The -ki suffix annotation in Turkic languages

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- The suffix -ki- has been examined in various Turkic languages from multiple perspectives, often yielding divergent results.
- Its interpretation and annotation are **inconsistent** across existing Turkic UD treebanks.
- In this talk, I summarize the outcomes of recent online discussions within the UD Turkic group.
- The focus is on new aspects of the phenomenon, primarily based on Turkish and Kyrgyz data.

- Our discussions indicate that two distinct constructions involve the suffix -ki-.
- In the first construction, -*ki* functions as the **head of a ModP**, licensing locative PPs as nominal modifiers.
 - (1) $\left[\text{ModP } \left[\text{PP -loc} \right] ki \left[\text{N} \right] \right]$
- The second construction is an anaphoric possessive structure, specialized for contexts lacking an overt possessum.
 In this case, -ki itself serves as the pro-form, i.e. the anaphoric element.
 - (2) [PossP N-gen [-ki]]

- From the perspective of the UD framework, three issues are central:
 - Whether the suffix -ki-, realized as a bound morpheme, should be **segmented**.
 - Which **POS** tag should be assigned to the construction.
 - How the **syntactic relation** is established within, and outside of, the phrase containing -*ki*-.

- At first sight, three constructions containing the suffix *-ki* can be distinguished:
 - (3) oda-da-ki çocuk(-lar-ım) room-loc-кі child-pl-1sg N-loc-ki N(+Infl)
 - (4) oda-da-ki(-ler-im-i) room-loc-ki-pl-1sg-acc N-loc-ki(+Infl)
 - (5) Ivan'-ın-ki(-nde) Ivan-gen-ĸı-loc N-gen-ki(+Infl)

- First, let us compare the two structures in (3) and (4):
 - (3) N-loc-ki N(+Infl)
 - (4) N-loc-ki(+Infl)
- Structure (3) represents the regular construction, where the suffix -ki- attaches to a locative-marked noun modifying an overt noun.
- Structure (4), by contrast, lacks an overt noun. This pattern is interpreted as an instance of **regular noun ellipsis**.
 - (3) N-loc-ki N(+Infl)

- Two pieces of evidence support the ellipsis analysis of (4):
 - Evidence 1: Lack of concord within the NP when the noun is overt. → If the noun is elided, one of the modifiers must take over its inflection.
 - (6) masa-da-ki kitap-lar-ım-da table-loc-кі book-pl-poss.1sg-loc 'in my books that are on the table'
 - (7) masa-da-ki-ler-im-de N table-loc-ki-pl-poss.1sg-loc 'in my books that are on the table'

- Evidence 2: The modifier that is linearly closest to the elided noun carries the remnant inflection.
 - (8) oda-da-ki zeki-ler-im N room-loc-KI smart-pl-1sg 'my smart ones in the room'
 - (9) #oda-da-ki-ler-im zeki N room-loc-ki-pl-1sg smart (intended: 'my smart ones in the room')

- \Rightarrow The resulting construction can be represented as:
- (10) N-loc-ki (N)

- At first sight, it appears that a noun inflected for locative case takes the suffix -ki-.
- Beyond nouns, -ki- can also attach to **PP**s expressing location:
 - (11) masa-nın alt-ın-da-ki çocuk table-gen under-poss.3sg-loc-kı child 'the child under the table'

 Likewise, -ki- can attach to adverbs expressing spatial and temporal location:

(12) Dün-kü yemeğ-i yi-yor-um yesterday-кı food-acc eat-prog-1sg 'I am eating the food from yesterday.' (lit. 'the yesterday's food')

• Apart from these contexts, the suffix -ki- does not appear to be productive.

- As a result, three main constructions with the suffix -ki- can be distinguished:
 - (13) N-loc-ki (N)
 - (14) Adv-ki (N)
 - (15) Postp-loc-ki (N)

- We assume that cases and adverbs can be analyzed as postpositions, leading to the generalization (see e.g. Johanson (2021) for adverbs):
 - (16) PP-ki (N)

 Regarding the function of -ki: it is traditionally assumed to modify a noun and to serve as a derivational suffix forming an adjective (i.e., an adjectivalizer).

Property	Adjective	PP-ki
Position w.r.t. the modified noun	only precedes	only precedes
Intensifier	yes	no/?
Comparative degree	yes	no/?
Predicate complement	yes	no/?
Base for adverb derivation	?	?

Table 1: Comparison of adjectives and PP-ki constructions

- As evidenced, [PP-ki] does not exhibit adjective-like properties; rather, it behaves as **nominal**.
- Following Kenesei (2014) on the Hungarian -i- suffix, we adopted the analysis that -ki in Turkic languages functions as the **licensor of locative PPs modifying nouns**. That is, it projects a functional layer, i.e. it is a "function suffix".

$$[ModP [PP -loc] -ki - [(N)]]$$

- **Segmentation:** According to UD, "The lemma does not remove derivational morphology." However, in the case of -*ki*, it is not a derivational suffix but a syntactic operation.
- **UPOS:** Treat the PP as ADP, and -ki itself as N.
- **Syntactic relation:** Assign amod or nmod as appropriate. In cases of ellipsis, apply the "promotion" analysis.

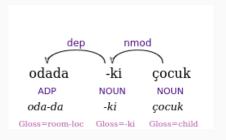


Figure 1: Illustration of the PP-*ki* (N) construction.

- Now, let us turn to the N-gen-ki construction.
- The [N-gen-*ki*] construction does **not** involve **noun ellipsis**: inserting a noun is ungrammatical.
 - (18) Ivan'-ın-ki *ev-in-de
 Ivan-gen-ĸı house-poss.3sg-loc
 intended: 'in Ivan's house'

• The N-gen-*ki* construction can take inflection, and its syntactic behavior resembles that of **ordinary nouns**.

(19) Bu kitap-lar Ivan'-ın-ki-ler. this book-pl Ivan-gen-ĸı-pl 'These books are Ivan's.'

 In other words, it functions as a noun in its own right and can only serve as a noun or a predicate.

- Semantically, the N-gen-ki construction expresses anaphoric possession: expressing belonging and highlighting (and possibly emphasizing) the possessor.
- The construction lacks an overt nominal possessum, with the suffix -*ki* itself serving as the possessum pro-form, i.e., the anaphoric element.

 \rightarrow The N-gen-ki construction is to be analyzed as a regular PossP.

- **Segmentation:** According to UD, "The lemma does not remove derivational morphology." In the case of *-ki*, however, it is not a derivational suffix but a pro-form.
- **UPOS:** Treat the N-gen construction as NOUN, and *-ki* itself also as NOUN.
- Syntactic relation: Assign nmod: poss.

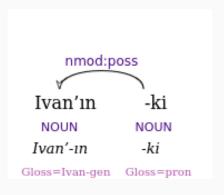


Figure 2: Illustration of the N-gen-*ki* construction.

Thank you!