The position of the Q-like particle *ki* in Turkish and consequences for sluicing constructions*

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Abstract: The paper revises the distribution of the so-called Q-like particle *ki* in Turkish and investigates the consequences of this revised distribution for embedded sluicing constructions. Contrary to the claim that *ki* appears only in matrix clauses (Ince, 2012; Zidani-Eroğlu, 2019), I show that it can also occur in embedded interrogative clauses when they are tensed. Based on this possibility, I propose an analysis of sluicing constructions in Turkish, where I argue that wh-remnants in embedded sluicing environments raise to the [Spec CP] position of the closest tensed clause (contra Ince, 2012).

Keywords: Turkish, Q-like particle, *ki*, sluicing, embedded sluicing, ellipsis

1 Introduction

Particle *ki*, borrowed from Persian, serves various functions in Turkish, such as a complementizer, a subordinator or an emphatic marker (Erguvanli, 1981; Göksel & Kerslake, 2004; Griffiths & Güneş, 2014; Kornfilt, 1997). The function under discussion in this paper is defined as a Q(uestion)-like particle that optionally occurs in interrogative clauses (Ince, 2012; Zidani-Eroğlu, 2019). The particle emphasizes the meaning in the clause it attaches to and does not have an exact translation in English as shown in (1a) below.[1, 2] However, when *ki* follows a non-interrogative clause, it functions as a different type of *ki,* but not as the Q-like particle, which is why Reading 2 in (1b) is not present.

(1) a. Ali-Ø   git-ti-Ø   mi   (ki)?
          Ali-NOM go-PAST-3SG Q   PRT
          'Did Ali leave (though/then)?

    b. Ali-Ø   git-ti-Ø   (ki).
          Ali-NOM go-PAST-3SG PRT
          Reading 1: 'Ali left.'

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[1] The meaning that the Q-like particle *ki* contributes to the sentence might change according to context, so it will be referred as *though/then* throughout this paper for the sake of simplicity.

[2] Abbreviations used in this paper are as follows: 1 = first person, 2 = second person, 3 = third person, ABL = ablative, ACC = accusative, DAT = dative, GEN = genitive, NEG = negation, NMLZ = nominalizer, NOM = nominative, PAST = past tense marker, POSS = possessive, PROG = progressive, PRT = particle *ki,* Q = question particle, sb. = somebody, SG = singular.

#Reading 2: 'Did Ali leave (though/then)?

Q-like particle *ki* is claimed to attach to matrix clauses and to be banned from embedded ones, based on the contrast between (2a) and (2b) (Ince, 2012; Zidani-Eroğlu, 2019).[3]

(2) a. Ali'n-in   nerey-e   git-tiğ-in-i   gör-dü-n   ki?
       Ali'-GEN where-DAT go-NMLZ-POSS.3SG-ACC see-PAST-2SG PRT
       'Where did you see Ali is/was going, though/then?'

    b.*Ali'n-in   nerey-e   git-tiğ-in-i   ki gör-dü-n?
       Ali'-GEN where-DAT go-NMLZ-POSS.3SG-ACC PRT see-PAST-2SG
       lit. 'Where did you see Ali is/was going?'

It has also been noted in the literature that the Q-like particle *ki* can exist in sluicing constructions in Turkish and there have been analyses regarding the derivation and structure of Turkish sluicing based on the aforementioned distribution of *ki* (Ince, 2012; Zidani-Eroğlu, 2019). This paper has two goals: first, it aims to show that the particle *ki* can also surface in embedded clauses, and second, it aims to build on previous analyses of Turkish sluicing and offer a new analysis based on this revised distribution of *ki*.

The rest of the paper is structured as follows: In section 2, I provide a brief summary of Turkish sluicing in general and review the previous analysis for embedded sluicing constructions with the Q-like particle *ki*. In Section 3, I present the proposal in two steps: first, I discuss the new properties of the particle *ki*, and then I revise previous analyses of embedded sluicing. Section 4 concludes the paper.

2   Sluicing

In this section, I first introduce the sluicing phenomena and then lay out the preliminary assumptions about the sluicing constructions in Turkish. I further discuss Ince's analysis of how *ki* survives the ellipsis operation in sluicing structures.

2.1   Occurrence of the Particle *ki* with Sluicing Constructions

Among many analyses as to how sluicing constructions are derived, I adopt the PF-deletion account where the internal structure exists both in overt and covert syntax but is deleted at PF prior to the pronunciation (e.g., Merchant, 2001, Ross, 1969). Therefore, I take sluicing to be a type of ellipsis where a TP is elided under the identity with another TP (*antecedent*), stranding a wh-phrase, a so-called wh-remnant which is coindexed with the indefinite pronoun (*correlate*) in the antecedent. As shown in (3) for English, *something* is the correlate of the wh-phrase which has moved out of the TP in the ellipsis site, and following this movement, the TP is elided leaving the moved remnant *what* overt. The ellipsis site (stricken-through in (3)), is called the *source* of the sluice, which is syntactically and semantically identical to the antecedent TP.

(3)   He is writing something$_i$, but you can't imagine what$_i$ [~~TP he is writing t_i~~].   (Ross 1969: 252)

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[3] Assuming that they have the same distribution, Ince (2012) refers to Besler's thesis (2000) where the Q particle *mI* in Turkish is discussed extensively, but not the Q-like particle *ki* particularly.

As classified by Lasnik (1999), there are two types of sluicing constructions: matrix sluicing and embedded sluicing, illustrated in (4a) and (4b) respectively. In (4a), the ellipsis site consists of a matrix interrogative TP whereas it corresponds to an embedded question in (4b).

(4) a. A: Mary will see someone.   *(Matrix Sluicing)*
         B: Who [~~TP Mary will see~~]?

     b. A: Mary will see someone.   *(Embedded Sluicing)*
         B: I wonder who [~~TP Mary will see~~].   (Lasnik 1999: 206)

Turkish also exhibits both types of sluicing constructions, as shown in (5a) and (5b) below. The sentence in (5a) is an example of matrix sluicing, where the wh-remnant *kime* 'to whom' is stranded after the deletion of the matrix interrogative TP. On the other hand, in (5b), the deletion occurs in an embedded clause environment, after which the wh-remnant *kime* 'to whom' is directly followed by the matrix verb *bilmiyorum* 'I don't know'.

(5) a. A: Ali-Ø   birin-e   kız-dı-Ø.   *(Matrix Sluicing)*
            Ali-NOM sb.-DAT get.mad-PAST-3SG
            'Ali got mad at someone.'
         B: Kim-e   [~~Ali-Ø   kız-dı TP~~]?
            who-DAT ~~Ali-NOM get.mad-PAST-3SG~~
            'At who?'

     b. A: Ali-Ø   birin-e   kız-dı-Ø.   *(Embedded Sluicing)*
            Ali-NOM sb.-DAT get.mad-PAST-3SG
            'Ali got mad at someone.'
         B: Kim-e   [~~Ali-Ø   kız-dı TP~~]   bil-m-iyor-um.
            who-DAT ~~Ali-NOM get.mad-PAST-3SG~~ know-NEG-PROG-1SG
            'I don't know at who.'

Wh-phrases in Turkish do not have to front (unlike those in English), which is a potential problem for the PF-deletion account since the wh-phrase cannot escape deletion if it is trapped inside the elided TP. However, considering the similarities between sluicing constructions of both languages (e.g., case connectivity), one prominent approach to Turkish sluicing is that wh-remnants in sluicing structures in Turkish raise first to [Spec CP] and then to [Spec FocP] to check focus features and wh-features, which enables them to survive the ellipsis (Ince, 2009, 2012). The derivation for this approach, also adopted in the present paper, is illustrated in (6) below.

(6)
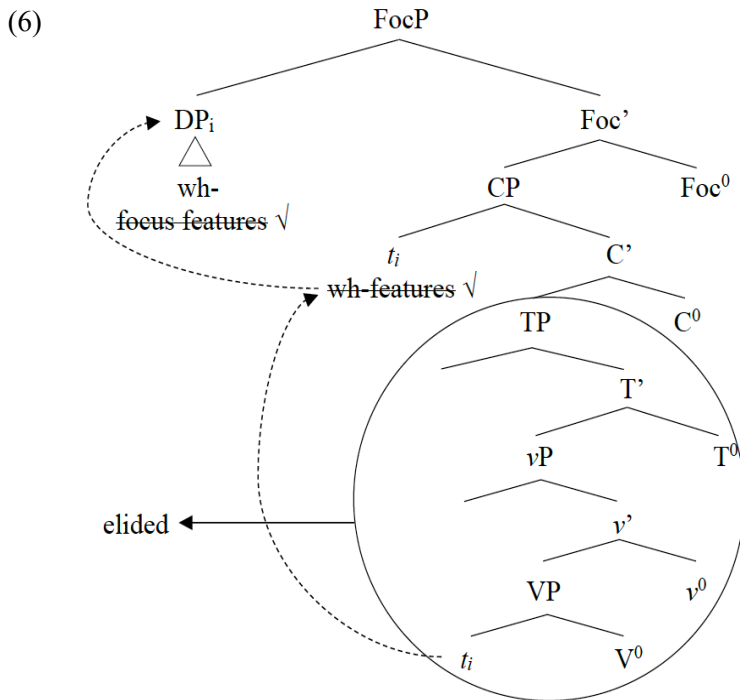
The Q-like particle *ki* can appear in sluicing structures in Turkish. As shown in the example of a matrix sluicing in (7) below, *ki* optionally follows the wh-phrase in the sluiced sentence, which means that the particle, together with the wh-remnant of matrix sluicing, survives the TP deletion.

(7) A: Ali-Ø   bir yer-e   git-ti-Ø.
      Ali-NOM a   place-DAT go-PAST-3SG
      'Ali went to somewhere.'
  B: Nerey-e   [Ali-Ø   git-ti-Ø TP]   (ki)?
      where-DAT   Ali-NOM go-PAST-3SG   PRT
      'Where, (though/then)?

Ince (2012), relying on the assumption that the Q-like particle *ki* cannot occur in embedded clauses, points out that *ki* can also follow sluiced wh-phrases that originate in the embedded clause. One such example is given in (8), in which the sluiced wh-phrase *kimden* 'from whom' is base-generated as an indirect object of the embedded clause and is followed by the particle *ki* after the deletion. Since *ki* can only surface in the matrix clause, Ince is forced to posit the entire antecedent clause in (8) as the source of the sluiced sentence, which means that the wh-remnant raises all the way to the matrix [Spec CP], as shown in (9) below. Consequently, Ince (2012) argues that the wh-remnant cannot raise only to a lower, embedded [Spec CP]; if that were the case, it would be difficult to explain how the particle *ki* comes to immediately follow the wh-remnant.

(8) A: Ali-Ø   Can'-ın birin-den para   iste-diğ-in-i   söyle-di-Ø.
         Ali-NOM Can-GEN sb.-ABL   money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG
   'Ali said that Can asked someone for money.'

     B: Kim-den   (ki)?
        who-ABL   PRT
        'From whom, (though/then)?'

(9) [kim-den_i [[~~Ali-Ø   Can'-ın t_i para   iste-diğ-in-i~~   ~~söyle-di-Ø~~ CP₂] ki C'] CP₁]?
       who-ABL   A.-NOM C.-GEN   money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG   PRT
       'Who ~~did Ali say Can asked for money~~, though/then?'

The details of Ince's analysis of sluicing constructions that contain *ki* are given in the next section.

2.2   How *ki* Survives the Deletion

Let us now see how Ince (2012) derives structures like the one in (8). Ince proposes that the wh-remnants of sluicing in sentences like (8) must move to the highest [Spec CP], that of the matrix clause, as shown in (10) below. Only if the wh-remnant is in the matrix [Spec CP] can the Q-like particle *ki,* located in the matrix C⁰, immediately follow the wh-phrase after the matrix TP has been elided.

(10)
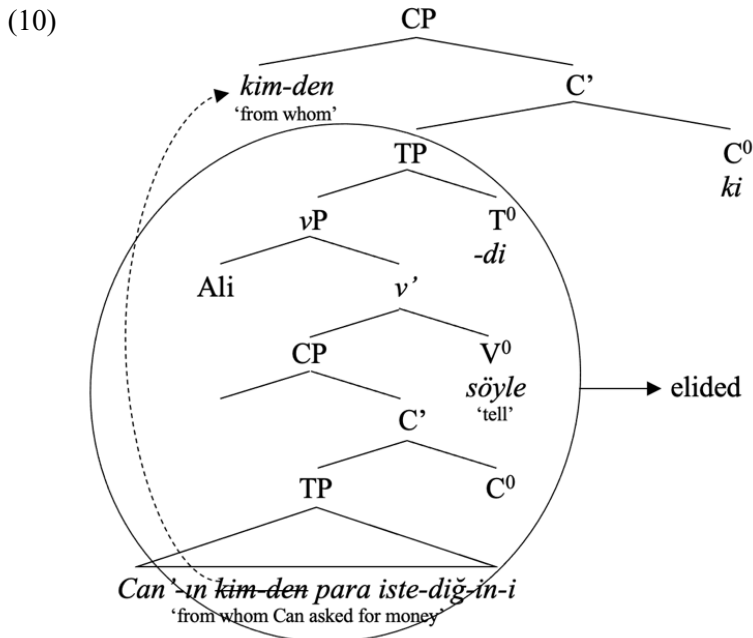
The problem with the possibility that the sluiced wh-phrase remains in the embedded CP-phrase is the discontinuity of ellipsis. That is, if the wh-remnant remained in the embedded [Spec CP], the

ellipsis operation would have to apply first to embedded TP, leaving the wh-remnant under embedded [Spec CP] overt, and then to the matrix TP deleting the matrix verb and subject, but not the Q-like particle as illustrated in (11) below. As Ince (2012) notes, such an ellipsis operation cannot be posited and would be a far-fetched analysis.

(11)
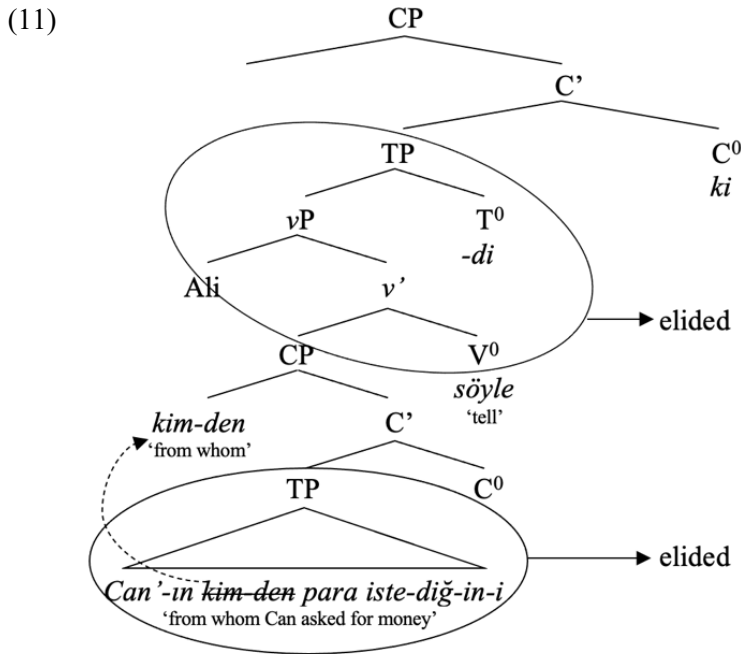
3   Proposal

In what follows, I first show that *ki* is not confined to matrix clauses but can also appear in certain embedded environments. Next, I show that, assuming this new distribution of *ki*, Ince's analysis of embedded sluicing makes incorrect predictions for examples with *ki* and I offer a new analysis which correctly derives these structures.

3.1   Properties of the Q-like Particle *ki:* Revised

Recall from Section 1 that the Q-like particle *ki* has been claimed to follow only matrix clauses, but novel data shows that it can actually attach to embedded clauses when they are tensed. A sentence where *ki* follows the embedded clause and precedes the matrix verb is provided in (12).[4]

(12) Ali-Ø   niye git-ti-Ø   (ki) bil-m-iyor-um.
      Ali-NOM why   go-PAST-3SG PRT   know-NEG-PAST-1SG
      'I don't know why Ali left, (though/then).'

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[4] There are some native speakers who find sentences like (12) ungrammatical due to the position of *ki.* It is worthy to note that there might be different properties of *ki* for different speakers, which needs further research and remains to be discovered.

Then, what rules out sentences such as (2b), repeated in (13) below? Here, the problem is that the particle *ki* appears in a *nominalized non-tensed* clause following the nominalized verb *gittiğini* 'is/was going', which leads to the ungrammaticality. The contrast between (12) and (13) shows that *ki* seems to occupy the clause-final position of a tensed interrogative clause, which might be matrix or embedded.

(13) *Ali'n-in   nerey-e   git-tiğ-in-i   ki gör-dü-n?
    Ali'-GEN   where-DAT go-NMLZ-POSS.3SG-ACC PRT see-PAST-2SG
    lit. 'Where did you see Ali is/was going?'

The revised properties of the Q-like particle *ki* can also be observed in sluicing constructions. In Ince's example in (14) repeated from (8), the sluiced sentence uttered by a speaker B contains only the wh-remnant and is as such uninformative as to whether *ki* can occur in embedded sluicing (see example (5b) for embedded sluicing in Turkish). However, in (15) where an alternative sentence is provided as a continuation to the antecedent sentence in (14), the wh-remnant is followed by the matrix verb *bilmiyorum* 'I don't know' and is legitimately followed by the particle *ki.*

(14) A: Ali-Ø   Can'-ın birin-den para   iste-diğ-in-i   söyle-di-Ø.
    Ali-NOM Can-GEN sb.-ABL   money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG
    'Ali said that Can asked someone for money.'
  B: Kim-den   (ki)?
    who-ABL   PRT
    'From whom, (though/then)?'

(15) Ali-Ø   Can'-ın birin-den para   iste-diğ-in-i   söyle-di-Ø. <u>Kim-den</u>
    Ali-NOM Can-GEN sb.-ABL   money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG who-ABL
    <u>(ki) bil-m-iyor-um</u>.
    PRT know-NEG-PAST-1SG
    'Ali said that Can asked someone for money. I don't know from whom, (though/then).'

The grammaticality of the sluiced sentence in (15) is not surprising and has been previously acknowledged (Zidani-Eroğlu 2019). For such sentences Zidani-Eroğlu (2019) adopts Hankamer's (2012) stripping analysis, where there are two different clauses separated by an intonation break, as demonstrated with the sign # in (16). In this analysis, both the wh-remnant *kimden* 'from whom' and *ki* occupy matrix positions, just like in Ince's account.

(16) …Kim-den (ki)   # bil-m-iyor-um.
    who-ABL PRT # know-NEG-PAST-1SG
    'From whom, (though/then)? I don't know.'

Note, however, that the second sentence in (16) has a null subject pronoun and this makes it easier to assume two independent clauses. If the verb *bilmiyorum* 'I don't know' in (16) had an overt subject, as in (17a), the subject would have to follow the wh-remnant and the particle *ki,* which belong to a different clause. However, the overt subject *ben* 'I' can also precede all the elements in the sentence, as in (17b). Example (17b) can only be derived via the stripping analysis if the matrix subject *ben* 'I' scrambled to a position that precedes the wh-remnant, which is in a

different clause. Although Turkish is well-known to be a scrambling language (Erguvanli, 1984), scrambling parts of one sentence into a different one is illicit.[5]

(17) a. …Kim-den (ki) # ben bil-m-iyor-um.
        who-ABL PRT # I   know-NEG-PAST-1SG
        'From whom, (though/then)? I don't know.'

   b. …Ben kim-den (ki) bil-m-iyor-um.
        I   who-ABL PRT know-NEG-PAST-1SG
        'I don't know from whom, (though/then).'

The discussion so far suggests that the stripping analysis does not make correct predictions for sluicing constructions in Turkish. The sentence in (17b) with the Q-like particle *ki* obviously does not contain two juxtaposed sentences but is perfectly grammatical regardless of an intonation break (contra Zidani-Eroğlu, 2019). That is, *ki* does not necessarily have to be located in the *matrix* C^0, and it can legitimately occupy the edge of a tensed embedded clause.

Before concluding this section, it might be noteworthy to mention that the new distribution of the Q-like particle *ki* also suggests that it is an interrogative particle, and not some other type of *ki*. Recall from Section 1 that the particle *ki* functions differently when preceded by a non-interrogative clause as shown in (18) repeated from (1b).

(18) Ali-Ø   git-ti-Ø   (ki).
    Ali-NOM go-PAST-3SG PRT
    Reading 1: 'Ali left.'
    #Reading 2: 'Did Ali leave (though/then)?

The evidence that the Q-like particle *ki* that can surface in an embedded clause is different from other types of *ki* comes from elliptical embedded sentences whose remnants are non-wh-phrases, as in (19). Here, the sentence is parallel to an embedded sluicing construction except that the embedded clause is declarative, not interrogative. The sentence is perfectly grammatical if *ki* is

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[5] Zidani-Eroğlu's stripping analysis (2019) can also be applied to non-sluiced sentences as shown in (i), but the problem in (15) above persists here too: the overt pronoun, *ben* 'I', legitimately precedes all the elements in the sentence in (ii-a), and as in (ii-b), it would have to scramble to a different sentence for the stripping analysis to work, which is not licit.

(i)   Ali-Ø   niye git-ti-Ø   (ki) # bil-m-iyor-um.
      Ali-NOM why go-PAST-3SG PRT # know-NEG-PAST-1SG
      'Why did Ali leave, (though/then)? I don't know.'

(ii) a. Ben Ali-Ø   niye git-ti-Ø   (ki) bil-m-iyor-um.
          I   Ali-NOM why go-PAST-3SG PRT know-NEG-PAST-1SG
          'I don't know why Ali left, (though/then).'

      b. Ali-Ø   niye git-ti-Ø   (ki) # ben bil-m-iyor-um.
          Ali-NOM why go-PAST-3SG PRT # I   know-NEG-PAST-1SG
          'Why did Ali leave, (though/then)? I don't know.'

absent, but it is degraded if *ki* is present. This shows that the particle *ki* in (18) and the one in (19) must be indeed different.

(19) Ali-Ø   Can'-ın Efe-den para iste-diğ-in-i   söyle-di-Ø ama Ece-Ø
    Ali-NOM Can-GEN Efe-ABL money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG but Ece-NOM
    Cem'-den (*ki) san-ıyor-Ø.
    Cem-NOM PRT think-PROG-3SG
    lit. 'Ali said that Can asked Efe for money, but Ece thinks that it was from Cem.'

I next discuss how the Q-like particle *ki* escapes ellipsis in embedded sluicing in Turkish.

### 3.2   How *ki* Actually Survives the Deletion

Considering the revised distribution of the Q-like particle *ki,* let us re-examine Ince's (2012) analysis of embedded sluicing constructions. Ince (2012) argues that the wh-phrases in the ellipsis site move to the [Spec CP] of the matrix clause, after which the matrix TP is elided. His analysis requires the source of the sluice to be the entire antecedent clause. This approach is problematic in two ways: First, the operation that deletes the matrix TP should also delete the matrix verb (which in Turkish follows the embedded clause). In (20), repeated from (15), the second sentence contains a sluiced embedded clause (*Can'ın birinden parayı istediğini* 'that Can asked someone for money') and a matrix verb *bilmiyorum* 'I don't know' that is base-generated as part of the matrix TP. The ellipsis of the matrix TP would not derive the sentence in (20); it would necessarily delete the matrix verb as well. This suggests that ellipsis applies to a smaller structure, perhaps the embedded clause.

(20) Ali-Ø   Can'-ın birin-den para iste-diğ-in-i   söyle-di-Ø. <u>Ben</u>
    Ali-NOM Can-GEN sb.-ABL   money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG I
    <u>kim-den (ki) bil-m-iyor-um</u>.
    who-ABL PRT know-NEG-PAST-1SG
    'Ali said that Can asked someone for money. I don't know from whom, (though/then).'

Second, the movement of the wh-remnant to the matrix [Spec CP] in (20) derives the wrong word order of the overt matrix subject *ben* 'I' and the wh-remnant *kimden* 'from whom'. Given that the source of the underlined embedded sluicing in (20) is the strikethrough in (21), if the wh-phrase raises all the way up to the highest [Spec CP] and if we assume that the ellipsis applies to the embedded TP (to amend the first problem), as illustrated in (22) below, the word order would be incorrect and ungrammatical as shown in (23).

(21) [Ben [kim-den*ᵢ* [[~~Ali-Ø   Can'ın~~ *tᵢ* ~~para~~   ~~iste-diğ-in-i~~   ~~söyle-di-Ø~~ TP₂ CP₂]
    I   who-ABL A.-NOM C.-GEN   money want-NMLZ-POSS.3SG-ACC tell-PAST-3SG
    (ki) C'] bil-m-iyor-um TP₁ CP₁].
    PRT   know-NEG-PAST-1SG
    'I don't know who Ali said Can asked for money, (though/then).'

(22)
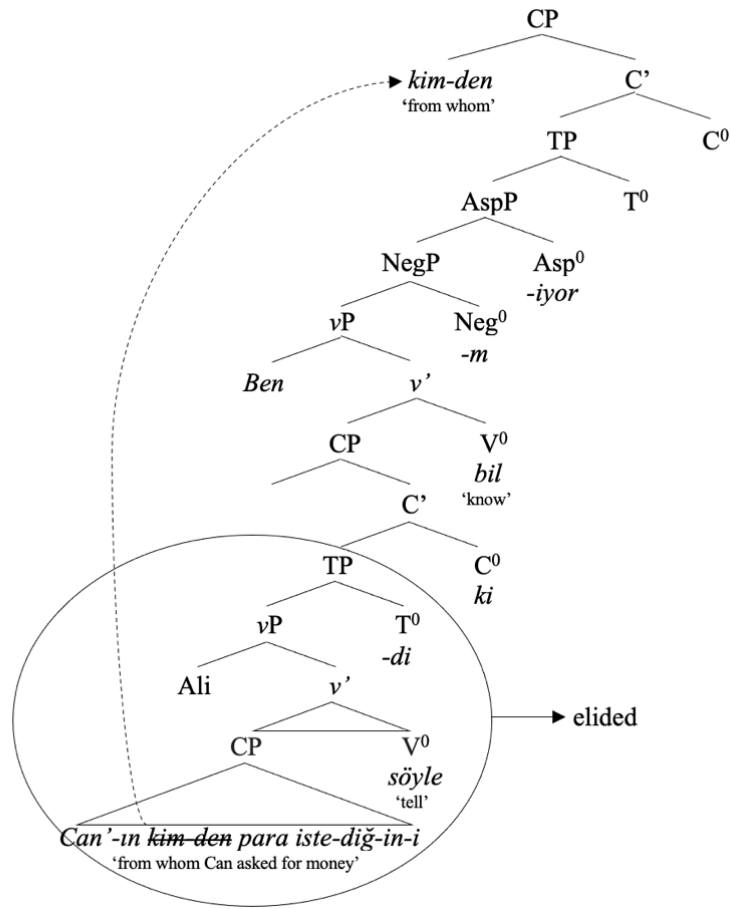
(23) *Kim-den ben ki   bil-m-iyor-um.
    who-ABL I   PRT know-NEG-PROG-1SG
    lit. 'I don't know from whom, though/then.'

Given these problems, I argue that the wh-phrases of embedded sluicing constructions must raise only to the [Spec CP] position of the *closest tensed clause* (contra Ince, 2012).[6] As illustrated in (24), the wh-phrase *kimden* 'from whom' moves from the embedded nominalized clause to the [Spec CP] of the higher tensed clause, and the embedded TP gets elided stranding the wh-remnant, the particle *ki,* the matrix subject and the matrix verb.

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[6] I assume that subjects in Turkish are located in [Spec vP] position (Gračanin-Yüksek & İşsever, 2011; Öztürk, 2002, 2005), which enables them to be elided during sluicing operation except when they are remnants.

(24)
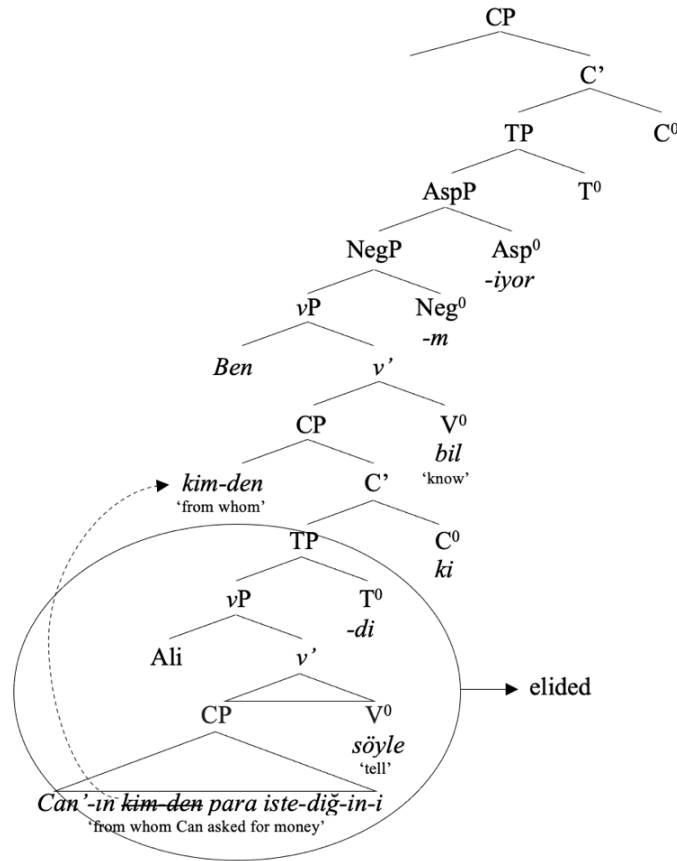
4   Conclusion

In this paper, I first showed that the Q-like particle *ki* in Turkish is licit when preceded by the wh-remnant in the embedded clause (cf. Zidani-Eroğlu, 2019). This showed that this *ki* can occur not only in matrix interrogative clauses, but also in embedded interrogative clauses, but only if the embedded clause is tensed. I further showed that the occurrence of the particle *ki* with wh-remnants in embedded clauses differentiates the interrogative *ki* from other types of *ki*.

With respect to the sluicing derivations with this particle, I discussed how the revised distribution of *ki* sheds light on the position of wh-remnants in embedded sluicing (cf. Ince, 2012). I proposed that the wh-phrase in embedded sluicing constructions raises to the [Spec CP] position of the closest tensed clause to precede the particle, rather than raising all the way to the matrix clause.

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