Maximality Mimics Exhaustivity: A Case Study of *Dake* 'only' in Japanese

Different semantics strategies sometimes lead to the interpretations that are indistinguishable (e.g., a definite plural vs. a universal quantifier). In this talk, I present another such case: the apparent exhaustive expression *dake* 'only' in Japanese. Kuno (1999) and Yoshimura (2007) noted some instances where the exhaustive meaning of *dake* is much weaker than that of the other 'only', the NPI *sika...nai*. Previously unnoticed, however, is the effect of clefting: the clefted *dake* exhibits the exhaustivity comparable with the NPI 'only'. The relevant paradigm is shown below.

(1) Context: *Why didn't Daisuke get that job?*
    a. ?? nihongo-dake   hanas-eru-kara-desu.
        Japanese-DAKE speak-can-because-be

        'Intended: Because he can speak only Japanese.'
    b.   nihongo-shika   hanas-e-nai-kara-desu.
        Japanese-SHIKA speak-can-Neg-because-be

        'Because he cannot speak any languages other than Japanese.'
    c.   hanas-eru-no-ga   nihongo-dake-da-kara-desu.
        speak-can-NML-Nom Japanese-DAKE-be-because-be

        'Because Japanese is the only language that he can speak.'

The use of an 'in-situ' *dake* in (1a) is surprisingly inadequate in the context above, while *sika...nai* and the clefted *dake* are perfectly felicitous. Kuno's and Yoshimura's accounts are similar in that they take the exhaustive meaning of *dake* to be secondary or not-at-issue. Both authors take it for granted that the exhaustivity is a part of the meaning of *dake*, and the critical issue for them is what kind of meaning category it belongs to. I offer an alternative analysis in which the exhaustivity (= the negative quantification over non-weaker alternatives in the sense of Fox 2007) is all together absent in *dake*. I argue that the exhaustive-like meaning has a root in its use as a degree expression, roughly paraphrased as 'the extent of', which is strengthened by the maximization commonly associated degree expressions (cf. von Stechow 1984, Rullmann 1995).

    Historically, *dake* derives from *take*, which means 'height' or 'length' (cf. Futagi 2004), and its degree meaning is well retained to this day in such expressions as *dekiru-dake*, can.do-dake, 'as much as possible', *dore-dake*, which-dake, 'how much/many, to what extent', *moteru-dake-no yasai*, can.hold-dake-Gen vegetable, 'as many vegetables as one can hold', etc. (Incidentally, there are other exhaustive-like expressions that are also degree-based: *X-bakari* 'only X' comes from the verb *hakaru* 'to measure', *X-kagiri* 'X (and no more than X)' is derived from *kagiru* 'to limit'.) Under the degree analysis of *dake*, *X-dake* is roughly paraphrased as 'up to X' or 'as many/much as X'. The proposed interpretation of *dake* is (2a), which in effect gives the definite plural denotation for the second argument (=P).

(2)   a. $\| \text{dake} \| = \lambda x.\lambda P.\ \max(P) = x$
      b. $\| \text{Mari-dake-ga kita (Mair-dake came)} \| = 1$ iff the maximal entity that came is Mari.

    The degree account must be augmented with an additional ingredient, however. Consider the following example.

(3)   a. Aya-to Saki-to Eri-dake-ga   shiken-ni ukat-ta.
         Aya-and Saki-and Eri-DAKE-Nom exam-Dat passed-Past
    b. The maximal individuals who passed the exam are Aya, Saki and Eri.

(3b) is compatible with a situation where Aya, Saki and Eri are all the students who took the exam. Clearly, (3a) is totally inappropriate in such a situation. To derive the infelicity of (3a), I adopt the 'mirative' analysis

of focus particles in English by Zeevat (2009), who argues that the semantic contribution of some of the focus particles is the sense of surprise/unexpectedness: *even* means more than expected, *only*, less than expected, *already*, earlier than expected, *still*, later than expected, etc. I suggest that a sentence with *dake* elicits the meaning that the argument of *dake* was less than expected/some salient standard of comparison. With this additional meaning, the interpretation of (3a) is 'the maximal individuals who passed the exam are Aya, Saki and Eri, and it was less than expected (e.g., more people were expected to have passed)'.

Obviously, the meaning of *dake* is similar to that of 'only'. As far as the truth conditions are concerned, they are practically identical. However, *dake* lacks the explicit negative quantification over the alternatives, which accounts for the weakness of the exhaustive meaning associated with *dake*. Let us next examine why the clefted *dake* elicits the kind of exhaustivity comparable to *sika...nai*. First, the cleft construction involves focus, and when *X–dake* is in the focus position of a cleft sentence, it evokes a sense of contrast with 'X as well as some others'. In other words, it is a case of polar contrast, as illustrated below.

(4) a. ukat-ta   no-wa   Eri-dake-desu.
         pass-Past NML-Top Eri-DAKE-be
     b. {Eri is the maximal of those who passed, Eri is not the maximal of those who passed}

Of the two alternatives, the former is chosen, and the latter is negated. This has the same effect as; (i) generate a set of scalar alternatives; $X, X \oplus Y, X \oplus Z, X \oplus Y \oplus Z$, and (ii) negate all except X. Therefore, cleft sentences with *dake*–phrases as their foci become equivalent to the usual semantics of *only*, which involves the negation of all the non-weaker alternatives.

The proposed analysis has many other advantages. The unexpected behavior of *dake* in a conditional sentence, noted by Kuno (1999), is no longer a surprise.

(5) sekai-ryokou-o   suru-niwa,   eigo-dake   hanas-er-eba ii
     world-travel-ACC do-in.order.to English-DAKE speak-can-if good
     'In order to make an around-the-world trip, it is all right as long as (you) can speak English.'

If you replace *dake* with *sika...nai*, the sentence becomes infelicitous, just as the case with the English 'only'. The degree semantics can make sense out since it means, 'in order to make an around-the-world trip, if the maximal language that you speak is English, it is good (enough)'. Another interesting consequence is that *dake* is no longer focus-sensitive. While nothing can prevent it from being focused, the meaning of *dake* does not require a focus semantic value of its argument. This aspect of the analysis is in accordance with the experimental result of Kitagawa et al (2013), which shows that *dake*–phrases do not induce focus intervention effects at all, contrary to the predictions made by all the previous analyses including Beck 2006 and Tomioka 2007. If *dake* does not require the generation of focus alternatives, however, there is no obvious reason to expect it to act as an intervener, and the Kitagawa et al's result is accounted for. It is also correctly predicted that *dake* and *sika...nai* can be combined (cf. Erlewine 2011). The combination of the two expressions does not involve the doubling of exhaustivity, as *dake* is merely a degree expression.

Partial References

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