Decomposing Question in Dagaare

Ken Hiraiwa &Adams Bodomo
Meiji Gakuin University & Universität Wien

1. Introduction—Disjunction Particle or Question Particle?: A number of languages show morphological affinity between disjunction and question (Larson 1985, Hagstrom 1998, Jayaseelan 2001, 2008, Han and Romero 2004, Erlewine 2012). In the Malayalam example in (1a), the disjunction suffix attaches to the verb and the sentence yields the yes/no question interpretation. Similarly, in Dagaare (a Gur language spoken in Ghana), yes/no question and alternative question require the particle *bee*, which is homophonous with the disjunction particle *bee* (or its allomorph), as shown in examples (2a)–(2c).

(1) Malayalam (Jayaseelan 2001, 67, 70)

a. John wannu-*(w)oo*?
John came-Disj
'Did John come?' (Yes/No Question)

b. ñaan John-ine-*(y)oo* Bill-ine-*(y)oo* kaNDu.
1Sg John-Acc-Disj Bill-Acc-Disj saw
'I saw John or Bill.' (Logical NP-Disjunction)

(2) a. Fo na di la saabo *bee*?
2Sg Fut eat F TZ Disj
'Will you eat TZ?' (Yes/No Question)

b. Fo na di la saabo *bee* fo na dii la fufu? (**bee*)
2Sg Fut eat F TZ Disj 2Sg Fut eat F fufu Disj
'Will you eat TZ or will you eat fufu?' (Alternative Question)

c. N na di la saabo *bee* fufu (**bee*).
1Sg Fut eat F TZ Disj fufu Disj
'I will eat TZ or fufu.' (Logical NP-Disjunction)

Building on the morphological identity of *-oo* in disjunction and question in Malayalam, Jayaseelan (2001, 2008) argue that *-oo* is indeed a question operator in question. The question to ask is whether *bee* in Dagaare functions as a question operator (just as in Malayalam) or only as a disjunction operator.

2. A Puzzle: Alternative Question in Dagaare presents an interesting puzzle. In a matrix clause, NP-disjunction does not yield an alternative question reading (a wide-scope reading of the disjunction in Rooth and Partee 1982 and Larson 1985), while clausal disjunction does, as shown in examples (3a)–(3b). In contrast, In an embedded clause, NP-disjunction readily yields an alternative question reading, as shown in examples (4a)–(4b).

(3) a. Fo na di la [saabo *bee* fufu]?
2Sg Fut eat F TZ Disj fufu
*'Will you eat TZ or fufu?' (*Alternative Question)

b. [Fo na di la saabo] *bee* [fo na di la fufu]?
2Sg Fut eat F TZ Disj 2Sg Fut eat F fufu
'Will you eat TZ or will you eat fufu?' (✓Alternative Question)

(4) a. N ba bɔng kà fo na di la [saabo *bee* fufu]?
1Sg Neg know C 2Sg Fut eat F TZ Disj fufu
'I don't know whether you will eat TZ or fufu.' (✓Alternative Question)

b. N ba bɔng [kà fo na di la saabo] *bee* [kà fo na di la fufu]?
1Sg Neg know C 2Sg Fut eat F TZ Disj C 2Sg Fut eat F fufu
'I don't know whether you will eat TZ or you will eat fufu.' (✓Alternative Question)

Han and Romero (2004), building on Schwarz (1999), argue that the alternative question reading of NP disjunction such as 'Do you drink coffee or tea?' in English is derived from gapping/ellipsis 'Do you drink coffee

or ~~do you drink~~ tea?'. Given the absence of gapping and pro-drop in general in Dagaare as shown in examples (5), however, their analysis comes in counter with the availability of the wide-scope reading of *bee* in (4a) in Dagaare. How does the relevant interpretation obtain in (4a), btut not in (3a)?

(5) a. *(~~I~~o) dire la saabo bee?
2Sg eat.Imp F TZ Disj
'Are you eating TZ?'

b. *Dakoraa gaa la Boston (kyɛ) ka Dɛre ~~gaa~~ New York.
Dakoraa go.Perf F Boston and C Dɛre go.Perf New York
'Dakoraa went to Boston and Dɛre went to New York.'

3. Decomposing Question: As a key to solving the puzzle, we first argue that *bee* in question (2a)–(2b) is the same species as *bee* in disjunction (2c). Example (2b) is direct evidence, showing that *bee* is never repeated in each disjunct in alternative question. In fact, *bee* can only appear once between two disjuncts and this is indeed parallel with ordinary NP disjunction, as shown in example (2c). Rather, *kà* is repeated in each disjunct. This suggests that what has Q force is in fact *kà*, not *bee*.

(6) N ba bɔng [kà$_{[Q]}$ o ɔɔrɔ la nɛne] *bee*$_{[Disj]}$ [kà$_{[Q]}$ o ɔɔrɔ la bɛngɛ].
1Sg Neg know C 3Sg eat.Imp F meat Disj C 3Sg eat.Imp F beans
'I don't know whether he is eating meat or he is eating beans.'

We propose a syntactic decomposition of question in (7).

(7) Question is composed of Question Force [Q] and Disjunction.

English presents the most transparent morphological evidence for (7). As Larson (1985) and Jespersen (1904–49) claim, the question complementizer *whether ... or ...* can be decomposed into wh/Q force, disjunction operator *either*, and disjunction *or*.

(8) *whether ..... X or Y* → wh$_{[Q]}$+either ..... X or$_{[Disj]}$ Y

4. Solving A Puzzle: We argue that the structure (8) is universal, but it has a different overt realization in Dagaare. Specifically, in Dagaare, Q force is indicated by the question complementizer *kà*, disjunction operator EITHER is silent (see Kayne 2005), and disjunction is marked by *bee*.

(9) Embedded Question: kà$_{[Q]}$ ..... X bee$_{[Disj]}$ (Y)

Support for such a syntactic relation between Q and disjunction is provided by (10). Note that the disjunction is embedded within the DP and an alternative question interpretation is not possible. Such an island effect indicates that there is syntactic dependency between Q-complementizer *kà* and the disjunction.

(10) ?*N ba bɔng [$_{CP}$ kà$_{[Q]}$ fo nyɛ la [$_{DP}$ [Chomsky bee$_{[Disj]}$ Halle] yiri]].
1Sg Neg know C 2Sg see.Perf F Chomsky Disj Halle house
'I don't know whether you saw Chomsky's or Halle's house.'

The asymmetry between matrix and embedded question results from the absence of syntactic Q-morpheme in the former. In Dagaare, matrix question has the following surface form.

(11) Matrix Question: ∅ ..... X bee$_{[Disj]}$ (Y)

In fact, two disjoined CP clauses are interpreted ambiguously as a declarative statement or as an alternative question, as shown in example (12).

(12) Zenɛ [te die-deme na ɔɔ la bengɛ] *bee* [te na ɔɔ la singkaafa].
today 1Pl house-own.Pl Fut chew F beans Disj 1Pl Fut chew rice
'Today our family will eat beans or we will eat rice.' 'Today will our family will eat beans or will we eat rice?'

It follows that the question meaning comes from prosodic factors in matrix question, in contrast with embedded question. Thus, because of the absence of the Q-morpheme, the syntactic dependency necessary for the wide-scope reading is missing in the Dagaare matrix question (3a).

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