a fire and an earthquake}) \forall x (x \in X) [x \text{ occurred}] \rightarrow \text{this alarm operates} \)

(4) \( \lambda P \exists X (X \text{ is a set including } a \text{ and } b) \exists x (x \in X) P x \)

(I) \( \text{DP}^{\text{conj}} \text{ appears to denote (4) only if the interpretation where the scope of DP}^{\text{conj}} \text{ is } IP_1 \text{ in } [IP_1 \ldots [IP_2 \ldots DP\text{ conj} \ldots ] \ldots ] \text{ and it is construed as (2) is logically equivalent to the interpretation where the scope of } DP^{\text{conj}} \text{ is } IP_2 \text{ and it is construed as (4).} \)

(II) The interpretation where \( DP^{\text{conj}} \text{ takes } IP_1 \text{ as its scope in } [IP_1 \ldots [IP_2 \ldots DP^{\text{conj}} \ldots ] \ldots ] \text{ is not derived by any grammatical scope-shifting operation; it involves pragmatic factors.} \)

   ‘We held a big farewell party when people like Mr. Kato and Mr. Suzuki retired.’
   b. \( \exists \forall X (X \text{ is a set including Kato and Suzuki}) \forall x (x \in X) [x \text{ retired } t] \) [there was a big farewell at t].
   c. \( \exists X (x \text{ is a set including Kato and Suzuki}) \forall x (x \in X) \exists t [x \text{ retired } t] \) [there was a big farewell at t].

(6) \( \exists X (x \text{ is a set including a fire and an earthquake}) \forall x (x \in X) [x \text{ occurred}] \rightarrow \text{this alarm operates} \)

(7) \( \{\text{kazi ya zisin / kazi, zisin nado}\}-ga okottara sore-no keihooki-ga sadoosuru (hazuda). \)
   ‘If things like a fire and an earthquake occur, their alarms (should) operate.’

(8) \( \exists \forall X (X \text{ is a set including Kato and Suzuki}) \exists x (x \in X) [x \text{ retired } t] \) [there was a big farewell at t].

(9) \( \{\text{Mittu-no zisin / Tasuu-no saigai}\}-ga hutatuizyo-nosyoobootai-o syutudoosaseta. \)
   ‘Three earthquakes / Many disasters} dispatched two or more fire-fighter teams.’

(10) \( \{\text{Mittu-no zisin / Tasuu-no saigai}\}-ga okottara, kono keihooki-ga sadoosuru (hazuda). \)
   ‘If three earthquakes / many disasters} occur, this alarm (should) operate.’

(11) The speaker is asked to provide the answer for who made that delicious cake, Taro, Jiro or Mari.

(12) TARoo-ga ano keeki-o tukutta (no desu). ‘Taro made that cake.’

(13) The question raised is whose resignation makes Mika at peace. ‘The speaker considers the relevant individuals one by one. Does Taro’s resignation do? How about Jiro’s? Then she replies.

(14) Q: Who ate what? Well what about Fred? What did he eat?
   A: Fred\text{B/A} ate the beans\text{A/B}.

(15) Q: Who ate what? Well, what about the beans? Who ate them?
   A: Fred\text{B/A} ate the beans\text{A/B}.

(16) \{\{x \text{ ate } y \mid y \in D_e\} \mid x \in D_e\}, \text{ e.g., } \{\text{what did Fred eat?, what did Mary eat? } \ldots \}

(17) \{\{x \text{ ate } y \mid x \in D_e\} \mid y \in D_e\}, \text{ e.g., } \{\text{who ate the beans?, who ate the eggplant? } \ldots \}

(18) The question raised is who participated in the party. The speaker considers the individuals relevant to the context one by one. Did John go? Did Bill participate? How about Ken? Then she replies.

(19) John to Bill-GA sankasita. ‘John and Bill participated.’


(21) a. Kazi-ga okottara kono keihooki-ga sadoosuru (hazuda).
   b. Zisin-ga okottara kono keihooki-ga sadoosuru (hazuda).
   c. X-ga okottara kono keihooki-ga sadoosuru (hazuda).

(22) TARoo ya Jiroo-GA yametara, Mika-ga ansinsuru daroo. (Cf. (13).)

(23) The question raised is whose resignation makes Mika at peace. ‘The speaker considers the relevant individuals one by one. Does Taro’s resignation do? How about Jiro’s? Then she replies.