Contact at the treetops: syntactic transfer and syntactic complexity*

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ABSTRACT: We examine the function and structure of *ki*-clauses in Modern Greek dialects of Trabzon (Romeyka), Silli, Cappadocia and Pharasa. We demonstrate that *ki*, transferred from Turkish, has been integrated into the clausal spine of these dialects in JudgeP (Krifka, 2023), whereby the speaker renders their private epistemic judgement regarding an assertion in its scope. In the source language, Turkish, *ki* spells-out not only Judge head—the lowest head in the expressive layer—but all heads of this layer. Given that *ki* realizes solely the Judge head in the Asia Minor Greek dialects, we propose a constraint according to which the accommodation of morphosyntactic rules in contact situations commences at the lowest relevant projection of a layer relevant to that rule. In other words, the accommodation of contact-induced rules correlates with structural complexity.

Keywords: syntactic complexity, language contact, borrowing hierarchy, speech acts, Greek, Turkish

Anlatımsal katmanda ilişki: sözdizimsel ödünçleme ve yapısal karmaşıklık

ÖZ: Bu çalışmada, hâlen Trabzon'da konuşulan ve yakın geçmişe kadar Sille'de (Konya), Kapadokya'da (Niğde ve Nevşehir) ve Faraşa'da (güneybatı Kayseri) da konuşulmuş olan Ön Asya Yunanca lehçelerinde gözlemlediğimiz *ki*-yapılarını inceliyoruz. Bu lehçelere Türkçeden geçmiş olan *ki*

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biçimbiriminin, bu lehçelerde Hâkim Öbeği (HÖ) başı (Krifka, 2023) işlevi gördüğünü ve konuşmacının bu biçimbirim vasıtasıyla Çekim Öbeği (ÇÖ) içerisindeki savı hakkında öznel bir bilgisel yargı ifade edebildiğini öne sürüyoruz. Ayrıca *ki* biçimbiriminin Türkçede yalnızca HÖ içerisinde değil, ÇÖ'yü başatlayan anlatımsal alandaki tüm öbeklerin başı olarak kullanılabildiğini gösteriyoruz. Yunanca lehçelerinde *ki*'nin niçin anlatımsal alandaki en alt öbekte konumlandığı sorusuna cevaben A dilinden B diline geçen biçim-sözdisimsel kalıplardan çıkarılan kuralların B dilinde nasıl yerleştirildiği ile ilgili bir kısıtlama öne sürüyoruz: Bu kurallar, erek dilde ilk olarak bu kuralları ilgilendiren en alt sözdisimsel katmanda kabul edilirler. Başka bir deyişle, dillerararası etkileşim sonucu A dilinden B diline seyahat eden kuralların B diline yerleştirilmesi yapısal karmaşıklık ile bağıntılıdır.

Anahtar sözcükler: yapısal karmaşıklık, dillerarası etkileşim, ödünçleme hiyerarşisi, sözeylemler, Ön Asya Yunancası, Türkçe

1 Introduction

Virtually any morphosyntactic category (form and function) can be transferred from a source language to a target one by imposition (Van Coetsem, 1988; Siegel, 2009) or borrowing—especially when bilinguals undergo performance attrition in their (dominant) language (Lucas, 2012). Numerous scholars observe, however, that not all morphosyntactic categories are equally transferrable—a fact often stated in implicational hierarchies (Muysken, 1981; Stolz & Stolz, 1996; Johanson, 2002; Aikhenvald, 2006; Matras, 2007, to name just a few). Whilst these hierarchies illuminate cross-linguistic transfer probabilities or frequencies, they prompt a deeper question: what renders one category more susceptible to transfer than others?

Matras (2007, 2009) is among the few scholars to have addressed this question. In a nutshell, he argues that semantic-pragmatic properties of categories determine their transferability: some properties challenge bilingual speakers more in interaction than others, impairing repertoire monitoring and allowing interference. For instance, Matras assumes that speakers exert less control over the qualification of the internal structure of an event than locating it on the timeline. Weakness or absence of authority in the former domain may generate interactional tension, and at such risky junctures, a bilingual speaker may fail to suppress other-language categories in her linguistic repertoire or deploy them deliberately as a repair strategy. [1] Matras, (2009, p. 162), attributes the earlier or frequent transfer of aspect over tense categories to this dynamic.

[1] Throughout the text, we refer to the speaker as 'she/her'.

Matras' observations on the likelihood and frequency of morphosyntactic transfer are undoubtedly invaluable. Nevertheless, the vagueness of concepts such as "weakness or absence of authority", the claim that certain junctures are at "high risk" for merging structures across different linguistic sub-repertoires, and the failure to distinguish what is transferred from how it is accommodated all undermine the explanatory adequacy of the mechanism underpinning these observations.

In this paper, we propose an alternative account for morphosyntactic transfer hierarchies. We argue that transfer likelihood of a category inversely correlates with the syntactic complexity with which that category is associated: the less complex a domain is, the more vulnerable it is to transfer, where complexity is taken as a function of the number of functional categories involved. Importantly, we do not claim that this hypothesis governs the mixed output created by bilingual individuals. Their mixed output can encompass virtually any form, as the code-switching literature demonstrates. However, selection and accommodation of source-language categories by L_1-learners exposed to the mixed input invariably begins in the syntactically simpler domains. Whether contact effects ultimately extend to higher syntactic domains is unpredictable because this may interact with a large array of extralinguistic factors; but any such progression occurs monotonically.

We base our arguments on data from the Modern Greek dialects of inner Asia Minor (hereafter AMG). This dialect group comprises varieties once widely spoken in (i) Pontus—the northeastern Black Sea region from Sinop to Rize (west-east) and inland to Gümüşhane; (ii) Cappadocia, across various settlements in present-day Niğde and Nevşehir provinces; (iii) Pharasa, in southwestern Kayseri province and northern Adana, and (iv) in Silli, now a neighborhood of Konya (Manolessou, 2019, pp. 20-21). While there are still Muslim speakers of Pontic in Turkey, whose dialect is known as Romeyka today (Sitaridou, 2014), the last speakers of the other dialects were relocated to Greece by 1925.

We investigate the morpheme *ki*, transferred into AMG dialects (1a) from Turkish (1b) (Dawkins 1916, p. 685, Schreiber 2022, p. 294, Janse to appear, p. 67 a.o.).[2]

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[2] Andriotis (1948) posits *ki*'s etymology from Ancient Greek *kai* 'and' survived into many synchronic Greek dialects, as *ke/ki*. This is incorrect: in many AMG dialects, [k] lenites to [ʧ] only in inherited words and never in borrowings, indicating *ki*'s non-native status. A reviewer suggests Persian origin over Turkish; however, the overall absence of Persian contact effects in AMG precludes this. Moreover, *ki* has been attested in Romeyka only recently, when no contact with Persian is present. Another reviewer views *ki* as an areal phenomenon. In the absence of information on the limits of that linguistic area and on how it has been formed, this remains truistic.

(1) a. Sanse ki erete na kanis.
supposed.3SG KI comes a person
'He supposed someone was coming.'
(Cappadocia (Kesisoglou, 1951, p. 63))

b. Sandı ki biri geliyor.
supposed.3SG KI someone comes
'He supposed someone was coming.' (Turkish)

In AMG dialects, *ki* occurs maximally in four patterns but in each pattern, it relates to the epistemic and evidential basis of a proposition to which the speaker is committed. Adopting Krifka's (2018, 2023) framework for assertive clauses, we locate *ki* in JudgeP, which dominates TP—the locus of assertions. In Turkish, *ki* fulfils this JudgeP function plus two others absent in AMG, best captured by associating it with CommitP and ActP (projections dominating JudgeP; Krifka, 2018, 2023). Thus, while Turkish hosts *ki* in JudgeP, CommitP, and ActP, AMG dialects adopt it solely as the Judge head exponent. This disparity cannot result from bilinguals never introducing CommitP/ActP *ki*-patterns into AMG. We rather suggest that once a source language category has the potential to be associated in the target language with syntactically less or the least complex configuration, it *is* associated with that one first.

The paper is organized as follows: section 2 details the structural and interpretative properties of four *ki*-patterns in AMG, which—despite surface differences—share an underlying structure. This structure is elaborated in section 3, where we argue that *ki* functions uniquely as a discourse particle marking the epistemic and evidential basis of speaker-committed propositions, best located in JudgeP. Pattern variations reduce to the content of Spec, JudgeP. Section 4 examines *ki* in Turkish, highlighting Greek-Turkish discrepancies. Section 5 develops our central claim regarding syntactic complexity's role in accommodation. Section 6 concludes.

2 *Ki*-clauses in in AMG

In no AMG dialect can *ki* initiate an utterance (2a) or stand in isolation (2b).

(2) a. *Ki …*sentence*…
b. A: — ….?/!/.
B: —*Ki.

There are four environments where *ki* is felicitous. We present these in 2.1-2.4.

2.1 Ki in a reporting clause and before root-like complements

In one environment, *ki* occurs after a matrix verb if that verb introduces an asserted proposition as a complement clause, or if a matrix verb introduces a quote. We adopt the commitment account of assertion (MacFarlane, 2011), according to which, by asserting, the speaker (a) assumes public responsibility as guarantor for the truth of an asserted proposition, and (b) obligates herself to respond in certain ways to appropriate challenges from interlocutors, which means the assertion is open to challenge by the interlocutors via ordinary means of negation or interrogation (Hooper & Thompson, 1973, p. 473).

Hooper & Thompson (1973) classify complement-taking predicates by their assertoric versus non-assertoric nature, as shown in (3) (enriched with data from Melvold, 1991 and Sheehan & Hinzen, 2011).

(3) Class A. Strongly assertive: *say, claim, report*
Class B. Weakly assertive: *think, believe, suppose,*
Class C. Non-assertive: *doubt, deny, be (im)possible, ask, want*
Class D. Factive: *regret, resent, be sorry*
Class E. Semi-factive: *know, see, understand*

Only predicates from classes A, B and E can present their complement as an assertion (Hooper & Thompson, 1973, p. 475). These are the sole verbs permitting *ki* in the presence of a complement clause.

Examples in (4) are from the Cappadocian dialect once spoken in Ulaghats (today Uluağaç, Niğde). Similar configurations appear in other Cappadocian subvarieties (e.g., Malakopi, (Derinkuyu, Nevşehir) Dawkins, 1916), as well as Silli (Kostakis, 1968), Pharasa (Bagriacik, 2018; Anastasiadis, 1976), and Romeyka (Schreiber, 2022, p. 294). Examples from other dialects are omitted due to space constraints.

(4) a. Ekino epe ki “xabar den exo, čünki ghipnosa.”
He said KI news not have.1SG because slept.1SG
‘He said, “I have no knowledge, because I went to sleep.”’
(Class A–Cappadocia (Dawkins, 1916, p. 466, his translation))

b. Sanse ki erete na kanis.
supposed.3SG KI comes a person
‘He supposed someone was coming.’
(Class B–Cappadocia (Kesisoglou, 1951, p. 63))

c. Transe ki to meydan en avya.
saw.3SG KI in.the yard are game.animals

'She saw that in the yard is some game.'
(Class E–Cappadocia (Dawkins, 1916, p. 348, his translation))

Ki is not obligatory in these environments; compare (4) with (5), all from the same dialect.

(5) a. Do neka […] epe "[…] do tira s sakono to"
the woman said "[…] the door your break.1SG it
'The woman said, "I will break your door."'
(Class A–Cappadocia (Dawkins, 1916, p. 350, his translation))

b. Sanse do čəraq ne.
thought.3SG the servant is
'She thought it was the servant.'
(Class B–Cappadocia (Dawkins, 1916, p. 370, his translation))

c. Transe do pelit aghajə apan itan yavriya.
saw.3SG the plane tree above were chicks
'He saw up on the plane tree there were chicks.'
(Class E–Cappadocia (Dawkins, 1916, p. 372, his translation))

No Class C or D predicate can co-occur with *ki* in this configuration:[3]

(6) a. Do peji ekrepse (*ki) na pji…
The boy wanted.3SG KI SBJV drink.3SG
'The boy wanted to drink…'
(Class C–Cappadocia (constructed example based on Kesisoglou, 1951))

b. Enne pišman (*ki) do pie.
became.3SG regretful KI that left.3SG
'He regretted that he left.'
(Class D–Cappadocia (constructed example based on Kesisoglou, 1951))

Ki need not be linearly adjacent to the embedded clause or quotation; *viz*., the indirect object in (7), [do vava t], interrupts this adjacency:

(7) do peji epe ki [do vava t] "do čəraq mas bori no fer."
the boy said.3SG KI the father his the servant our can SBJV.her bring.3SG
'The boy said to his father, "our servant is able to bring her."'

[3] AMG texts lack examples of Class C/D predicates followed by *ki* before a complement clause (or a quote); native speakers reject such sequences.

(Cappadocia (Dawkins, 1916, p. 353, his translation))

(7) indicates that *ki* may not be an (optional) subordinator selecting an embedded sentence or a quote (contra Dawkins, 1916; Anastasiadis, 1976). Further evidence comes from fronted complement clauses: although fronting is possible across dialects, *ki* cannot move with the clause (8a), but remains grammatical in postverbal position (8b).

(8) a. (*Ki) tu pirin ta pejkira, idha ta.
KI that took.3SG the horses saw.1SG it
'That he took the horses, I saw it.'

b. tu pirin ta pejkira, idha ta ki!
that took.3SG the horses saw.1SG it KI
'That he took the horses, I saw it, really.'
(Pharasa, native speaker judgments[4])

We defer discussion of sentences like (8b) to section 2.2. For now, the contrast between (8a) and (8b) demonstrates that *ki* is not syntactically part of the complement clause (or quote). Rather, it resides—apparently 'optionally'—in the matrix clause with verbs enabling speaker commitment to an assertion or quote demonstration.

Native speaker judgements indicate that *ki* is a root phenomenon (on which see Emonds, 1970; Hooper & Thompson, 1973; Green, 1976; Aelbrecht et al. 2012; Frey, 2011, 2020; Frey & Meinunger, 2019; Miyagawa, 2022, a.o.).[5] The clause hosting *ki* cannot be embedded under any other verb, assertive or otherwise (9a), nor can it appear in a relative (9b), or a temporal adverbial clause (9c). Root phenomena are widely associated with clauses possessing illocutional potential (Frey, 2011). We follow Haegeman (2006) and maintain that the

[4] Unless otherwise stated or referenced, all subsequent examples reflect native speaker judgements.

[5] Root phenomena also occur in a restricted set of root-like dependent clauses, such as argument clauses of non-negated lectic verbs, or verbs of doxastic attitude, and in peripheral adverbial clauses (Haegeman, 2012). Recent research by Frey (2011, 2020) and Frey & Meinunger (2019) distinguish weak and strong root phenomena: weak ones have a wider distribution, including in peripheral adverbial clauses, whereas strong ones are confined to independent clauses, and a small set of dependent clauses which, however, show all the signs of being syntactically independent from their apparent host clauses (see Frey 2011 for German examples). Precisely categorizing *ki* as strong or weak root phenomenon requires careful examination of central and peripheral adverbial clauses in AMG.

occurrence of a root phenomenon necessitates anchoring its host clause to a speaker.

(9) a. Čo ghriksin ta [tu ipa (*ki) "gho čo irevu ta."]
not realize.3SG it that said.1SG KI I not want.1SG it
'She did not realize that I said "I do not want it."'

b. O nomat tu nanosti (*ki) eni perišani …
the man that thinks KI is forlorn
the man who thinks that he is a forlorn…

c. Samu ghriksen (*ki) sta šera mu čo ghlitoni…
when understood.3SG KI from.the hands his not escape.3SG
'When he understood that he could not escape from me…'
(Pharasa)

The presence or absence of *ki* does not affect the truth value of the proposition in its host clause*, viz.* its 'optionality'. Bagriacik (2018) reports that native speakers view *ki* as a stylistic device, frequently used in narratives. When paraphrasing *ki*-containing sentences, such as (4a), given below as (10), speakers often resort to adverbs such as *really* or *truly*, yielding equivalents such as "*he really said…"*

(10) Ekino epe ki "xabar den exo, čünki ghipnosa."
He said KI news not have.1SG because slept.1SG
'He said, "I have no knowledge, because I went to sleep."'
(Cappadocia (Dawkins, 1916, p. 466, his translation))

Speaker judgements indicate that *ki* conveys the speaker's conviction that an assertion in its scope must be true. In addition to the fact that *ki* cannot be embedded—presumably because the judgement must be of the speaker, and root phenomena necessitate anchoring its host clause to a speaker—one key piece of evidence supports this view: *ki* is incompatible with *hedges* (Lakoff, 1973, p. 54; Coates, 2013, p. 31), such as question tags:

(11) o Yorikas *ipen* (#ki) "i ma mu kamnoni so Gastro", *xe*?
the George said KI the mother my works in Kayseri, Q-TAG?
'George said, "My mum works in Kayseri," didn't he/doesn't she?
(Pharasa)

Using *ki* in (11), the speaker first asserts with strong conviction that a quote existed and it was uttered by George. Once this commitment is established,

employing a hedging device to express doubt about the same event creates a pragmatic contradiction.[6]

The commitment signaled by *ki* may pertain to either the truth of the embedded proposition (the quote) or that of the matrix clause/reporting clause: the speaker may endorse both. In order to elaborate on this, consider first the claim by Hooper & Thompson (1973, p. 475) that a sentence such as (12) contains two assertions, given in (13a) and (13b):

(12) He said it's just started to rain.
(13) a. He said X.
b. It's just started to rain.

There are two possible readings of (12). Under one, (13b) is taken "as the assertion under consideration, the assertion whose truth is at stake in the discourse" (*ibid*.), whereby (13a) simply functions as a parenthetical. In this function, (13a) can also follow (13b), i.e., *It's just started to rain, he said*. Hooper & Thompson (*ibid.*) show that in the parenthetical use the main predicate cannot be negated:

(14) *It's just started to rain, he didn't say.

When reporting a quote where the focus is the truth of the quote itself, the matrix clause containing *ki* cannot be negated, paralleling (14). For instance, (15) cannot felicitously answer the question "What didn't George say?" if it hosts *ki*.

(15) o Yorikas ču *pen* (#ki) "gho a ffio".
the George not said.3SG KI I will leave.1SG
'George didn't say "I will leave."' (Pharasa)

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[6] The similarity between the adverb *really* and *ki*—also noted by one reviewer—is only partial: *really* can reflect either the speaker's or the addressee's point of view, depending on the clause type.

(i) I really said that. (speaker is the seat of knowledge)
(ii) Did you really say that? (addressee is the seat of knowledge)
Ki cannot occur in interrogatives either (see also section 2.2),

(iii) Na nda ipo (*ki) mis a ffighum?
SUBJ him tell.1SG KI we will leave.1PL
'Shall I tell him we are leaving?' (Pharasa)

suggesting that *ki* can at best be glossed as "the speaker's *really*". This clarifies why *ki* cannot co-occur with hedging devices: why would a speaker challenge her own conviction regarding an assertion she deems certain?

Under the second reading of (12), (13a) is taken to be "the important assertion, the assertion whose truth is in question or being discussed in the discourse context" (*ibid.*). Negation in a matrix clause containing *ki* is tolerable only if the truth of the matrix assertion is at stake for the speaker; in such cases, the quote remains unaffected by the negation of the reporting predicate. This is evident when the matrix clause functions as a rhetorical question, which presupposes a hidden assertion of opposite polarity to the surface form (Sadock 1971; Han 2002, and much subsequent work). In (16), the foregrounded element is the (hidden) matrix assertion, i.e., *I said* X.

(16) Ma gho sena čυ pa ki "ær na kap to imati mu a
but I to.you not said.1SG KI if SUBJ burn.2SG the shirt my will

inume poli perišani?
become.1PL very miserable
'But did I not tell you "if you burn my shirt, we will be very miserable"?
(Pharasa (Theodoridis 1964, p. 314))

The discussion thus far demonstrates that *ki* (a) syntactically belongs to the matrix clause, (b) is a not-at-issue expression, and (c), is deployed when the speaker provides her judgement that an assertion is true, hence it is speaker-oriented. The assertion whose truth is in question is normally taken by the speaker to be the embedded proposition, but it can also be the assertion in the matrix clause. The following subsections examine further configurations of *ki* in AMG dialects, revealing a consistent function across these environments and adding nuance to its characterization.

2.2 Ki as a sentence-final particle

Ki also appears in final position of assertive clauses across AMG dialects (recorded in Silli, Pharasa and in Romeyka; Kostakis, 1968, p. 69; Anastasiadis, 1976, pp. 219-220, 1980, p. 119; Papastefanou, 2009, p. 62):

(17) Piesin a vreši ki!
caught.3SG a rain KI
'It has started to rain!' (Pharasa (Papastefanou, 2009, p. 99))

Interrogatives and exclamatives are not compatible with sentence-final *ki*:

(18) a. Irtin ma (#ki)?
came.3SG Q KI

‘Did he arrive?’

b. Ame (#ki)!
Go.IMP.2SG KI
‘Go!’ (Pharasa)

The verb of the clause hosting *ki* can introduce a non-root-like argument clause such as a factive complement. Thus, sentence-final *ki* imposes no restrictions on the accompanying verb type.

(19) Šerede [tu irtis] ki!
be.glad.3SG that came.2SG KI
‘She is happy that you came!’ (Pharasa)

However, postverbal root-like complements or quotations (Section 2.1) are incompatible with sentence-final *ki*.

(20) Legho “Ma to Theo, tipos čo irevo” (*ki)!
say.1SG for.God’s.sake, nothing not want.1SG KI
‘I say, “For God’s sake, I want nothing.”’
(Pharasa, constructed example based on Theodoridis 1964, p. 298)

As discussed in Section 2.1, (20) is acceptable if the *ki* precedes the quote:

(21) Legho ki “Ma to Theo, tipos čo irevo.”
say.1SG KI for.God’s.sake, nothing not want.1SG
‘I say, “For God’s sake, I want nothing.”’
(Pharasa, constructed example based on Theodoridis 1964, p. 298)

(20) can also become acceptable if the quote is inverted:

(22) “Ma to Theo, tipos čo irevo,” legho […] ki!
for.God’s.sake, nothing not want.1SG say.1SG KI
“For God’s sake, I want nothing, ” I say!
(Pharasa, Theodoridis 1964, p. 298)

Although both involve quotative constructions, (21)-(22) are not the same: As noted in (15), and the discussion around it, matrix negation is infelicitous when

the speaker commits to the assertion in the quote. When quotative inversion takes place, negation is freely available in the matrix clause:

(23) “Eu,” ču pa ki!
come.IMP.2SG not said.1SG KI
‘I didn’t say “come!”’ (Pharasa)

Negation is grammatical with sentence-final *ki,* whether there is a quote (23) or not (24):

(24) Čo ghipnosa ki!
not slept.1SG KI
‘I did not fall asleep!’ (Pharasa)

We claim that sentence-final *ki* fulfils the same function as in Section 2.1: the speaker signals strong commitment to the truth of her assertion. For evidence, consider the preceding discourse of (23), which is taken from a narrative: exhausted, the speaker sighed “Sighhh!”, inadvertently summoning a demon of that name. When Sighhh demanded to know the speaker’s intent, she denied summoning him. The demon insisted (“Tell me at once what you want”), prompting (23)—where *ki* underscores the speaker’s firm commitment to the truth of her denial.
Consider next the constructed example in (25), taken from Bagriacik (2018):

(25) Context: A group of women, including the speaker, are cleaning the basement and thus cannot see outside. The speaker utters:

Piesin a vreši (#ki)!
caught.3SG a rain KI
‘It has started to rain! (Pharasa)

In this context, (25) conveys a weak evidential reading and *ki* is uniformly rejected by native speakers. They note that *ki* would be felicitous if the speaker were certain, e.g., having observed the rain. Thus, *ki* reinforces the speaker’s commitment to her evidence, enhancing the certainty of her conjecture. Hedging devices are therefore incompatible with clause-final *ki*:

(26) Piesin a vreši (#ki), xe?
caught.3SG a rain KI, Q-TAG
‘It has started to rain, has it not! (Pharasa)

To conclude this section, *ki* occurs in sentence-final position when the speaker signals her strong commitment to the truth of her assertion based on the strong yet private evidence she has, exactly as its function explained in section 2.1.[7] In quotative constructions with inversion, the committed assertion is always the matrix one.

2.3 Ki as an adverbial marker

Ki further links two finite clauses, the second always subjunctive and the first in any mood. Here, *ki* connects the second clause's proposition to the speaker's epistemic stance: the first clause provides justification or evidence for it. Consider (27) from Silli.

(27) Kremasti dana, ki naz ghultoši op či zulya.
hang.IMP calf KI SBJV escape.3SG from the matter
'Hang the calf, and let him be free from the matter.'
(Silli, Dawkins 1916, p. 300, his translation)

(27) comes from a tale, where a wife, exasperated by her husband's laziness, proposes a vow: whoever speaks first the next morning must tie the calf — a daily task she has hitherto performed. The man is so lazy that he does not utter a single word the next day even when the villagers decide to hang him for an unrelated matter. The wife intervenes and utters (27). She states the effect she desires (her husband's release), and proposes that the punishment of the calf constitutes enough justification for her wish, linking punishment to her wish via subjective reasoning. Consider next (28), from Romeyka.

(28) Me to sabahi t'ezeni eskumunest ki o ilo na mi kruy ta za.
with morning prayer woke.up.1PL KI the Sun SBJV not hit.3SG the cows
'We'd wake up with the prayer (so that) the cows not have sunstroke.'
(Romeyka, CK, 28.03.2022, 06:41-53)

In (28), the first clause expresses an action that, per the speaker, could realize the wish in the second clause (whether it did is immaterial). Notably, no

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[7] Dawkins (1916) renders the translation of (i) by adding the adverb 'indeed'.

(i) Tutus eši polla para ki.
he has much money KI
'This man has much money indeed.'
(Silli (Dawkins 1916, p. 294, his translation))

No preceding discourse to (i) introduces a presupposition—overt or implicit—about the subject's financial status. Thus, sentence-final *ki* does not mark counter-presupposition.

objective cause-effect relation exists between the clauses' propositional contents; rather, the second clause describes a state in a possible world, with the first providing the speaker's subjective justification for its actualization. Finally, consider (29) from Pharasa.

(29) Krommudhi ma efagha ki na miriso?
onion not ate.1SG KI SUBJV stink.1SG
literal: 'I did not eat onions, (why) would I stink?'
idiomatic: 'I did not do anything wrong; therefore, I am innocent.'
(Pharasa (Dawkins 1937, p.136))

In (29), the speaker negatively evaluates the rhetorical question's propositional content (second clause): despite no overt negation, the implication is its negation (i.e., she does not stink (literally) or feel guilty (idiomatically))—rebutting an interlocutor's implication. The first clause justifies this via the speaker's denial of onion-eating (literal) or wrongdoing (idiomatic).

We can conclude that in (27)-(29), the speaker relates an eventuality in the second clause to her epistemic attitude, offering the adverbial clause (first clause) as her subjective justification or reason. This subjectivity is evident, as no objective relation can be established thus:

(30) a. #To temiri so nero čav vari ni ki na patties.
the iron from.the water more heavy is KI SBJV sink.3SG
'The iron is heavier than water; therefore, it sinks.'

b. #Xer o nomat pin nero ki na zi.
every the person drink.3SG water KI SBJV survive.3SG
'Every person drinks water to survive.'
(Pharasa)

2.4 Ki after epistemic and evidential adverbs

In this configuration, *ki* may immediately follow epistemic/evidential adverbs (31), though not obligatorily (32). As we will argue in detail below, *ki* eliminates the adverbs' otherwise available objective modal reading.

(31) Temek ki gho iira to gečimi mu.
Evidently KI I found.1SG the living my
'Evidently, I've found my bread.'
'#It is evident that I've found my bread.'
(Pharasa (Theodoridis, 1960, p. 246))

(32) Temek atos tipos čo pičen.

Evidently he nothing not did.3SG
'It is evident that he didn't do anything (wrong).'
(Pharasa (Anastasiadis, 1976, p. 281))

Other adverbs, e.g., evaluatives or low-VP modifiers, are incompatible with *ki*.

(33) Expale/tarna (*ki) pitaksin to mextupi.
Luckily/quickly KI sent.3SG the letter
'Luckily/quickly, he sent the letter.' (Pharasa)

Bare epistemic adverbs in AMG dialects are two-way ambiguous (for Pharasa in particular, see Bagriacik, 2018): they may express a speaker's subjective commitment to the truth of a proposition, or an objectively measurable chance that the proposition is true or not true — a difference that is generally mapped onto modal adverbs and modal adjectives respectively in languages like English or German (Nuyts, 1993; Papafragou, 2006; Ernst, 2009; Müller, 2019, a.o.).

(34) a. George is certainly sick. (adverb – subjective)
b. It is certain that George is sick. (adjective – objective)

While evidential adverbs imply evidence, either physically perceptible or transparent inference from publicly available evidence (Ernst, 2009), yielding objective modal reading, speakers can also provide their epistemic judgments that are not always based on reasonable, all-visible evidence. They may also suggest that the speaker has evidence for her statement and hence express her epistemic judgment. Consider for instance the example in (35):

(35) Pelle o Andrias pirin ta paradha.
obviously the Andrew took.3sg the money
a. 'Obviously, Andrew stole the money.'
b. 'It is obvious that Andrew stole the money.' (Pharasa)

Under (35a), the speaker expresses subjective certainty: Andrew's theft is obvious based on 'her' evidence, e.g., Andrew has a new car. The adverb conveys her evidential confidence, outside at-issue meaning. Under (35b), she does not necessarily commit to the obviousness of the proposition (Andrew stole the money) but she describes an objectively evident state: if Andrew was interrogated and arrested, all would assume his guilt.

When followed by *ki*, evidential/epistemic adverbs lose their objective modal reading. Thus, (36) conveys only the speaker's personal certainty assessment and commitment to the proposition's truth.

(36) Pelle ki o Andrias pirin ta paradha.
obviously KI Andrew took.3SG the money
'Obviously, Andrew stole the money.' (Pharasa)

Ki's incompatibility with adverbs' objective modal reading is confirmed by generic statements (e.g., laws of nature), which are universally valid and compatible with epistemic/evidential adverbs under objective interpretation. *Ki*'s suppression of this reading naturally explains its pragmatic infelicity in (37).

(37) Pelle (#ki) o kozmus tolantizi son oilu jiru.
obviously KI the Earth revolves on.the Sun around
'It is obvious that the Earth orbits the Sun.' (Pharasa)

2.5 Interim summary

In all constructions examined in section 2, *ki* conveys an attitude or a mental state, setting the relevant point of view as that of the speaker. Crucially, the "relation to the speaker" also implies a relation to a hearer in the discourse setting: *ki* has the function not only of expressing the speaker's mental state, but also of manipulating the interlocutor's attitude toward the content of the speaker's assertion. The question that remains is whether this function can be captured structurally. Section 3 is devoted to this attempt.

3 The structure of *ki*-clauses

3.1 Speaker coordinates and encoding the speaker's judgement

Since Ross (1970), extensive literature has posited a superordinate structure above the clause with propositional content, encoding what the speaker *does* in addition to what she *says* (Wiltschko, 2021). Speas & Tenny (2003) formalize this as Speech Act Phrase (SAP), which encodes force, speech act roles, and point of view roles. SAP is predicational: SA head expresses a predication on the communicative intention of an utterance and selects three arguments: two pragmatic roles (P-roles)—speaker and hearer—and the propositional content. Extending the *v*P-shell approach to this domain, they provide the following structure for a declarative sentence:

(38) [$_{saP}$ *speaker* [$_{sa}$ [$_{SAP}$ *utterance content* [$_{SA}$ [*hearer*]]]]]

In (38) the speaker—as the c-commanding P-role closest to the utterance content—possesses the relevant evaluative knowledge. Different illocutionary acts derive from this structure (Speas & Tenny, 2003). However, as Miyagawa

(2022) notes Speas & Tenny's framework leaves unclear how the speaker and the addressee in the SAP relate to the propositional content.

Recently, Krifka (2018, 2023) proposed a superordinate structure addressing this gap, incorporating ideas from Frege (1918) and Peirce (1934; also, Tuzet, 2006). Frege (1918) distinguishes the following components of an assertion:

(39) a. The grasping/conception of a thought – the thinking,
b. the appreciation of the truth of the thought – the judging, and
c. the manifestation of the judgement – the asserting.
(Frege, 1918, translation by Frey, 2020)

Krifka (*ibid.*) translates these aspects into three distinct semantic operations:

(40) a. the forming of a proposition *φ*, which has truth conditions,
b. the judgement by a thinking mind concerning *φ*, a private act, and
c. the performing of a speech act by a thinking mind, a public act.

These operations are syntactically represented as follows:

(41) a. TP, the propositional/thought content,
b. JudgeP, which encodes the private judgment by the speaker of his/her attitude toward the proposition,
c. ActP, encoding the speech act performed by the speaker, the locus of illocutionary force.

Krifka (2023) posits an additional projection, CommitP, between ActP and JudgeP. CommitP encodes a committer and their public commitment. While the committer is the speaker in assertions, it equals the addressee in information seeking questions. Miyagawa (2022) claims that CommitP is links the speaker/ hearer to the propositional content:

(42) $[_{\text{ActP}} \bullet [_{\text{CommitP}} \vdash [_{\text{JudgeP}} [_{\text{TP}} \ldots]]]]$[8]

CommitP modifiers (e.g., *truly, by God, definitely,* and *seriously*) affect public commitment strength, typically when the speaker anticipates disbelief, implicating propositional controversy (Krifka, 2023). JudgeP, conversely, encodes private judgement, hosting subjective modifiers, such as epistemic and evidential ones. The semantic contribution of JudgeP is not part of the main

[8] The notation is taken from Krifka (2023). The dot symbol is an assertion operator, and the turnstile, the head of CommitP.

proposition to be communicated, namely TP. Such modifiers alter commitment type, as Krifka (2023) states:

> "[i]t is safer to commit to one's own estimation of likelihood of a proposition, or commit to the inference of a proposition from assumptions that one holds true, than to commit to the proposition directly."
>
> (p. 18)

This holds because JudgeP encodes the speaker's private epistemic state, which the interlocutor cannot easily challenge. While JudgeP modifiers may seem to weaken the assertion's perceived strength, they shift commitment targets: By these modifiers, commitment is to a different proposition, "one that may feel safer to defend" (Krifka 2023, p. 13).

3.2. The Structure of ki-*clauses in Greek*

Section 2 showed that *ki* expresses the speaker's private judgement regarding a proposition's source, strength or justification. We thus claim that *ki* spells out Judge in Krifka's (2023) terms. That only epistemic/ evidential adverbs tolerate *ki* (section 2.4) further supports this claim.

Since *ki* cannot initiate utterances (requiring an overt material immediately before it) or stand in isolation, we claim that *ki* demands spec-head configuration with a preceding constituent. One way to satisfy this is merging an epistemic/evidential modifier in [Spec, JudgeP], yielding subjective reading (as discussed in section 2.4).

(43) $[_{\text{ActP}} \bullet [_{\text{CommitP}} \vdash [_{\text{JudgeP}}$ *obviously* $[_{\text{Judge}}$ *ki* $[_{\text{TP}} \ldots]]]]$

This structure derives the syntactic peculiarities in section 2.4 and explains why, among two epistemic modifiers in one utterance, only the higher adverb licenses *ki* and receives subjective modal reading, while the lower one receives objective modal reading alone (44a-b).

(44) a. Pelle ki taman (*ki) o Jorikas a mis ghultosi.
obviously KI undoubtedly KI George will us save.3SG

b. Pelle ki o Jorikas taman (*ki) a mis ghultosi.
Obviously KI George undoubtedly KI will us save.3SG
'Obviously, it is without doubt that George will save us. (Pharasa)

One reviewer proposes an alternative analysis for (44a-b): *pelle* 'obviously' in CommitP (above JudgeP), *taman* 'undoubtedly' is in JudgeP (with the subject *o*

Jorikas 'George' intervening as topic in (44b)). While topic expressions may occur there, we reject *taman* reaching up to JudgeP. Evidence from (45) shows that a second epistemic modifier is felicitous only below the contrastive phrase *mis pali* 'us'. Contrastive *pali*-phrases exhibit focus properties and occupy the left periphery Sitaridou & Kaltsa, 2014; Bagriacik, 2018, p. 275-285).[9] That the highest *taman* in (45) is ungrammatical shows that it cannot be in JudgeP (nor in a potential position above the *pali*-phrase).

(45) Pelle ki (*taman) mis pali (taman) o Jorikas (taman) …
obviously KI undoubt. us PALI undoubt. George undobt. …
'Obviously, it is without doubt that George will help us.'
(Pharasa)

We conjecture that, among the two lower grammatical modifiers in (45), the higher occupies a left-peripheral topic position, while the lower remains within TP.

A second way to satisfy *ki*'s requirement is external merger of a full clause with propositional content in [Spec, JudgeP], yielding its adverbial reading. This configuration captures the interpretive properties of the adverbial clause (for which see section 2.3):

(46) [$_{\text{ActP}}$ • [$_{\text{CommitP}}$ ⊢ [$_{\text{JudgeP}}$ [adverbial clause] [$_{\text{Judge}}$ *ki* [$_{\text{TP}}$ …]]]]

Finally, *ki*'s requirement can be fulfilled by movement to [Spec, JudgeP] of TP that *ki* c-commands.

(47) [$_{\text{ActP}}$ • [$_{\text{CommitP}}$ ⊢ [$_{\text{JudgeP}}$ [$_{\text{TP}}$…] [$_{\text{Judge}}$ *ki* [~~$_{\text{TP}}$ …~~]]]]

(47) represents the structure of not only sentences with clause-final *ki* (section 2.2) but also those where *ki* follows an assertive predicate introducing a complement clause or a quote (section 2.1). We claim that in the latter, only the matrix clause moves to [Spec, JudgeP] and the material following *ki*, i.e., the complement clause or quote, is not linked to the matrix verb by ordinary means of subordination. This is evident for quotes and empirically verifiable for complements, like (4b-c), repeated as (48a-b) respectively:

(48) a. Sanse ki erete na kanis.
thought.3SG KI comes a person
'He thought someone was coming.'
(Cappadocia (Kesisoglou, 1951, p. 63))

[9] *Pali*-phrases cannot precede the modifier+*ki* sequence either.

b. Transe ki to meydan en avya.
saw.3SG KI in.the yard are game.animals
'She saw that in the yard is some game.'
(Cappadocia (Dawkins, 1916, p. 348, his translation))

That complement clauses in (48a-b) are not subordinated to the matrix clause is shown by the fact that matrix material fails to c-command embedded material. First, if *ki* is present, the complement clause behaves like a strong island, unlike the case without *ki*:

(49) Pots$_i$ sanse i Nerkiza (*ki) [effain o Yorikas _$_i$]?
what thought.3SG the Nerkiza KI ate.3SG the George
'What did Nerkiza think that George ate?'
(Pharasa)

Second, with *ki* present, the embedded clause is opaque to binding from the matrix clause, cf. (50a) and (50b).

(50) a. Xerkes$_i$ sanse o ijo tu$_{i/j}$ paredhothin.
everyone thought.3SG the son his got.married.3SG
'Everyone$_i$ thought his$_{*i/j}$ son got married.'

a. Xerkes$_i$ sanse ki o ijo tu$_{*i/j}$ paredhothin.
everyone thought.3SG KI the son his got.married.3SG
'Everyone$_i$ thought his$_{*i/j}$ son got married.'
(Pharasa)

We conclude that the clause following *ki* in (48)-(50) is a non-integrated, independent discourse unit—like a quote. While the linking mechanism to the matrix clause remains unclear, movement of the matrix TP to [Spec, JudgeP], stranding the apparent complement/quote, is structurally viable and interpretively explanatory.

In the next section, we turn to the source language, Turkish, and investigate *ki* in this language.

4 *Ki* in the source language

The most detailed description of *ki*-environments in the source language, Turkish, comes from Erguvanlı (1980/1981), who includes in her account data from the Turkish dialect of Nevşehir (part of Cappadocia). (51) lists the *ki*-

environments, illustrated in (52)-(55) with dialectal examples (all from Erguvanlı, 1980/1981).

(51) a. after lectic verbs when they introduce a quote (52),
b. after verbs of cognition to introduce finite complement clauses (53),
c. a *so-dass* clause (in the sense of Frey, 2011) (54), and
d. a so-called elliptical clause, where *ki* is clause-final (55).

(52) Gız da dimiş ki beni alacağına altından bir deve yaptır.
girl TOP said.3SG KI me marry.instead golden a camel make.CAUS.IMP
'The girl said, "Instead of marrying me, have a camel made of gold.'"

(53) Gelin bakıyor ki gaynının kellesi bir yerde, gödesi bir yerde.
bride sees KI in-law's head one place.LOC body one place.LOC
'The bride sees her in-law's head is at one place, his body at another.'

(54) Babası da iki dene zehilli at yolladı ki Aslanzade ölsün.
father.his TOP two pieces poisonous horse sent.3SG KI Aslanzade die.3SG
'His father sent two poisonous horses so that Aslanzade would die.'

(55) Ben Gültekin'i hiç dömem ki!
I Gültekin never beat.NEG.1SG KI
'I never beat Gültekin!'

We further note that *ki* may follow speaker-oriented adverbs: *tabi(i)* 'natural(ly)', *elbette* 'surely', *demek* 'evidently', *Allahtan* 'luckily', *maalesef* 'unfortunately', *belli* 'obviously', *iyi* 'fortunately', *muhakkak* 'certainly', *mutlaka* 'certainly', *yazık* 'unfortunately':[10]

(56) a. Allahtan ki Rumlar 'evet' demiştir.
fortunately KI Greeks 'yes' said.3PL
'Fortunately, the Greeks said 'yes'.

b. Belli ki önerimizi Saddam'a götüreceklerdi.
obviously KI our.proposal to.Saddam would.take.3PL
'Obviously, they would take our proposal to Saddam.'

[10] The adverbs listed here, as well as the examples in (56), are from the Turkish National Corpus (Aksan et al. 2012, https://www.tnc.org.tr). Göksel & Kerslake (2004, 357) treat them as adjectives, but we see no structural justification. They further claim these adjectives+*ki* combinations are "[…] frozen forms […] function[ing] more as modal adverbials" (*ibid*.). The corpus shows none are frozen.

Standard Modern Turkish judgments indicate that *ki* affects the truth value in none of the above configurations, as evidenced by the fact that it can be omitted from all sentences in (51)-(56).[11]

The literature on Turkish *ki* assumes multiple *ki*s (Erguvanlı, 1980/1981; Schroeder, 2002; Predolac, 2017, ch. 2; Griffiths & Güneş, 2015; Meral, 2018). Most studies focus on its category: a subordinator (e.g., Erguvanlı, 1980/1981; Çağrı, 2005), a coordinator (Griffiths & Güneş, 2015; Predolac, 2017), a clause-typer (Meral, 2018), or discourse marker (Schroeder, 2002). A few further examine its host clause and its discourse connection; of these, Griffiths & Güneş (2015) (G&G) is particularly relevant here.

G&G focus specifically on *ki*-configurations like (52) and (53): embedded clauses and quotes introduced by *ki*.[12] Based on prosodic evidence (inter alia) they associate *ki* with the matrix clause, which they call *ki*-clause. Following De Vries (2009), they treat *ki* as a parenthetical head (of KiP) selecting type *t*-complements (shown in dashed lines in (57)). The resulting maximal projection, KiP, further pair-Merges with any host clause node (the embedded clause in our terms):

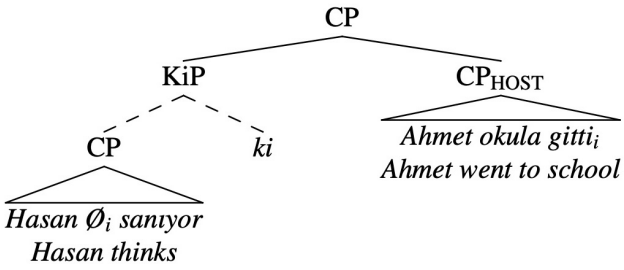
(57)

[11] As one reviewer rightly points out, *ki* cannot be omitted from (54) as easily as from other sentences. Omission is possible if the *say*-complementizer, *diye*, is added at the end of the second sentence.

[12] G&G further analyze appositive/non-restrictive finite relative clauses with *ki* and treat them as parentheticals, where *ki* is a proclitic (unlike the enclitic *ki* in (52)-(56), where it is an enclitic).

(i) Abim, [ki işini daima zamanında yapar], bu sefer geciktirmiş.
my.brother KI his.work always on.time does this time delayed.3SG
'My brother, (he) always does his homework on time, handed it in late.'
(G&G, p. 176, glosses simplified)

Erguvanlı (1980/1981) notes this function of *ki* is restricted in Standard Turkish, and *ki* in this function may have a different historical source. *Ki* with this particular function is absent in AMG.



G&G further distinguish two host clause types: (i) true assertions, and (ii) demonstrations of utterances by a third party, which may be the speaker herself. They claim demonstrations are speech acts but are not assertions. Accordingly, they recognize two types of *ki*-clauses: assertion modifiers and demonstration modifiers. When the host clause denotes an assertion, with the *ki*-clause the speaker commits publicly to the truth of it (plus of her assertion in *ki*-clause). When the host clause denotes a demonstration, however, the speaker remains neutral, merely reporting/demonstrates an utterance—by herself or by another party. Illustrations appear in (58) and (59) (host clauses are given in square brackets):

(58) Fısıldadım ki [Meryem bir milyon dolar kazandı].
whispered.1SG KI Meryem one million dollar won.3SG
'I whispered "Meryem won one million dollars."'
(host clause as a demonstration)

(59) İnanıyorum ki [Meryem bir milyon dolar kazandı].
believe.1SG KI Meryem one million dollar won.3SG
'I believe Meryem won one million dollars.'
(host clause as an assertion)

Demonstrations are best disambiguated from assertions with non-first-person matrix subjects: in such cases, as in (60), the speaker merely demonstrates/reports what has previously been asserted, without expressing public commitment to it:

(60) Ali diyor/inanıyor ki [Meryem bir milyon dolar kazandı].
Ali says/believes KI Meryem one million dollar won.3SG
'Ali says/believes Meryem won one million dollars.'
(host clause as a demonstration)

G&G claim that demonstrations feature root-like *ki*-clauses, unlike non-root-like ones in assertions. Only the *ki*-clauses of demonstrations are good hosts for evaluative adverbs, whereas the modifiers of assertions do not allow these adverbs:

(61) Hasan maalesef sanıyor ki Ali okula gitti.
Hasan unfortunately thinks KI Ali to.school went.3SG
'Hasan unfortunately believes Ali went to school.'
(host clause as a demonstration)

(62) (#Maalesef) sanıyorum ki Ali okula gitti.
unfortunately believe.1SG KI Ali to.school went.3SG
'I unfortunately believe Ali went to school.'
(host clause as an assertion)

G&G's analysis, and especially their attempt to distinguish demonstrations from assertions, is important but we are not ready to agree with their claim that "[…] *ki* can be optionally dropped without any consequences for interpretation" (p. 177); that is, *ki* is genuinely optional. At this point, consider Göksel & Kerslake's (2004, p. 355) observation that the use of a *ki*-clause

> "[…] has the effect of highlighting the main predicate, thus drawing attention to the status of what is about to be uttered: an obvious fact, a surmise on the part of the speaker, a desire, etc."

We argue that what Göksel & Kerslake call "drawing attention to the status of what is about to be uttered" reflects the speaker's involvement; in particular, presenting her point of view on the upcoming utterance, which, implicating the expressive functional layer. Consider the following minimal pair:

(63) Patron sanıyor işi ben savsaklıyorum.
boss thinks task I slack.off.1SG
'The boss thinks I slack off on the task.'

(64) Patron sanıyor ki işi ben savsaklıyorum.
boss thinks KI task I slack.off.1SG
'The boss thinks I slack off on the task.'

While both (63)-(64) demonstrate the subject's doxastic state, (64) adds a non-neutral evaluation by the speaker: it locates the demonstration in common ground as an assertion. Consider challenging (63)-(64) with *How do you know?*—a

standard way to challenge a speaker's assertion (Haziza, 2022, and references therein). The speaker of (63) can felicitously reply with (65) but the answer turns out to be infelicitous if uttered by the speaker of (64). Thus (64) constitutes a genuine assertion of a demonstration.

(65) Bana öyle geliyor.
me such comes
'Just a hunch.'

We speculate that demonstrations assume assertion status with *ki,* if *ki* is associated with Krifka's ActP. That evaluative adverbs such as *maalesef* 'unfortunately' can occur in the *ki*-clause of demonstrations (61) evidences their ActP status.[13]

Consider next assertions of the type (62). While their *ki-clause* is not compatible with evaluative adverbs, which are presumably ActP modifiers, they are good hosts for judgement or commitment modifiers:

(66) Kesinlikle/elbette inanıyorum ki Ali okula gitti.
definitely/certainly believe.1SG KI Ali to.school went.3SG
'I definitely/certainly believe Ali went to school.'

We believe that *ki*-clauses of sui generis assertions are maximally CommitPs. With *ki* in assertions, the speaker not only communicates the asserted proposition but strengthens her commitment or signals seriousness. Other uses of *ki*, not discussed by G&G, become relevant to the picture at this point. One of these is the clause-final *ki*, illustrated in (55), repeated as (67):

(67) Ben Gültekin'i hiç dömem ki!
I Gültekin never beat.NEG.1SG KI
'I never beat Gültekin!'

Sentences like (67) express counterreaction to a discourse commitment (implicit or explicit in the utterance) of the interlocutor to the negation of the proposition expressed by *ki* (for details see Altınok 2025). In the current framework, this should be read as strengthening the commitment of the speaker to the truth of her proposition where she finds that regular commitment may fail to convince the interlocutor. As a commitment marker, *ki* here must be associated with CommitP.

Finally, consider (54), repeated as (68). The initial clause provides the state of the affairs triggering the result in the second clause. This cause-effect relation

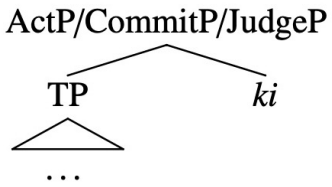
[13] Hence, we think the test in (61)-(62) does not show that *ki*-clauses of demonstrations are root clauses whereas *ki*-clauses of assertions are not.

is the one evaluated by the speaker, not an objective one. As in AMG, we claim *ki* here is associated with JudgeP.

(68) Babası da iki dene zehilli at yolladı ki Aslanzade ölsün.
father.his TOP two pieces poisonous horse sent.3SG KI Aslanzade die.3SG
'His father sent two poisonous horses so that Aslanzade […] would die.'

We have so far tentatively claimed that Turkish *ki*'s different uses stem from its location in ActP, CommitP and JudgeP; i.e., *ki* can realize all the heads of the expressive layer in Turkish (69). Its cooccurrence—exclusively—with evaluative (ActP), commitment (CommitP), and evidential/epistemic (JudgeP) adverbs (Krifka 2023) supports this. Regarding the internal syntax of *ki*-clauses, we largely follow G&G with one modification: we claim their KiP comes in different sizes: ActP, CommitP and JudgeP:[14]

(69)



That *ki* cannot be iterated (Göksel & Kerslake 2004, p. 355; Predolac 2017, pp. 27-30) suggests it realizes only one head in the expressive layer at a time. Moreover, its occurrence with the highest adverb suggests that *ki* moves to the highest available head in the expressive layer:

(70) Allahtan ki demek (*ki) mutlaka (*ki) bir kefil bulabilecek.
fortunately KI evidently KI certainly KI one bondsman find.3SG
'Fortunately, evidently, she will certainly find a bondsman.'

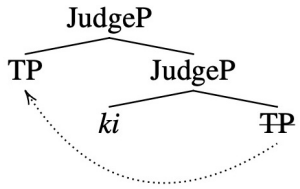
We conclude this section as follows: Turkish *ki* spells out the highest head available in the expressive layer whose complement is a TP: this can be Judge, Commit or Act. The multifunctionality of *ki* reflects its position in the expressive layer.

[14] Here, we do not analyze the external syntax of *ki*-clauses, i.e., their attachment to a host (as demonstration, an assertion or a result clause). See G&G (2015) for a solution.

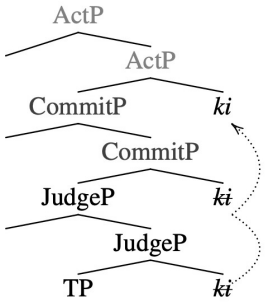
5 *Ki* from Turkish to AMG

We have so far claimed that *ki* is in Judge head in AMG (71), while in Turkish it occupies the highest available head in the expressive layer, which may be JudgeP, CommitP or ActP (72).

(71) *AMG*



(72) *Turkish*



Why does *ki* differ in its functions in the two languages? Specifically, why is AMG *ki* solely the exponent of Judge while Turkish *ki* can move up to Act? Assuming *ki*'s functions in Turkish were diachronically stable—a reasonable claim given Erguvanlı's (1980/1981) historical data—bilingual speakers presumably introduced all functions—and projections (ActP, CommitP, JudgeP)—into the AMG linguistic pool but only the Judge head pattern was ultimately accommodated in AMG grammars.

We address this question via a specific transfer hierarchy. While transfer hierarchies typically consider only outcomes, ours captures both morphosyntactic transfer outcomes and mechanisms, factoring in syntactic complexity. We claim that, regardless of faithful/unfaithful transfers introduced by bilinguals, their sedimentation—accommodation into target grammars by L_1 acquirers—follows the universal functional hierarchy monotonically, from less to more complex structures. We propose the following axiom:

(73) If a category *f* is relevant to multiple functional projections in a prolific domain (Grohmann, 2003) in the source language and if *f* is introduced into the pool of variants of the target language, *f* will be accommodated, i.e., will be part of target language grammar, first in the lowest functional projection of that specific domain, and then in the higher ones, in monotonic order.

There is every reason to believe that all Turkish *ki* patterns, i.e., its functions as Act, Judge or Commit heads, were at some point introduced into the linguistic pool of AMG dialects. Thus, indeed, *anything* goes in transfer, when transfer is

taken to mean the introduction of patterns from one language to another by bilingual speakers. However, *ki*'s accommodation into AMG solely as the exponent of Judge must follow from (73)—whatever its underlying motivation is: adoption of categories that are associated with a specific prolific domain—in this case the expressive layer—proceeds monotonically starting from the lowest projection within that domain, in our case JudgeP. Once a source language category has the potential to be associated in the target language with syntactically the least complex configuration, it is associated with that one.

6 Conclusions

In this paper, we investigated the *ki* particle in Asia Minor Greek dialects, a morpheme standardly assumed to have been borrowed from Turkish. We showed that it has been accommodated into the grammar of these dialects as the exponent of JudgeP head (Krifka, 2018, 2023), in the expressive layer above TP. We further proposed that *ki* in the source language, Turkish, realizes all the heads in the expressive layer (Judge, Commit, Act). We argued that the non-isomorphism of the functions of *ki* between Turkish and Greek dialects stems from how a transferred morphosyntactic category is accommodated into the grammar of L_1 learners, who are subject to patterns involving the transferred category. We claimed that accommodation of a category is correlated with syntactic complexity, where we defined complexity as the number of functional projections: a transferred category is first accommodated into the target grammar at the lowest functional projection with which it is associated.

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