

TURKISH CAUSATIVES ARE  
RECURSIVE: A RESPONSE TO  
KEY 2013  
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*Abstract:* It is claimed in Key 2013 that Turkish, despite allowing multiple causative morphemes on a single complex verb, does not in fact allow causative recursion, where one causing event is embedded by another causing event. This squib argues against Key’s conclusion, using evidence from eventhood diagnostics to show that “double” causatives in Turkish encode two distinct, syntactically represented causing events in addition to the caused event. Thus, Turkish causatives are indeed recursive. This finding supports approaches to productive affixal causatives that allow recursive embedding of the same category over approaches that rely on a fixed functional hierarchy.

*Keywords:* causative, morphology, syntax, argument structure, recursion, Turkish

## 1 Introduction

In Turkish, it is possible to form a “double” causative, involving two causees and two instances of the productive causative affix on the same verb stem, as shown in (1).<sup>1</sup>

- (1) Doktor Ayşe-ye çocuğ-u uyu-t-tur-du.  
doctor Ayşe-DAT child-ACC sleep-CAUS-CAUS-PST.3SG  
‘The doctor made Ayşe make the child sleep.’

Turkish double causatives are usually assumed to involve two causing events in addition to the caused event (e.g., Göksel 1993, Kural 1996, Çetinoğlu, Butt, and Oflazer 2009), much like *make*-causatives in English. However, Key’s (2013) dissertation on the morphosyntax of Turkish causatives claims that apparent double causatives in Turkish do not in fact involve the syntactic recursion of causing events; instead, they merely involve morphological reduplication of the causative morpheme. According to Key, then, Turkish does not have true double causatives. Key extends his argument to several other languages with productive affixal causatives, suggesting that double causatives in these languages are illusory and never encode more than two events in the syntax (one causing event and one caused event). If his claim is correct, then it would have important implications for the syntax of

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<sup>1</sup>The Turkish productive causative affix has two allomorphs, appearing as *-t* after bisyllabic roots ending in a vowel or a liquid, and *-Dir* elsewhere (Kural 1996). The phonological realization of *-Dir* is conditioned by voicing assimilation and vowel harmony (Lewis 1967, Kornfilt 1997).

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causatives and other complex predicates; we would have to explain why productive affixal causatives never recurse in these languages and why they differ in this respect from periphrastic causatives in other languages.

In this squib, I demonstrate using evidence from several diagnostic tests for eventhood that Turkish double causatives indeed have two distinct, syntactically represented causing events in addition to the caused event. Thus, productive affixal causatives in at least some languages involve true causative recursion. This finding supports approaches to affixal causatives that allow embedding of the same category, such as flavors of little *v* (e.g., Harley 1995, Pykkänen 2008, Legate 2014), over approaches that employ fixed functional hierarchies to capture causative structure (e.g., Ramchand 2008, Key 2013).

## 2 Key 2013

Productive affixal causatives in Turkish have been shown to encode two events that stand in a causal relation: one event (the “causing event”) brings about another event (the “caused event”). Some evidence for this in the literature has come from scope of negation (e.g., Bainbridge 1987, Göksel 1993, Kural 1996). The negated simple causative in (2) has two interpretations: one where negation scopes over the causing event (2a), and another where negation scopes over just the caused event (2b). While Kural (1996) points out a confound in the scope-of-negation test with respect to the type of causation conveyed (I return to this point in section 3.4), it is by all accounts agreed that there are two syntactically represented events in simple productive causatives in Turkish.

- (2) John Mary-yi koş-tur-ma-dı.  
John Mary-ACC run-CAUS-NEG-PST  
a. ‘John did not make Mary run.’ (= she ran on her own accord)  
b. ‘John made Mary not run.’ (= he prevented her from running)  
(Kural 1996:88)

Double causative constructions, then, might be expected to encode three events in Turkish: a higher causing event, an intermediate causing event, and the caused event. However, Turkish does not always exhibit a one-to-one relationship between causative marking and interpretation. As shown in (3), the same situation involving two causees can be expressed using either one or two instances of the causative marker on the verb.

- (3) Anne-si Ayşe-ye Mary-yi oyna-t-tı /  
mother-3SG.POSS Ayşe-DAT Mary-ACC play-CAUS-PST  
oyna-t-tır-dı.  
play-CAUS-CAUS-PST  
‘Her mother made Ayşe make Mary play.’

Turkish also allows the opposite pattern: a causative with one causee can cooccur with either single, double, or even quintuple causative marking, as in (4). As Kural (1996:125) writes, “Turkish places no upper limit as to how many times the causative morpheme may be iterated” (see also Göksel 1993).

- (4) Ahmet soğanlar-ı Ali-ye doğra-t-tı /  
Ahmet-NOM onions-ACC Ali-DAT chop-CAUS-PST  
doğra-t-tır-dı / doğra-t-tır-t-tır-t-tı.  
chop-CAUS-CAUS-PST chop-CAUS(×5)-PST  
‘Ahmet made Ali chop the onions.’  
(adapted from Kural 1996:126)

Thus, there is not always a one-to-one mapping between the number of causees and the number of causative affixes in Turkish. Key (2013) reports similar evidence to this effect from Hungarian (Hetzron 1976), Kashmiri (Manetta 2014), and Tsez (Kulikov 1993).

From this evidence, Key argues that double causatives in Turkish maximally encode two events in the syntax (one causing event and one caused event).<sup>2</sup> To account for the availability of multiple causees as in (3), Key suggests that “the semantics of indirect causation allow for an indefinite number of causal links”; however, these links crucially “are not syntactically represented” (2013:225). That is, intermediate causees might be associated with intermediate causing events in the semantics, but not in the syntax. Key does not address the issue of how exactly intermediate causees can be overtly pronounced without an associated causing event in the syntax. He nonetheless proposes that such constructions encode just one causative head/event, and that double causatives arise when a causative head marked with a [+focus] feature undergoes morphological reduplication (Key 2013:220). Despite providing no evidence from eventhood diagnostics to support his claim, Key concludes that double causative constructions in Turkish and other affixal languages are illusory (see also Svenonius 2005, Harley 2017).

Key points out that theories of affixal causatives that appeal to some form of recursion, defined here as the embedding of one category within another category of the same type, predict that true double causatives should be attested. For instance, the flavors-of-little-*v* approach (Harley 1995, 2008, Cuervo 2003, Folli and Harley 2005, Pytkänen 2008, Legate 2014) allows one *vP* to embed a second *vP*, which can be of one of various flavors, such that a causative *vP* should be able to embed another causative *vP*. In order to avoid predicting such causative recursion, Key (2013:216) proposes instead that affixal caus-

<sup>2</sup> Key (2013) makes a syntactic distinction between inner and outer causatives—essentially, lexical and productive causatives. Thus, an unaccusative/anticausative predicate “can be causativized twice, by one inner and one outer causative, while unergative and transitive bases do not permit any iteration of the causative” (p. 220).

atives obey the fixed universal functional hierarchy in (5) where a dedicated Caus head, associated with the causing event and the causee, selects for a vP associated with the caused event; Voice (Kratzer 1996) introduces the causer argument.

(5) [<sub>VOICEP</sub> CAUSER [Voice [<sub>CAUSP</sub> CAUSEE [Caus [<sub>vP</sub> v THEME]]]]]

Since the vP in (5) is crucially selected by Caus and not another vP, there is no category recursion, thus precluding the possibility of causative recursion.

While at least some double causatives in Turkish may indeed involve reduplication of a single causative morpheme, I contend in this squib that this is not the case for all double causative constructions. In the next section, I show using diagnostic tests for eventhood that true double causatives do exist in Turkish.

### 3 Turkish Double Causatives

Previous work has revealed the presence of two events in Turkish simple causatives. In this section, I use four diagnostic tests for eventhood to demonstrate the presence of three events (two causing events and a caused event) in Turkish double causatives: scope of ‘again’, manner adverbials, temporal adverbials, and permission readings.

The data reported in this section involve double causatives of unergative predicates with animate causees. The data represent truth value judgments provided by at least three native-speaker consultants, based on the contexts given (or similar ones). Some speakers found double causatives of transitive predicates to be degraded, independently of the eventhood diagnostics. This could be due to a number of reasons: a general dispreference in the language for multiple dative arguments in the same clause (e.g., Kural 1996), a difference in the syntax of unergative and transitive causees,<sup>3</sup> and/or parsing limitations. I leave this issue for future research, focusing on the grammatical

<sup>3</sup> Examples of double causatives of transitives that were judged to be fairly acceptable include (i) and (ii), involving non-change-of-state verbs; an anonymous reviewer suggests that these are ingestive verbs, whose external argument’s syntactic status may differ from that of a canonical transitive (Bhatt and Embick 2003, Ramchand 2008).

- (i) Anne-si Ayşe-ye kitab-ı Hakan-a  
mother-3SG.POSS Ayşe-DAT book-ACC Hakan-DAT  
oku-**t-tur**-du.  
read-CAUS-CAUS-PST  
‘His/Her mother made Ayşe make Hakan read the book.’
- (ii) Doktor bana sigara-yı anne-m-e  
doctor me.DAT cigarette-ACC mother-POSS.1SG-DAT  
iç-**ir-t-me**-di.  
drink-CAUS-CAUS-NEG-PST.3SG  
‘The doctor made me make my mother not smoke a cigarette.’

double causatives of unergatives and whether their causing events can recurse.

### 3.1 Scope of ‘Again’

‘Again’ attachment has been widely used to diagnose event decomposition in the syntax (e.g., McCawley 1968, Dowty 1979, von Stechow 1996); ‘again’ introduces a presupposition that an event has previously occurred at least once. Simple causatives with the adverb *yine* ‘again’ in Turkish are ambiguous between two interpretations, one where it scopes over the causing event (6a) and another where it scopes over just the caused event (6b).

- (6) Öğretmen Mary-yi **yine** koş-tur-du.  
teacher Mary-ACC again run-CAUS-PST  
‘The teacher made Mary run again.’

a. again CAUS > V

Context: It is sports day at school. Mary wanted to play volleyball in the morning, but the teacher made her run instead. In the afternoon the teacher made Mary run again.

b. CAUS > again V

Context: Mary ran around the field in the morning, but the teacher wasn’t watching. So in the afternoon the teacher made Mary run again.

Double causatives with *yine* are ambiguous between three interpretations, where *yine* scopes over the higher causing event (7a), the intermediate causing event (7b), or just the caused event (7c). Thus, ‘again’ diagnoses the presence of three syntactically represented events in double causatives in Turkish.

- (7) Baba-sı öğretmen-e Mary-yi **yine**  
father-3SG.POSS teacher-DAT Mary-ACC again  
koş-tur-t-tu.  
run-CAUS-CAUS-PST  
‘Her father made the teacher make Mary run again.’

a. again CAUS > CAUS > V

Context: It is sports day at school. Mary wanted to play volleyball in the morning, but her father asked the teacher to make her run instead. In the afternoon her father made the teacher make Mary run again.

b. CAUS > again CAUS > V

Context: Mary wanted to play volleyball in the morning, but the teacher made her run instead. However, her father wasn’t watching. So in the afternoon her father made the teacher make Mary run again.

c. CAUS > CAUS > again V

Context: Mary ran around the field in the morning, but her father wasn’t watching. So in the afternoon her father made the teacher make Mary run again.

### 3.2 Manner Adverbials

Distinct events should also be able to receive independent manner modification (e.g., Davidson 1967, Jackendoff 1972). Examples of a double causative with the manner adverb *sessizce* ‘quietly’ are given in (8) and (9). Different readings emerge depending on the placement of the adverb. When the adverb immediately precedes the direct causee (i.e., the argument that participates in the caused event), the adverb can modify either the higher causing event or the intermediate causing event (8). When the adverb follows the direct causee, it can modify either the higher causing event or the caused event (9). The unavailable readings for each word order are indicated using the symbol #.

- (8) Anne-si Ayşe-ye **sessizce** Mary-yi  
mother-3SG.POSS Ayşe-DAT quietly Mary-ACC  
oyna-**t-tr**-di.  
play-CAUS-CAUS-PST  
‘Her mother made Ayşe make Mary play quietly.’
- a. quietly CAUS > CAUS > V  
Context: We are at a dinner party at Ayşe’s house. Ayşe’s friend Mary is bored. Ayşe’s mother quietly asks Ayşe to make Mary play with her toys.
- b. CAUS > quietly CAUS > V  
Context: Ayşe’s friend Mary is bored in the next room. Ayşe’s mother asks Ayşe to quietly go and make Mary play with her toys.
- c. #CAUS > CAUS > quietly V  
Context: Ayşe’s friend Mary is playing loudly with her toys. Ayşe’s mother asks Ayşe to make Mary play quietly.
- (9) Anne-si Ayşe-ye Mary-yi **sessizce**  
mother-3SG.POSS Ayşe-DAT Mary-ACC quietly  
oyna-**t-tr**-di.  
play-CAUS-CAUS-PST  
‘Her mother made Ayşe make Mary play quietly.’
- a. quietly CAUS > CAUS > V  
b. #CAUS > quietly CAUS > V  
c. CAUS > CAUS > quietly V

Example (7) from section 3.1 showed that ‘again’ can attach at three different points in double causatives in Turkish. It is not clear to me why manner adverbs appear to attach at only two, with the interpretations modulated by word order; information structure may play a role. Setting this issue aside, the interpretations available with manner adverbials nonetheless indicate the presence of three events in Turkish double causatives.

### 3.3 Temporal Adverbials

Like manner adverbials, temporal adverbials should also be able to independently modify each event in a double causative (e.g., Fodor

1970, Jackendoff 1972, Wierzbicka 1975). A double causative with two temporal adverbials is given in (10). While *pazartesi* ‘Monday’ modifies the higher causing event, *gelecek hafta* ‘next week’ can modify either the intermediate causing event (10a) or the caused event (10b). Thus, temporal adverbials also indicate the presence of three events in Turkish double causatives.<sup>4</sup>

- (10) **Pazartesi** baba-sı öğretmen-e Mary-yi  
Monday father-3SG.POSS teacher-DAT Mary-ACC  
**gelecek hafta** koş-tur-t-acak.  
next week run-CAUS-CAUS-FUT  
‘On Monday her father will make the teacher make Mary run next week.’
- a. Monday CAUS > next week CAUS > V  
Context: Sports day is next week. On Monday Mary’s father will ask the teacher to make Mary run next week.
- b. Monday CAUS > CAUS > next week V  
Context: Sports day is next week, with registration on Monday. Mary’s father will ask the teacher on Monday to make Mary sign up to run next week.

In (10), *gelecek hafta* linearly follows the direct causee. The same interpretations are available if the temporal adverb immediately precedes the direct causee.

### 3.4 Permission Readings

Finally, Turkish verbs marked with causative morphology often also have a permission reading (e.g., Bainbridge 1987, Göksel 1993, Kural

<sup>4</sup> According to Akkuş (2021a), Turkish speakers reject examples of two temporal modifiers with a single causative, such as (i). This would be at odds with the fact that speakers accept examples like (10) involving double causatives. However, the speakers I consulted permitted two temporal adverbials when the causative was in the future tense, as in (ii). Thus, tense/aspect may interact with the availability of eventhood readings.

- (i) \*Patron **dün** işçi-ler-e buzdolabı-nı **bugün**  
boss yesterday employee-PL-DAT fridge-ACC today  
taşı-t-ti.  
carry-CAUS-PST  
‘Yesterday the boss made the workers carry the fridge today.’  
(Akkuş 2021a:(9))
- (ii) **Yarın** Özlem Ali-yi **cumartesi günü** koş-tur-acak.  
tomorrow Özlem Ali-ACC Saturday day run-CAUS-FUT  
‘Tomorrow Özlem will make Ali run on Saturday.’

English *have*-causatives may exhibit a similar pattern. It has been argued that *have*-causatives do not allow two temporal modifiers in the past tense (Ritter and Rosen 1993, 1996, Bjorkman and Cowper 2013) (iiia), yet acceptability vastly improves in the future tense (iiib).

- (iii) a. \*In June the director had the actress audition in July.  
b. In June the director will have the actress audition in July.

1996). Example (11), for instance, is ambiguous between a causative and a permission interpretation.

- (11) Öğretmen Mary-yi uyu-t-ti.  
teacher Mary-ACC sleep-CAUS-PST  
a. ‘The teacher made Mary sleep.’  
CAUS  
b. ‘The teacher let Mary sleep.’  
LET

Recall from section 2 that scope of negation has been used to diagnose the presence of two events in Turkish simple causatives, where negation appears to scope over either the causing event or the caused event, as in (12). However, the negative morpheme always appears outside of the causative morpheme in Turkish; allowing negation to scope below the causing event would therefore violate the Mirror Principle (Baker 1985). Kural (1996, 1997) argues that this puzzle can be solved, using evidence from the permission reading of Turkish causatives. He shows that the scope order CAUS > NEG is truth-conditionally equivalent to NEG > LET, as in (12b). Thus, “it can be maintained that negation uniformly takes scope over [the causative morpheme] in Turkish” (Kural 1996:89), and differences in interpretation derive from the causative vs. permission reading of the causative morpheme.

- (12) John Mary-yi koş-tur-ma-dı.  
John Mary-ACC run-CAUS-NEG-PST  
a. ‘John did not make Mary run.’  
NEG > CAUS > V  
b. ‘John made Mary not run.’  
CAUS > NEG > V  
= ‘John did not let Mary run.’  
NEG > LET > V  
(Kural 1996:88)

Permission readings are also found in double causatives. A canonical causing event can embed another causing event (13a) or a permission event (13b). A permission event can similarly embed another permission event (13c) or a causing event (13d). Permission readings therefore also diagnose the presence of three events in double causatives, including two events associated with the causative morpheme.

- (13) Baba-sı öğretmen-e Mary-yi koş-tur-t-tu.  
father-3SG.POSS teacher-DAT Mary-ACC run-CAUS-CAUS-PST  
a. ‘Her father made the teacher make Mary run.’  
CAUS > CAUS > V  
Context: It is sports day at school. Mary told the teacher she wanted to play volleyball, but Mary’s father made the teacher make Mary run instead.  
b. ‘Her father made the teacher let Mary run.’  
CAUS > LET > V  
Context: The teacher wanted Mary to play volleyball, but Mary told her father she wanted to run instead. So Mary’s father made the teacher let Mary run.



- c. ‘Her father let the teacher let Mary run.’  
LET > LET > V  
Context: Mary’s father wanted Mary to play volleyball, but Mary told the teacher she wanted to run instead. So Mary’s father let the teacher let Mary run.
- d. ‘Her father let the teacher make Mary run.’  
LET > CAUS > V  
Context: Mary told her father she wanted to play volleyball, but the teacher wanted her to run instead. So Mary’s father let the teacher make Mary run.

Summing up, the evidence from scope of ‘again’, manner adverbials, temporal adverbials, and permission readings all indicates that Turkish double causatives encode three events in the syntax: two causing events and a caused event.<sup>5</sup>

#### 4 Causative Recursion

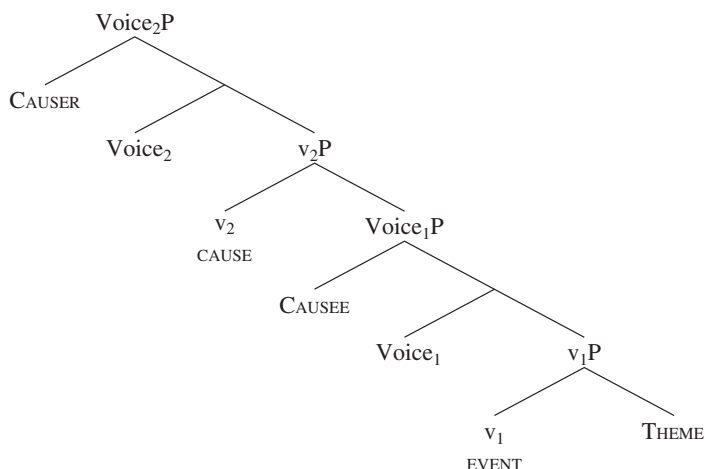
The evidence from eventhood diagnostics demonstrates that productive affixal causatives of unergatives in Turkish are indeed recursive; they allow the embedding of multiple events. This result accords with previous work reporting the availability of true double causatives in some varieties of Japanese (Kuroda 1993, Nie 2020a). Like Turkish, Japanese allows double causatives to be expressed with one or two causative markers on the verb. Kuroda (1993) suggests that a process of morphological haplology deletes one of the causative morphemes in Japanese. Turkish similarly exhibits morphological haplology (deletion) and phonological haplology (dissimilation) in a number of domains (Kornfilt 1986, Haig 2004). Tat and Kornfilt (2018) show that Turkish causatives undergo dissimilation; I suggest that causatives may also be subject to morpheme deletion.

These results furthermore support the predictions of recursive-embedding approaches to causatives, such as flavors of *v* (Harley 1995, 2008, Cuervo 2003, Folli and Harley 2005, Pykkänen 2008, Legate 2014). The flavors-of-*v* analysis is sketched in (14), in which a *vP* headed by any event-introducing *v* can be embedded by another *vP*, whose head introduces a causing event. I assume here that the causee in Turkish is introduced by a lower Voice head, as has been suggested for other languages (Harley 2013, Legate 2014, Nash 2020, Nie 2020b, Akkuş 2021b, Sigurðsson and Wood 2021).<sup>6</sup>

<sup>5</sup> The present discussion of double causatives naturally raises the question of whether triple causatives are available in Turkish. Triple causatives involving three causees are generally rejected by native speakers. This unacceptability likely derives from the same restriction(s) that bar double causatives of transitives for most speakers: a dispreference for multiple dative arguments and/or parsing limitations.

<sup>6</sup> There is some evidence that causees are nonvolitional in Turkish; they cannot, for example, control agent-oriented adverbs (Key 2013). A number of proposals have recently been advanced on how Voice may associate with a nonvolitional causee (Legate 2014, Nash 2020, Sigurðsson and Wood 2021; see Nie 2020a and Akkuş 2021a on Turkish specifically).

(14) *Flavors-of-v causative*



Importantly, the causative vP in (14) can be further embedded by another causative vP, thus deriving double causatives and causative recursion. By contrast, approaches to causatives that employ fixed functional hierarchies (e.g., Ramchand 2008, Key 2013) are unable to account for the availability of causative recursion.

The finding that recursion is possible in languages with affixal causatives also provides support for a syntactic approach to argument structure and word building (e.g., Marantz 1984, Baker 1988, Halle and Marantz 1993, Pesetsky 1995, Borer 2005, Koopman 2005). Productive affixal causatives in Turkish and Japanese are recursive, just like periphrastic causatives in other languages.<sup>7</sup> This suggests that the same recursive rules that operate on words and phrases also apply below the word level, to morphemes. Word structure and phrase structure are thereby built the same way.

Finally, there has been recent work arguing that productive causatives in some languages involve stacking of just the Voice head, without an additional little v (Nash 2020, Nie 2020a,b, Sigurðsson and Wood 2021). Such Voice-type causatives do not involve a syntactically identifiable causing event; the VoiceP that introduces the causer thus directly embeds the VoiceP that introduces the causee. In Nie 2020a, I show that, despite its being in principle possible, Voice-type causatives do not recurse without limit; they cannot embed a third VoiceP. The question thus arises why vP-type causatives can recurse but Voice-type causatives cannot. I suggest that this contrast lies not in whether Voice and v heads themselves can recurse, but in independent restric-

<sup>7</sup> Ackema (2014) in fact suggests that the productive causative morpheme in Japanese behaves syntactically like a free morpheme, rather than a bound affix, despite being morphophonologically part of the verb complex.

tions on thematic role assignment: namely, that the causee role (just like any other role) can only be assigned once per thematic domain. I propose that thematic domains are defined by events. Thus, vP-type causatives, which encode multiple events, can introduce multiple causees, whereas Voice-type causatives, which encode a single event, do not allow multiple causees.

To conclude, this squib has demonstrated using evidence from syntactic eventhood diagnostics that Turkish has true double causatives. I argued, contra Key 2013, that productive affixal causatives in Turkish do allow the recursion of events, which is best captured in recursive-embedding approaches to causatives.

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