

Embedded clauses in Turkish: Both argumenthood and modification are paths to composition

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1 Introduction

There are (at least) two kinds of clauses in Turkish.

- (1) a. **Nominalizations: argument-like**
 Gaja [Anna-nın tırman-dığ-ın-ı] düşünüyor.
 Gaja Anna-GEN climb-NMZ-3S-ACC thinks
 Gaja thinks that Anna climbs.
- b. **Diye clauses: modifier-like**
 Gaja [Anna tırman-ıyor diye] düşünüyor.
 Gaja Anna climb-PRES.3S DIYE thinks
 Gaja thinks that Anna climbs.

Main claim: Nominalizations are like other arguments in the language. *Diye* clauses, like other modifiers.

Evidence: The morphosyntax of complex noun phrases; Case and distribution with verbs.

2 Background: Two possible ways of composing clauses, two kinds of clauses

Two possible ways of composing clauses

We have a handle on the global truth conditions of attitude reports:

- (2) Gaja thinks that Anna climbs.
 $\forall w' \in \text{dox}(w, \text{Gaja}) : \text{Anna climbs at } w'$
 ‘At all of the possible worlds accessible to Gaja, from her thoughts in the actual world, Anna climbs.’

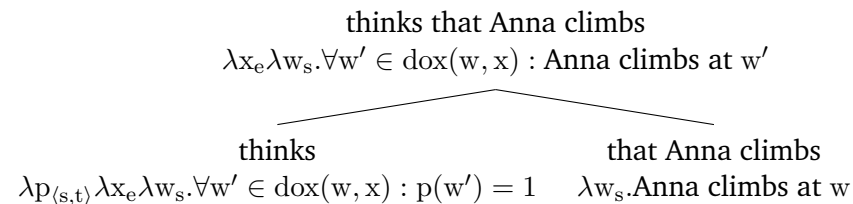
Similar remarks apply to clauses composing with nouns.

- (3) the thought that Anna climbs

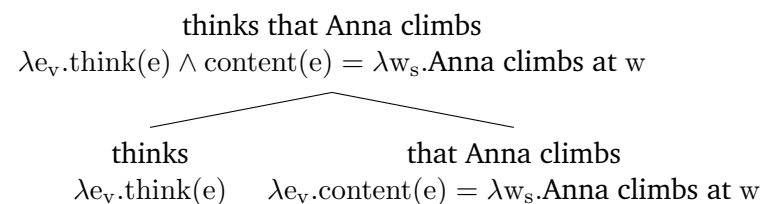
A big question: How do these truth conditions arise compositionally?

Two answers at two extremes:

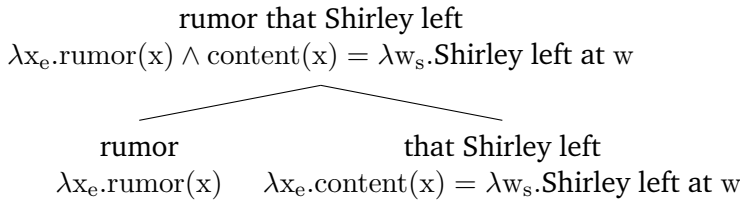
Clauses as arguments (Heim and Kratzer, 1998; von Stechow and Heim, 2011)



Across the board modification (Elliott, 2017)



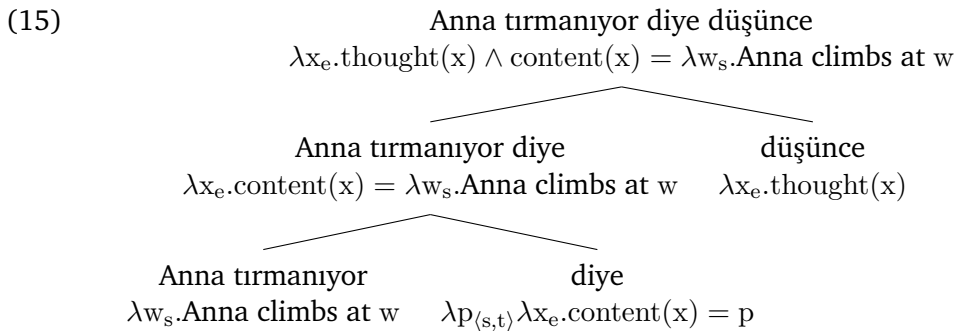
(14) content Ns & *that* clauses are of type $\langle e, t \rangle$; they compose via Predicate Modification



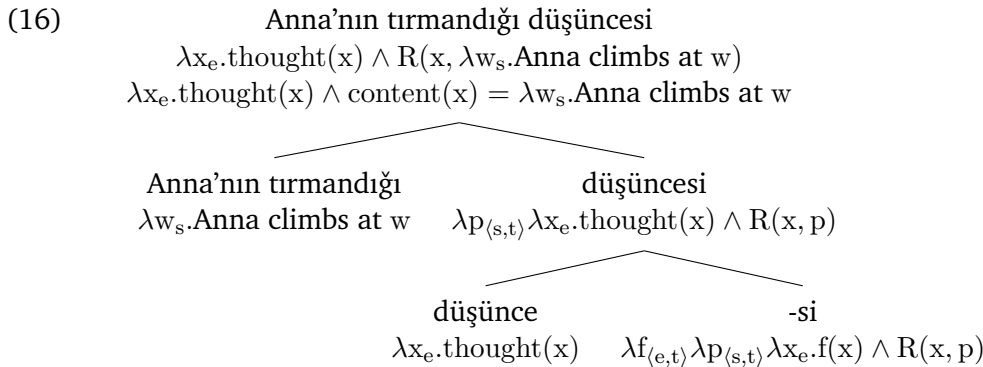
$\lambda_{p\langle s,t \rangle} \lambda_{x_e}.\text{content}(x) = p$ associates things with propositional content. Things like beliefs, rumors, truths have content in this sense, while tables and chairs do not.

Evidence for this kind of semantics is rooted in the syntax of noun + *that* clause combinations.

- There is no reason not to adopt the same view for *diye* clauses.



- But with nominalizations, composition must proceed differently:
 - As in the regular compound cases $-(s)I(n)$ introduces a relation R that holds between predicates of individuals (e.g., *thought*) and propositions.
 - Its value? For concreteness, assume that it determines propositional content.⁴



- The meaning of nominalization + N and *diye* clause + N ends up being equivalent, but derived differently. Propositional content is determined from within the clause with *diye* and outside with nominalizations. In (17), a nominalization combines with the existential copula. These sentences are about the frequency of particular situations. And this is consistent with the claim that nominalized clauses do not inherently fix the content of things.

(17) [Anna-nın tırman-dığ-ı] oluyor/yok.
 Anna-GEN climb-NMZ-3S.NOM COP/NEG.COP
 It happens that Anna climbs./Anna doesn't climb.

⁴There are alternatives to look into: Perhaps nominalized clauses denote nominalized propositions (of type e), and R here is the identity relation (Potts, 2002). Evidence from predicational vs. specificational copular clauses.

4 Composing clauses with verbs

Nominalizations and *diye* clauses also both compose with verbs:

- (18) Gaja [Anna-nın tırman-dığ-ın-ı] / [Anna tırman-ıyor diye] düşünüyor.
Gaja Anna-GEN climb-NMZ-3S-ACC / Anna climb-PST.3S DIYE thinks
Gaja thinks that Anna climbs.

Nominalizations do not combine with (derived) intransitives. *Diye* clauses are quite generally free to do so. The former pattern like regular DPs with respect to distribution and case; *Diye* clauses pattern differently.

- (19) a. Gaja [Anna-nın tırman-dığ-ın-ı] (*yalan) söyledi.
Gaja Anna-GEN climb-NMZ-3S-ACC lie told
Intended: Gaja lied that Anna climbs.
b. Gaja [Anna tırman-ıyor diye] yalan söyledi.
Gaja Anna climb-PST.3S DIYE lie told
Gaja lied that Anna climbs.⁵

Case alternation #1: ACC ~ DAT in causatives

- When a Turkish verb is causativized, the causee is in the accusative or in the dative depending on whether an (accusative) internal argument is present. Modifiers of the verb do not force the causee to be dative.

- (20) a. Gaja Dave-i düşün-dür-dü.
Gaja Dave-ACC think-CAUS-PST.3S
Gaja made Dave think.
b. Gaja {Dave-e, *Dave-i} şu-nu düşün-dür-dü.
Gaja Dave-DAT Dave-ACC that-ACC think-CAUS-PST.3S
Gaja made Dave think that.
c. Gaja {*Dave-e, Dave-i} hızlı düşün-dür-dü.
Gaja Dave-DAT, Dave-ACC quick think-CAUS-PST.3S
Gaja made Dave think quickly.

- Nominalizations trigger the dative on the causee. *Diye* clauses are perfectly happy with accusative causees. (Though some people at least accept them with dative causees as well.)

- (21) a. Gaja {Dave-e, *Dave-i} [Anna-nın tırman-dığ-ın-ı] düşün-dür-dü.
Gaja Dave-DAT, Dave-ACC Anna-GEN climb-NMZ-3S-ACC think-CAUS-PST.3S
b. Gaja {%Dave-e, Dave-i} [Anna tırman-ıyor diye] düşün-dür-dü.
Gaja Dave-DAT Dave-ACC Anna climb-PST.3S DIYE think-CAUS-PST.3S
Gaja made Dave think that Anna climbs.

⇒ Nominalizations must saturate argument slots.⁶ *Diye* clauses may be modifiers. (but do they have to be?)

Case alternation #2: ACC ~ NOM in passives

- When a Turkish verb is passivized, its accusative argument surfaces in the nominative.

- (22) [Anna-nın tırman-dığ-ı] düşün-ül-dü. cf. (18)
Anna-GEN climb-NMZ-3S.NOM think-PASS-PST.3S
It was thought that Anna climbs.

⁵This sentence has a possible parse where the *diye* clause composes with the noun 'lie.' Space keeps me from ruling this out.

⁶If this is right, one would have to (re-)think why substitution failures arise in examples like *Gaja explained the fact that/that Anna climbs* (Pietroski, 2000; Uegaki, 2015; Elliott, 2017).

- *Diye* clauses are able to occur with passivized attitude verbs:

(23) [Anna tırman-ıyor diye] düşün-ül-dü.
 Anna climb-PST.3S DIYE think-PASS-PST.3S
 It was thought that Anna climbs.

- Assume that *diye* clauses saturate a transitive predicate's internal argument slot.
 - Then, we expect (23) to have a parse where the clause is the subject of the passive.
 - Which in turn leads us to expect that *diye* clauses should be able to be subjects quite generally.
- Contrary to fact: *Diye* clauses are unacceptable subjects (cf. nominalized clauses).

(24) a. *[Anna tırman-ıyor diye] doğru/belli.
 Anna climb-PST.3S DIYE true.COP/obvious.COP
 Intended: It's true/obvious that Anna climbs.

b. [Anna-nın tırman-dığı] doğru/belli.
 Anna-GEN climb-NMZ-3S.NOM true.COP/obvious.COP
 It's true/obvious that Anna climbs.

- These facts are consistent with a strong view where *diye* clauses may never be arguments.⁷

5 Concluding remarks

- Turkish suggests that there are two ways of composing clauses with nouns and verbs (to give rise to complex expressions with similar meanings):
- Nominalizations compose like other arguments do.
- *Diye* clauses compose like other modifiers do.
- Ways of implementing this view exist in classical and more recent work on clausal composition. But the coexistence of multiple paths to composition within a language, and the possibility of clausal complementation with nouns is less prominent.
- Outlook: A better handle on semantic effects associated w/ attitude reports (e.g., veridicality alternations).

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⁷Caveats: Negative data point. Are there things that may only be derived subjects?