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Should I move for focus or for contrastive topic?

1 Introduction

Kamali and Krifka ("K&K") propose an analysis of focus and contrastive topic in declaratives and in questions, based on data from Turkish, within the framework of commitment space semantics (Krifka 2015). Turkish is relevant because focus and contrastive topic are marked differently from one another in polar questions: prosodically and with a segmental morpheme *-mI* for focus, only prosodically for contrastive topic (Kamali and Büring 2011). And while focus and contrastive topic have been studied in detail in declaratives, they have received less attention in other types of sentences. This is a gap that K&K propose to fill.

The task of accounting for the morphophonological, syntactic, semantic and pragmatic properties of focus and contrastive topic is by no means an easy challenge and the authors are able to cover the empirical ground that they set out to cover, and they do so in a technically elegant way (albeit one with a learning curve). This commentary is thereby less of a rebuttal than an extension of K&K's system to novel cases and an exploration of the consequences of doing so.

I concentrate on an asymmetry in K&K's treatment of focus and contrastive topic, which is that the former is handled in situ, while the latter involves movement. The first observation that I make is that expressions of many syntactic categories and semantic types may be contrastive topic marked (adjectives, sentences, etc.). All such expressions have to be moved, and the resulting structures, interpreted. While this is technically feasible, not all contrastive topic marked expressions move, and moreover, we would need a very flexible semantics for contrastive topic for the composition to work out. The second question that I raise is whether this asymmetry has to be that way, especially given evidence (and K&K's assumptions) that it might rather be contrastive topic that should be treated in situ in Turkish, and focus through movement. Indeed, contrastive topic

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may mark expressions that are inside islands for movement. This suggests but does not necessitate an in situ analysis, but extending K&K's account to handle such cases while keeping to a movement based analysis makes a wrong prediction. Turning to focus, there is a positive correlation between the expressions that the morpheme *-mI* (which K&K assume is a focus marker) may attach to, and ones that are moveable. This in turn suggests (but does not necessitate) a movement based approach to focus.

2 Empirical and theoretical overview

What we will need is an overview of:
– How to identify focus and contrastive topic in Turkish,
– How to compositionally derive the meaning of sentences containing focus and contrastive topic marked expressions.

Focus and contrastive topic highlight certain expressions in an utterance, and they impose restrictions on when that utterance is good to utter. I will refer to this highlighting as F- and CT-marking, respectively, and use the subscripts F and CT to indicate it on an expression in examples.

F- and CT-marked expressions are in some sense prominent. What prominence means here is ususally prosodic prominence, but segmental morphemes or syntactic displacement help identify focus and contrastive topic as well. There is variation both across languages and within a language in terms of how these markings are realized. And it makes little sense to talk about F- and CT-marking and their realization without making reference to their interpretation.

An utterance like (1b), where "Ali" bears a high tone on its stressed final syllable, and where the utterance is low and flat throughout the rest, is felicitous as an answer to a question like (1a), where a *wh*-word questions the subject. It would be infelicitous, for example, to utter (1c) instead, the same string as (1b) but where prominence marks the direct object.

(1)   a.   Kim iskambil oynadı?
           who cards   played
           Who played cards?
      b.   Ali$_F$ iskambil oynadı.
           Ali cards   played
           Ali played cards.
      c.   #Ali iskambil$_F$ oynadı.

In both (1b) and (1c), the F-marked constituent is signaled prosodically. On the interpretive side, an utterance that contains an F-marked constituent is only felicitous if the immediately preceding discourse context contains a congruent question, where 'congruent,' for simplicity, amounts to asking "Who is x such that x played cards?" When such a question has not explicitly been uttered, it may be accommodated.

CT-marking is very similar to F-marking in terms of being marked by prominence and imposing a congruence requirement, but there are differences in terms of how the marking is realized and what the question is that CT is congruent with. In (2c), the expression "Ali" is CT-marked. This is manifested by the fact that "Ali" bears a high tone on its stressed syllable, that there is a break after it, and also by the fact that the (F-marked) direct object "iskambil" is also accented. This utterance is felicitous as a response, specifically a partial answer, to a conjoined question like (2a), but infelicitous as the answer to a question about only Ali, like the one in (2b).

(2) a. Ali ne   oynadı, ve Merve ne   oynadı?
         Ali what played and Merve what played
         What did Ali play? and what did Merve play?
     b. Ali ne   oynadı?
         Ali what played
         What did Ali play?
     c. Ali$_{CT}$ iskambil$_F$ oynadı.   [✓ after (2a), # after (2b)]
         Ali   cards   played
         Ali played cards.

Here too, a CT-marked constituent is signaled prosodically, but the marking is different from F-marking. On the interpretive side, CT-marking requires there to be a congruent question as well, but where congruence is with a conjoined *wh*-question. Notice that instead of explicitly conjoining two questions, as in (2a), one simply could have asked "What did Ali and Merve play?" or "Who played what?" Both of these questions license CT-marking on the subject as well.

In Turkish the difference between F- and CT-marking is perhaps clearest in polar questions. In (3), the focus is "Ali." This is indicated by a conjunction of phenomena: the position of the clitic *-mI*, main sentential prominence on "Ali" and a low intonational phrase boundary (L%) at the end of the utterance.

(3) Ali$_F$ mi   iskambil oynadı?
     Ali   POLQ cards   played
     Is it Ali who played cards?

The particle *-mI* can be sentence final (among other positions in the sentence, which I return to), and is taken by K&K to then focus an abstract polarity head, which I represent as 'POL$_F$' below. Importantly, such sentences also end in L%.

(4)   Ali iskambil oynadı POL$_F$ mı?
       Ali cards   played   POLQ
       Did Ali play cards?

Example (5), on the other hand, involves CT-marking on "Ali". "Ali" again bears main sentential prominence but now the utterance ends in a high boundary tone (H%).

(5)   Ali$_{CT}$ iskambil oynadı POL$_F$ mı?
       Ali   cards   played   POLQ
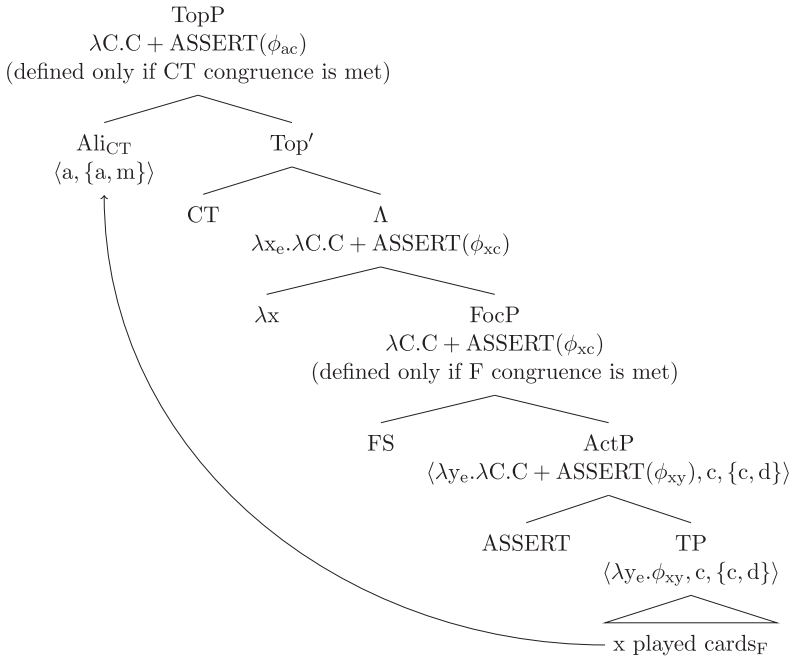   (What about Ali,) did Ali play cards?

The main point here is that F- and CT-marking may be teased apart on the basis of differences in felicity conditions that they impose, and of how that marking is overtly realized.

K&K propose to account for the felicity conditions imposed by focus and contrastive topic within the framework of commitment space semantics. This is a model of discourse that records, sequentially, discourse participants' common ground, what speech act has been performed, and given this, what subsequent discourse moves are felicitous. For present purposes, it suffices to say that the discourse context (the 'commitment space') is updated through the lexical semantics of various left-peripheral heads in the syntax. Speech act operators update the context with the information that an assertion has been made, a question, asked, etc. Focus and contrastive topic are handled through operators FS and CT, which introduce the presupposition that the context contains a congruent question.

The overall architecture is illustrated in (6), with the derivation of the sentence "Ali$_{CT}$ played cards$_F$."[1] I leave out most of the details of the composition, but the reader may observe that focus is handled in situ (a focus meaning percolates up the tree and is discharged by FS) and contrastive topic involves raising of the CT-marked expression.

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1 Key: a for Ali, m for Merve, c for cards, d for dominos, ϕ_{xy} for x played y; capital C for commitment spaces and subscript C for the type of commitment spaces (sets of sets of propositions).

(6) Ali_{CT} played cards_{F}.

$$
\begin{array}{c}
\text{TopP} \\
\lambda C.C + \text{ASSERT}(\phi_{\text{ac}}) \\
\text{(defined only if CT congruence is met)}
\end{array}
$$

with daughters:

Ali_{CT} $\langle a, \{a, m\} \rangle$ and Top′

Top′ has daughters CT and Λ: $\lambda x_e.\lambda C.C + \text{ASSERT}(\phi_{\text{xc}})$

Λ has daughters λx and FocP:

$$
\begin{array}{c}
\text{FocP} \\
\lambda C.C + \text{ASSERT}(\phi_{\text{xc}}) \\
\text{(defined only if F congruence is met)}
\end{array}
$$

FocP has daughters FS and ActP: $\langle \lambda y_e.\lambda C.C + \text{ASSERT}(\phi_{\text{xy}}), c, \{c, d\} \rangle$

ActP has daughters ASSERT and TP: $\langle \lambda y_e.\phi_{\text{xy}}, c, \{c, d\} \rangle$

TP dominates: x played cards_{F}

– The TP introduces the sentence's propositional core. It contains the type e trace "x" of CT-marked and raised "Ali." Its denotation is a triple of the form $\langle \text{background}, \text{focus}, \text{alternatives} \rangle$ which is a structured meaning used to handle focus semantics (Krifka 1992). The background $\lambda y_e.\phi_{\text{xy}}$ applied to the focus "c" (for "cards") results in the sentence's ordinary semantic value, the proposition that x played cards. Alternatives to the sentence are obtained by applying the background to each one of the alternatives: that x played cards, that x played dominos.
– Above the TP, a speech act operator ASSERT introduces the instruction to update the context C with the proposition that x played y. This is in the background, the focus and the alternatives remain unchanged.
– FS is an operator that takes background-focus-alternative triples and applies the background to the focus. The operator denotes a partial function which is defined only if the context contains a question of the form "What did x play?" where this question is obtained by applying the background to each one of the alternatives.
– If the sentence contains a contrastive topic, the derivation proceeds by lambda-abstracting over the trace of the CT-marked expression. CT-marked

expressions denote ⟨background, alternative⟩ pairs at their landing site. And the CT operator takes the abstract and the pair as its input, returns the original context update and introduces the presupposition that the context satisfies CT congruence. Here, this is the requirement that it contain a conjoined question of the form "What did Ali play and what did Merve play?"

Before moving on, I would briefly like to raise the question of how K&K would handle contrastive topic and focus in directive speech acts (Tomioka 2010). In (7a), the speaker asks where they should go, contrasting this to where others should go. The answer, in (7b), is a command to go to Ankara. The answer to the *wh*-word is the focus, and (presumably) the subject is a contrastive topic.

(7)   a.   Peki ben nereye gideyim?
             PRT 1S   where go.OPT.1S
             What about me, where should I go?
       b.   Sen_{CT} Ankara'ya_{F} git.
             2S   to.Ankara   go.IMP.2S
             You_{CT} go to Ankara_{F}.

It seems that a modal approach to imperatives (Kaufmann 2011; Oikonomou 2016), where imperatives are modalized propositions that are asserted, would allow for a treatment of focus and contrastive topic in directives that is unified with K&K's treatment of assertions and questions. Interestingly, Turkish imperatives have been argued to lend support for the modal analysis (Demirok and Oikonomou 2019).

3 Contrastive topic and movement

3.1 Contrastive topic generalized

K&K concentrate on examples where F- and CT-marked expressions are mainly individual denoting (except for polarity focus in some polar questions). In particular, their sentence level CT operator takes as its first argument a function from individuals to commitment space update functions and as its second argument a background-alternative pair where the background is an individual. However, expressions of a variety of syntactic categories and semantic types can be F- and CT-marked. While the system that K&K flesh out can be made to extend to such cases, the cost of this extension for contrastive topic will be flexibility on the

type of the CT operator's (first argument's) first argument or a multiplicity of CT operators in the lexicon.

Example (8b) illustrates a CT-marked adjective and (9b), a CT-marked sentence. These examples involve contrastive topic, as the expressions *sarı* and *gök* bear sentential prominence and the polar questions have final *-mI* and end in an H%. (It is interesting to note that CT-marking, in (9b), projects – a phenomenon which is known for focus, but not much explored for CT. That is to mean that while it is the unaccusative subject that bears CT-prominence, the CT-alternatives are any contextually relevant polar questions, rather than ones of the form "did x roar?")

(8) a. Context: Ali hugged different cats of different colors. We want to know whether he hugged the yellow cat.
     b. Ali sarı$_{CT}$ kediyi kucakladı mı?
         Ali yellow cat   hug
         Did Ali hug the yellow$_{CT}$ cat?

(9) a. Context: There was supposed to be a thunderstorm. We know that it rained but also want to know whether there was thunder.
     b. [Gök gürledi]$_{CT}$ mi?
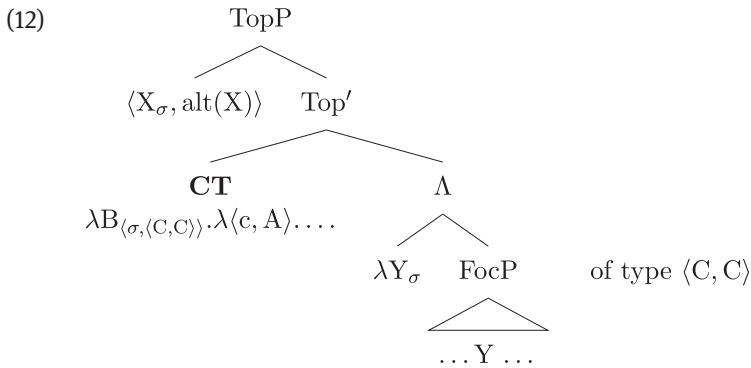   sky   roar   POLQ
         Was there thunder?

One worry, which I will return to in the next subsection, is that the adjective in (8b) cannot naturally be topic-fronted or moved much at all. Leaving this aside, to capture the meaning of such sentences, we will need the CT-marked expressions to denote background-alternative pairs of the form given in (10):

(10) a. ⟦sarı$_{CT}$⟧= ⟨λx.yellow(x), alt(yellow)⟩
      b. ⟦gök gürledi$_{CT}$⟧= ⟨λw.thunder-in(w), alt(there is thunder)⟩

These pairs correspond to a moved constituent serving as CT's second argument. For its first argument, we need lambda-abstracts of the form given in (11). Here, the variables f and p correspond to the trace of the moved element and are abstracted over. The semantics of the CT operator will saturate these functions with the first member and elements of the second member of the pairs in (10) – as needed to impose CT-congruence and perform a context update.

(11) a. $\lambda f_{\langle e,t \rangle}$. . . . Ali hugged a f cat
      b. $\lambda p_{\langle s,t \rangle}$. . . . p

And because these are functions of different types, we either need a type flexible CT operator, as sketched out in (12) or a family of CT operators which differ in the type of their (first argument's) first argument.

(12)

$$
\begin{array}{c}
\text{TopP} \\
\langle X_\sigma, \mathrm{alt}(X)\rangle \quad \text{Top}' \\
\mathbf{CT} \qquad\qquad \Lambda \\
\lambda B_{\langle \sigma, \langle C, C\rangle\rangle}.\lambda\langle c, A\rangle.\ldots \\
\lambda Y_\sigma \quad \text{FocP} \qquad \text{of type } \langle C, C\rangle \\
\ldots Y \ldots
\end{array}
$$

The same conclusion does not hold for FS, the operator that handles speech acts that contain F-marked expressions. Let us see why this is. The meaning of focused "yellow" is the triple:

(13) $\langle \lambda f_{\langle e,t\rangle}.f, \lambda x_e.\mathrm{yellow}(x), \mathrm{alt}(\mathrm{yellow})\rangle$

And as the composition proceeds, this triple grows through the application of a general rule (K&K's ex. (96)) into (14) as the denotation of the speech act phrase ActP:

(14) $\langle \lambda f_{\langle e,t\rangle}.\lambda C.C + \mathrm{ASSERT}(\mathrm{Ali\ hugged\ the\ f\ cat}), \lambda x.\mathrm{yellow}(x), \mathrm{alt}(\mathrm{yellow})\rangle$

The FS operator combines with such triples and encodes the general instruction to apply the background to the focus and to the alternatives in a certain way. Now, both FS and CT manipulate structured meanings that may contain F- and CT-marked expressions of different types, so type-flexibility will at least be required there. However, CT additionally needs to be type flexible on another argument than its structured meaning argument, namely the lambda abstract in (12).

The question is: Could we not reduce focus and contrastive topic to minimal variants of each other that differ in the felicity conditions that they impose on their argument, but neither in their argument structure, nor in the internal structure of their structured meaning argument?

3.2 Contrastive topic in islands

A general difficulty for a movement based analysis of contrastive topic is that CT-marked constituents can occur inside islands for movement. In (15a), the first conjunct of a *ve* conjunction is CT-marked.[2] This sentence is felicitous in e. g., the context in (15b) where the alternatives to the conjunction are of the form "x and Sağ." It is infelicitous in a context where the alternatives are not regular in this way, e. g., in (15c).

(15)   a.   Derin dün   [Göksu$_{CT}$ ve   Sağ-ı]   okudu mu?
             Derin yesterday Göksu   and Sağ-ACC read   POLQ
             Did Derin read Göksu and Sağ yesterday?
       b.   Felicitous context for (15a):
             A reading list is made up only of two authored papers. These papers
             all have Sağ as the second author, while the first author varies.
             alt(Göksu$_{CT}$ and Sağ)={Göksu and Sağ, Kornfilt and Sağ,...}
       c.   Infelicitous context for (15a):
             A reading list is made up of single and two authored papers.
             alt(Göksu$_{CT}$ and Sağ)≠{Kamali, Göksu, Göksu and Sağ, ...}

In contrast, CT-marking the entire conjunction is acceptable in context (15c) and unacceptable in context (15b).

(16)   Derin dün   [Göksu ve   Sağ-ı]$_{CT}$ okudu mu?
       Derin yesterday Göksu and Sağ-ACC read   POLQ
       Did Derin read Göksu and Sağ yesterday?

For completeness, the unacceptability of (17) suggests that Turkish *ve* conjunctions are in fact islands for movement.

(17)   *Göksu Derin dün [___ ve Sağ-ı] okudu mu?

The possibility of CT-marking individual conjuncts is thus unexpected, if contrastive topic requires moving the CT-marked constituent.

Interestingly, Constant (2014), whose account of CT is also movement based, provides examples from English where CT marking occurs in islands, and in particular coordinations:

(18)   a.   How would Fred or Sue be as a partner for Mary?
       b.   Fred$_{CT}$ and Mary would be good$_F$ partners.

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2 We know this because of intonational prominence on "Göksu," sentence final *-mI* and a H% boundary tone.

What Constant proposes is that in cases like this, we may move the island while still predicting a meaning that is equivalent to what we would have obtained had we moved the CT-marked constituent out of the island.[3]

The question then becomes whether moving the island itself will give rise to a structure with the desired interpretation in the system fleshed out by K&K. As far as I can tell, this is possible, but not without additional assumptions about how the correct alternatives to "X_{CT} and Y" are computed. I follow K&K in assuming that CT-marked names denote background-alternative pair as in (19a). Names otherwise denote individuals, as in (19b) and I make the assumption that *ve* forms mereological sums, as in (19c). We will be interested in composing background-alternative pairs with ordinary semantic values, and in particular (19a) with (19d), where (19c) has had its first argument saturated by s.

(19)   a. $[\![\text{Göksu}_{CT}]\!] = \langle g, alt(g)\rangle$
        b. $[\![\text{Sağ}]\!] = s$
        c. $[\![\text{ve}]\!] = \lambda x_e.\lambda y_e.y + x$
        d. $[\![\text{ve Sağ}]\!] = \lambda y_e.y + s$

We could compose these two expressions by using a rule that K&K give in their (102a) for composing a background-alternative pair with ordinary meanings (which they use to compose *wh*-words with surrounding material):

(20)   If two regular meanings α, β combine to (α, β), then
        background-alternative meaning $\langle \lambda X[\alpha[X]], A\rangle$ combines with β to
        $\langle \lambda X.[(\alpha[X], \beta)], A\rangle$

The denotation of "ve Sağ" is our regular meaning β, and alt(g) is the set of alternatives A in the background-alternative meaning (19a). We will want g to saturate the second argument of the sum operator, so α = g. The abstraction $\lambda X \ldots X$ is vacuous and the parentheses indicate that two expressions should compose as they ordinarily would. Applying (20) to (19a) and (19d), we thus get (21).

(21) $\langle \lambda X.(g[X], \lambda y.y + s), alt(g)\rangle$
        $= \langle (g, \lambda y.y + s), alt(g)\rangle$
        $= \langle g + s, alt(g)\rangle$

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3 Constant argues that island sensitivity can be detected in English, as it appears that the boundary tone L-H% in the L+H L-H% CT contour may not occur island internally but is anchored to the right edge of the island. A finer grained investigation is required here, but I detect no similar effect in Turkish: The right edge of the conjunction is unmarked and remains deaccented.

The crucial observation is that the alternatives to g + s end up being the alternatives to g. Opinions may vary as to what such alternatives may be, but there is no reason to think that they should all be of the form "x+s." (K&K may consider here that there is a special CT-sensitive entry for 'and' that takes a CT-marked expression and a non-CT-marked one and outputs, e. g. $\langle x + y, \{z + y : z \in alt(x)\}\rangle$. This is a possibility whose consequences would need to be spelled out.)

My worry here is that if we move the island and interpret the resulting structure, we risk predicting that examples like (22a) should be good in contexts like (22b) where "Kamali" is an alternative to "Göksu and Sağ" given (21). This is not a welcome prediction.

(22)   a.   And did Derin read Göksu$_{CT}$ and Sağ?
       b.   Sentence predicted to be felicitous in context:
            We know that Derin read Kamali but did she read…

Intuitively, what has gone wrong is that in general, a CT-marked expression X_{CT} may compose with non-CT-marked expressions Y without the mediation of the CT operator. And in such cases, we need to derive the alternatives to $X_{CT}Y$ based on X_{CT} and Y, rather than X_{CT} alone.

4 Why move for contrastive topic and not for focus?

In this section, I ask whether K&K's choice of treating focus in situ and contrastive topic via movement is necessary, or whether things could have been otherwise.[4]

The bulk of the existing literature on *-mI* converges on the idea that the particle indicates (but does not determine) the location of focus, and that it involves *moving* focused constituents to its specifier position. This view is instantiated in various forms in, e. g. Kahnemuyipour and Kornfilt (2011), Kamali (2011), Özyıldız (2015), and Bayırlı (2017) — which of course does not entail that movement is necessarily a component of the right analysis — and risks conflicting with

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4 Hans-Martin Gärtner (p.c.) reorients my attention to K&K's footnotes 22 and 25, which mention the possibility of treating focus in *wh*-questions (what about in polar questions?) via movement, and CT in situ. The mention, however, is in terms of theoretical possibility and it would be desirable to see it discussed in light of the data and (perhaps) the challenges put forward in this commentary.

the in situ analysis of focus that K&K lay out.[5] The idea that movement imposed by *-mI* is involved in the structure of polar questions comes from the following observation.

The examples in (23) show that *-mI* need not and sometimes cannot be adjacent to the F-marked constituent, suggesting that attaching *-mI* to a constituent is not sufficient to F-mark it.[6] In (23a), where the possessor is focused, there is the option of attaching *-mI* to the possessor or of attaching it to the possessive phrase. In (23b) (adapted from Kamali 2011, ex. (62)), the adjective 'white' is focused, but *-mI* cannot attach to it. It instead attaches to the possessive phrase. In both cases, the focused expression is one that bears sentence-level prominence.

(23)   a.   Anna Brian'ın$_F$ (mı) arabasını (mı) aldı?
           Anna Brian's   POLQ car   POLQ bought
           Is it Brian's car that Anna bought?
      b.   Emre Ali'nin beyaz$_F$ (*mı) arabasını *(mı) aldı?
           Emre Ali's   white POLQ car   POLQ bought
           Is it Ali's white$_F$ car that Ali bought?

Movement based analyses straightforwardly capture examples like (23) in that genitive marked possessors are mobile, and adjectives, at least in the position that "white" is in in (23b), are not. (Partial) evidence for the latter observation is given in (24):

(24)   *Beyaz Emre Ali'nin ___ arabasını aldı.
      white Emre Ali's   car   bought

The authors acknowledge the possibility of handling focus through movement (fn. 22) but remain silent on whether *-mI* itself requires focus movement and on whether movement to *-mI* underlies focus interpretation. I see several ways of reconciling their system with the facts discussed here, all of which require an elaboration on how to capture the possible and impossible positions of *-mI*. One is to say that *-mI* spells out some (possibly complex) head in the left-periphery and attracts F-marked expressions (possibly the islands containing them) for focus interpretation. Another is to say that *-mI* does involve movement, but one that is

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5 An alternative without movement is found in Atlamaz (2015) and while anecdotal, it might perhaps be informative to point out that the former set of papers are syntax-oriented, while the latter focuses on semantics.

6 I leave it to the authors to check whether F-marking is necessary for *-mI* attachment, that is, e. g. whether polar questions with multiple foci but a single *-mI* can be constructed.

not required for focus interpretation. And finally, restrictions on the position of *-mI*, which would remain to be spelled out, might not be related to movement at all.

5 Concluding remarks

The core question that the present discussion raises, I believe, is whether it is necessary to treat CT as movement and focus in situ in light of empirical evidence that things could be otherwise. The other logical possibilities are to treat both in situ, both through movement, and CT in situ and focus through movement. My belief is that K&K do not opt for a uniformly in situ analysis to avoid having to compose background-alternative and focus-background-alternative meanings together. But the other two possibilities remain live and the facts discussed in this commentary seem to favor CT in situ and focus through movement. Interestingly, not only are the restrictions on the position of *-mI* attested for question particles in other languages, e. g., in Tlingit (Cable 2010), but also for contrastive topic particles in languages that have them, e. g., Japanese *wa* (Hara 2006). Could this then mean that focus and contrastive topic uniformly involve movement, or that which form of highlighting involves movement and which does not is parametrized across languages?

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