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The Causative/Inchoative Alternation, and the Decomposition of Little v

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Abstract

Morphological evidence in causative/inchoative pairs in Turkish is analyzed to determine the derivational relationship between the transitive and intransitive members of the pairs. Three patterns are found: 1. The transitive member is derived from the intransitive; 2. The intransitive is derived from the transitive; 3. Both members are independently derived from a common base. For a complete explanation of the data, it is proposed that the verbalizing head little *v* decomposes into a verbalizer (little *v* proper) and a discrete 'flavor' morpheme (CAUSE, BECOME, etc.).

1 Introduction

Transitive/inchoative alternations are pairs of verbs, one transitive and the other intransitive, typically denoting a change of state (Haspelmath 1993). In English, this class is mainly represented by labile alternations such as melt/melt and shrink/shrink, where the transitive and intransitive members do not differ phonologically.

The nature of these alternations—the derivational relationship between the two members of a pair—is a matter of some controversy. In broad terms there are three

logical possibilities: 1. The inchoative is basic, and the transitive is derived from it (causativization); 2. The transitive verb is basic, and the inchoative is derived from it (decausativization); 3. Neither is derived from the other, but both are derived independently from a common base.

Hypothesis 1 (causativization) is isometric to standard semantic representations of the transitive alternant.

(1) CAUSE (x, [BECOME [STATE (y)]]) (Kearns 2000)

(2) λx λy λs λe [∃v [CAUSE (v,e) ∧ EFFECTOR (v,y) ∧ BECOME (e,s) ∧ THEME (s,x) ∧ ϕ (s)]]
ϕ = "random stative predicate" (Koontz-Garboden 2009)

In such a structure, the causative (CAUSE) embeds an inchoative layer (BECOME). On hypothesis 2 (decausativization), the transitive form undergoes a lexical argument-reducing operation (Chierchia (2004), Horvath & Siloni (2009)). Since the causative is basic, it does not embed an inchoative layer. On hypothesis 3 (independent derivation), morphemes deriving the alternants independently attach to a common base. In the present study, morphological evidence for Turkish is analyzed to determine whether it supports one or more of the above hypotheses.

2. Morphological evidence

One of the key pieces of evidence in the decausativization hypothesis is the fact that in the majority of alternations in Italian and other Romance languages, the unaccusative alternant differs from the transitive in having reflexive morphology. This is taken as an indication that the inchoative is derived from the transitive (Chierchia 2004). The remaining alternations in Romance are labile, as are the majority in English.

Both morphological patterns are explained by Chierchia's (2004) reflexive closure operation, wherein an external event argument is identified with the internal

event argument. Exponence may be through movement (producing a labile alternation) or reflexive morphology.

(3)

	transitive	intransitive
English:	*break*	*break*
Italian:	*rompere*	*romper**si***

2.1 Evidence from Middle Eastern Languages

Morphological evidence in Romance and English, both European languages, supports or is consistent with decausativization. Middle Eastern languages provide a different array of data. Laks (2011), who also believes decausativization to be the universal derivational direction in the causative/inchoative alternation, finds that while the majority of alternations in Hebrew either have a morphologically simplex transitive and a complex inchoative (expected as a reflex of an argument-reducing operation) or two simplex alternants, a small number of alternations display the unexpected pattern of complex transitive/simplex inchoative, which looks on the face of it like causativization.

(4)

a.	simplex transitive	complex intransitive
	kimet	*hitkamet*
	‘wrinkle’	‘become wrinkled’
b.	complex transitive	complex intransitive
	hirgiz	*hitragez*
	‘make mad’	‘get mad’
c.	simplex transitive	simplex intransitive
	simeax	*samax*
	‘make happy’	‘become happy’
d.	zero morphology (labile alternation)	
	hivri	*hivri*
	‘make healthy’	‘become healthy’

e.

complex transitive	**simplex intransitive**
hikpi	***kafa***
'freeze'	**'become frozen'**

Laks (2011)

(4e) is the problematic pattern on the decausativization hypothesis, since the transitive *hikpi* is morphologically complex while intransitive *kafa* is simplex, at least in terms of overt morphology. Similar facts obtain in Palestenian Arabic.

(5) a.

simplex transitive	complex intransitive
kasar	*inkasar*
'break'	'become broken'

b.

complex transitive	complex intransitive
sakkar	*tsakkar*
'close'	'become closed'

c.

complex transitive	**simplex intransitive**
qawwa	***qiwi***
'make strong'	'become strong'

(Laks 2011)

Here again, the complex transitive/simplex intransitive pattern (5c) is problematic for decausativization. Laks, endorsing decausativization, explains the anomaly by positing that the deviant transitives are the product of a process he calls morphological filling of frozen lexical entries (MOFFLE). Part of the support for this is that the number of such alternations in Hebrew is conspicuously small (44 out of 388 (11%) in his sample). Morphological support for deriving the alternation through decausativization as a component of Universal Grammar can be maintained as long as apparently contrary evidence remains scant, as in the Hebrew case, and becomes correspondingly more difficult as such evidence increases.

The Persian facts present a somewhat different picture. In the overwhelming majority of cases, the inchoative/causative pair is realized as a light verb meaning 'do' and a light verb meaning 'become' alternating on a non-verbal base, typically a nominal or adjective (Folli, Harley & Karimi 2004).

(6)	*âb kar-dan*	*âb šo-dan*
	water do-1NF	water become-1NF
	‘melt (transitve)’	‘melt (intransitive)’

Labile alternations are exceedingly rare, though the pattern does occur.

(7)	*šekas-tan*	*šekas-tan*
	break-1NF	break-1NF
	‘break (tr.)’	‘break (int.)’

In addition, there are some cases where a simplex verbal inchoative has a transitive alternant with an affixal causative.

(8)	*suz-ân-dan*	*sux-tan*
	burn-CAUSE-1NF	burn-1NF
	‘burn (tr.)’	‘burn (int.)’

(8), with complex transitive/simplex intransitive, is the problematic pattern for the decausativization hypothesis. Decausativization, with a simplex transitive and complex intransitive, is the rarest pattern in Persian.

(9)	*bori-dan*	*bori-de šod-an*
	cut-INF	cut-PRT become-INF
	‘cut (tr.)’	‘get cut (int.)’

The presentation and discussion of evidence from Turkish constitutes the remainder of the paper.

3 The morphology of the causative/inchoative alternation in Turkish

3.1 Data

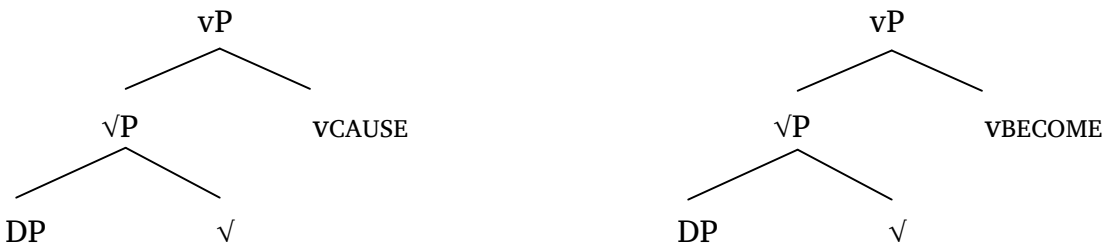
This verbs in this study were collected from *A Dictionary of Turkish Verbs in Context and by Theme*, Ralph Jaeckel and Gülnur Doğanata Erciyeş (2006), a dictionary of over 1,000 verbs. For inclusion in the data set, the following criteria must be met: A verb must participate in a transitive/intransitive alternation; the intransitive member of the alternation must have a telic reading; the intransitive member must have a non-passive reading. In cases where only one member occurs in the dictionary, the alternation was considered to be represented, and the missing member was independently verified and supplied. (On the data sheet, members not occurring in Jaeckel and Erciyeş are italicized.) A total of 146 pairs comprising 292 verbs were collected (Appendix).

3.2 Analysis

Groups A and B (16.4%) support Decausativization: simplex transitive, complex intrasitive. Groups C through G (65%) support Causativization: complex transitive, simplex intransitive. (This is the problem pattern for decausativization). Groups H through J (18.5%) support Independent Alternation: complex/complex, (possibly one case of simplex/simplex)

However, if there are null morphemes realizing little v, the actual patterns may be different. Perhaps independent alternation can account for all the data. If either the causative or the inchoative morpheme can be null, then all alternants are complex. Verbalizing heads, 'little *v*'s of different 'flavors' (Folli & Harley 2005) alternate on a root (Harley 2006).

(10)



One of the more salient effects of root adjacency is allomorphy. Turkish causative morphemes have the following forms (Göksel & Kerslake 2005):[1]

(11) a. Productive ('syntactic') causative
-DIr following a monosyllabic stem, or a polysyllabic stem ending in a non-liquid consonant
-t following a polysyllabic stem ending in a vowel or a liquid
b. Unproductive ('lexical') causative: unpredictable
-Ir, -Ar, -Art, -It

The regular or Elsewhere form occurs on stems not specified for a 'lexical' causative—in other words, where it is not blocked by a lexical causative. The productive causative (*-DIr/-t*) is the Elsewhere form. It is used to causativize virtually all unergative and transitive verbs.

(12)

a.	*çalış-*	'work'
	çalış-tır-	'cause to work'
b.	*taşı-*	'carry'
	taşı-t-	'cause to carry'

The Elsewhere form also occurs in the causative/inchoative alternation with a root that has no lexically specified irregular causative.

[1] Capital letters indicate segments whose realization varies according to voicing assimilation for consonants, and vowel harmony for vowels.

(13)	a.	*don-*	‘freeze (int.)’	group E1
		don-dur-	‘freeze (tr.)’	
	b.	*büyü-*	‘grow (int.)’	group F5
		büyü-t-	‘grow (tr.)’	

If a root has a specified ‘lexical’ causative, the Elsewhere form is blocked.

(14)	a.	*düş-*	‘fall’	group C
	b.	*düş-ür-*	‘make fall’	
	c.	**düş-tür-*		

This brings up a puzzle: If causatives (and inchoative morphemes) are root-adjacent, why isn’t there more allomorphy? Only fifteen (10.3%) of the transitive members have ‘lexical’ causatives. The total number of such verbs in all of Turkish does not exceed 30. If all causatives are root adjacent, a much higher proportion would be expected to show allomorphy. By way of comparison, in Jacobsen’s (1992) study of Japanese (cited in Harley 2006), well over 300 such verbs are catalogued.

A more detailed analysis of the verbal forms may shed some light on this issue. There is an asymmetry in the distribution of stem-final consonants. Monosyllabic stems end in any of the following consonants.

(15) consonant	example
ç [ʧ]	*aç-*
ğ (= vowel length)	*eğ-*
k	*burk-*
l	*böl-*
m	*göm-*
n	*din-*
p	*sap-*
r	*kır-*
s	*sus-*
ş [ʃ]	*şiş-*
t	*bit-*

(Monosyllabic Turkish verb stems may also end in D, v, and y, though these do not occur in the data set, for a total of 14)

In contrast, polysyllabic stems end in only a subset of these consonants: k, l, n, r, ş, and t.

(16)

consonant	example
k	*acık-*
l	*yanıl-*
n	*ısın-*
r	*delir-*
ş	*değiş-*
t	*dağıt-*

(Even outside the data set, polysyllabic verb stems never end in any other consonant, so the total is 6.)

Hypothesis: Monosyllables are acategorial roots. Polysyllables are roots plus one or more functional morphemes. These morphemes compose a small, closed morphological class, so it is expected that they would not display the full consonant inventory of the language. In other words, monosyllabic stems are acategorial roots plus a null functional morpheme. Polysyllabic stems are roots plus overt functional morphemes. This would mean that none of the stems taking the *–t* allomorph of the Elsewhere form are roots (groups F-G). Recall that the Elsewhere form is *–t* after polysyllabic stems ending in a vowel or a liquid (and *–DIr* everywhere else). In that case, what is the morpheme between the root and *–t*?

Note that the sequence *lA* occurs in that position in group F6. It also appears in other combinations in groups B2 and G-H, yielding the following paradigm.

(17)
a. -lA
b. -lAn
c. -lAş
d. -lAt

Verbs formed with the simple form in (13a) are either transitive (B2) or intransitive (F6)

transitive *–lA* (B2)

(18) *temizle-* ‘clean’
durula- ‘rinse’

intransitive *–lA* (F6)

(19) *bayatla-* ‘go stale’
şişmanla- ‘get fat’

-lAn and *–lAş* yield only intransitive verbs (G1, G2, H1)

intransitive *–lAn*

(20) *hastalan-* ‘become sick’ G2
pislen- ‘become filthy’ H1

intransitive *–lAş*

(21) *gerçekleş-* ‘become real’ G1
kötüleş- ‘become bad’ G1

The suffix *-lAt* yields only transitive verbs (F2, H1)

transitive *-lAt*

(22) *bayatlat-* ‘cause to go stale’ F6
pislet- ‘make filthy’ H1

-lA is clearly a verbalizer (little *v*). The other segments (-n, -ş, -t) indicate the 'flavor' of little *v*. I therefore propose that the verbalizer (little *v* proper) and the flavor are separate functional heads.

(23) –lA = v
–n, –ş = BECOME
–t = CAUSE

The proposed 'flavor' morphemes occur independently of *–lA* .

(24) –n BECOME: B1, H2
ısın- 'become hot' H2
tüken- 'become exhausted'

(25) –ş BECOME: E3
sıkış- 'become jammed' E3
buruş- 'become wrinkled'

(26) –t CAUSE: F1-6, H2
ısıt- 'heat' H2
yıprat- 'wear out'

The flavor morphemes never stack. Thus, sequences such as **-nt, *-şt, *-tn, *-tş* are non-occurring. (The last two are phonotactically illicit, but versions with epenthetic vowels also do not occur: **-nIt, *-şIt*). Instead, *–t* and *–n* occur in alternation, both with *-lA* (H1) and with a vowel (H2).

(27)	transitive	intransitive		
	ɪs-lat-	*ɪs-lan-*	‘get wet’	H1
	kir-let-	*kir-len-*	‘get dirty’	
	pis-let-	*pis-len-*	‘get filthy’	
	ɪsɪt-	*ɪsɪn-*	‘heat’	H2
	tüket-	*tüken-*	‘exhaust’	
	yɪprat-	*yɪpran-*	‘wear out’	

These facts suggest that, at this level, the flavor morphemes alternate on a common base.

Hypothesis: In cases where a flavor morpheme appears to be added to the other member of a pair which lacks a flavor morpheme, it is in fact in alternation with a null flavor morpheme.

(28)	transitive	intransitive
a.	*sar-ar-t*	*sar-ar-ø-*
	√-v-CAUSE	√-v-BECOME
	‘make yellow’	‘become yellow’
b.	*giz-le-ø-*	*giz-le-n-*
	√-v-CAUSE	√-v-BECOME
	‘hide (tr.)’	‘hide (int.)’

In some cases, however, little v and flavor appear to be bundled or fused into a single suffix.

(29)	transitive	intransitive
a.	*boz-ø-*	*boz-ul-*
	√-v.CAUSE	√-v.BECOME
	‘ruin’	‘become ruined’

b. *don-dur-* *don-ø-*
√-v.CAUSE √-v.BECOME
'freeze' 'freeze/become frozen'

Thus, little v and flavor can either be discrete or fused.

Here is a tentative catalogue of some verbal morphemes in the data set:

Isolated morphemes

(30) little *v*
-lA
-Ar
-A
-I

(31) BECOME
-n
-ş
-ø

(32) CAUSE
-t
-ø

Fused morphemes

(33) little v.BECOME
-Il (groups A, F3)
-ø

(34) little v.CAUSE
-DIr (groups E, G)
possibly –Ir (group C)
-ø

-lA is the Elsewhere form for pure little *v*. It selects for both roots (35) and whole words (36).
root base

(35) *ɪs-la-n-*
√-v-BECOME
'get wet'

(36) adjective base
bayat-la-ø- F6
stale-v-BECOME
'go stale'

noun base
parça-la-ø- B2
piece-v-CAUSE-
'shred/shatter'

Note that *–lA* attaches to polysyllabic whole-word bases to form trisyllabic (or longer) verb stems. The other little *v* morphemes only select for monosyllabic stems—i.e., roots.

Furthermore, the *-n/-t* alternation (H1-2) only occurs on disyllabic stems. Even though the sequences *–lAn* and *–lAt* can occur beyond the second syllable (B2, F6), they are never in alternation with each other anywhere but the second syllable.[2] Therefore, it seems that flavor may be a discrete morpheme only when little *v* is root-adjacent. At

[2] In the data set, that is. Outside this set, the pair *aydın-lan-*/*aydın-lat-* 'illuminate' exists. It is possible that *aydın* is an anomolous, disyllabic root.

higher attachment sites, either little *v* and flavor are always fused, or they are not distinct categories.

This would put flavor in exactly the position of the mysterious morpheme 'M' identified in Svenonius (2005), demarcating the boundary between the inner and outer causative domains.

(37) *kop-ar-t-tır-*
√-CAUS-'M'-CAUS-
'cause to cause to break off'

In Malagasy, 'M' is the prefix *-f-*. Nelson (to appear) has identified this with the flavor phrase.

The puzzle mentioned above has been solved. The question was why there wasn't more root-adjacent allomorphy in Turkish. The answer is that, in fact, there is. In pairs with *–t* in the transitive member, allomorphy is found not in the causative morpheme, but in pure little *v*, which is root-adjacent.

little *v* allomorphy

(38) a. *-lA* (Elsewhere form)
baş-la-t- F6
√-v-CAUSE

b. *-Ar* D
sar-ar-t-
√-v-CAUSE

c. *-A*
uz-a-t- F4
√-v-CAUSE

d. *-I*
kur-u-t- F5
√-v-CAUSE

Now there is a new puzzle: If this is all correct, then in some alternations the causative does embed an inchoative layer (E2-3, F3, G1-2), while in others it doesn't.

Inchoative-embedding causatives

(39)	transitive	intransitive	
	bu-la-n-dır-	*bu-la-n-*	G2
	√-v-BECOME-v.CAUSE	√-v-BECOME	
	'make turbid'	'become turbid'	
	**bulat-*		

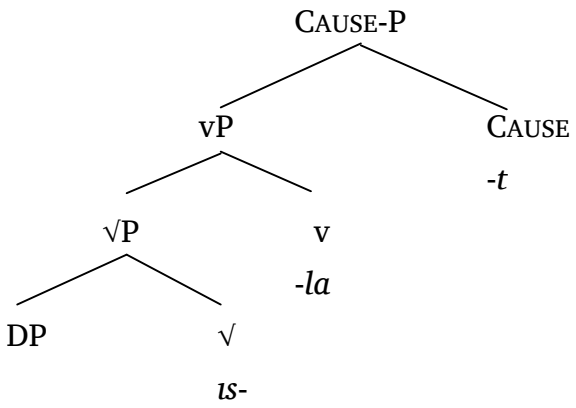
Non-inchoative-embedding causatives

(40)	transitive	intransitive	
	ıs-la-t-	*ıs-la-n-*	H1
	√-v-CAUSE	√-v-BECOME	
	'make wet'	'become wet'	
	**ıslandır-*		

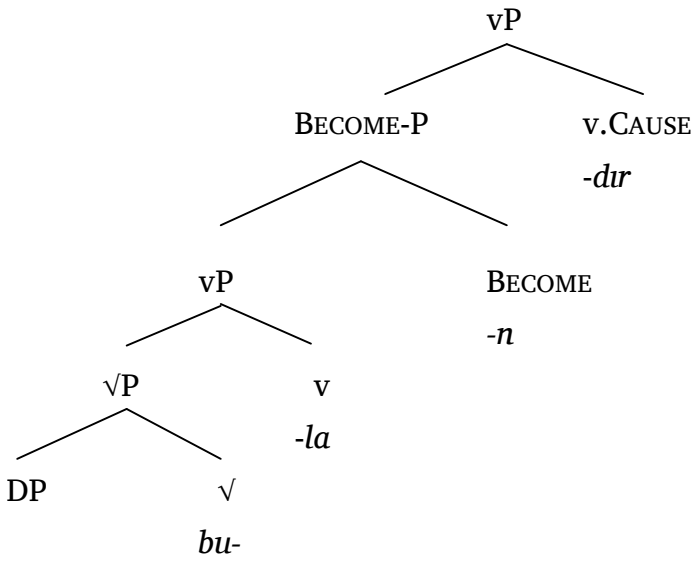
We might also ask why forms such as **bulat-* do not occur rather than *bulandır-*, or **ıslandır-* instead of *ıslat-*. At first glance, it looks like a straightforward case of blocking. If *ıslat-* (40) is a lexical causative, it blocks the causative made with the Elsewhere form *–DIr*: **ıslandır-*. Where no lexical causative exists (**bulat-*), Elsewhere is free to apply: *bulandır-* (39).

However, on closer inspection this cannot be right. If the present analysis is correct, the flavor morpheme *–t* is selecting for pure little *v*, while the Elsewhere causative *–DIr* is selecting for a flavor phrase.

(41)



(42)



In this configuration, the two morphemes are not in competition, and therefore one cannot block the other. This is on the assumption that blocking is limited to allomorphy at a terminal node (Embick and Marantz 2008). I make the following proposal:

(43) Pseudo-blocking
The existence of a functionally equivalent structure may allow a paradigm gap to persist.

In most cases, the presence or absence of an inchoative layer has little or no perceptible semantic or syntactic effect in a causative construction. I claim that the following representations are in most cases semantically equivalent:

(44) CAUSE (x, [BECOME [STATE(y)]])

(45) CAUSE (x, [STATE(y)])

If this is so, then no form is actually blocked; there is simply a paradigm gap. In cases where there is a difference between the two representations, both structures should be available. One type of case that makes a difference: where the inchoative is ambiguous between a physical reading and a pyschological/affective reading.

(46) *ɪs-ɪ-n-* H2
√-v-BECOME
a. 'become warm (physically)'
b. 'warm up to (emotionally)'

(47) a. *ɪs-ɪ-t-*
√-v-CAUSE
'heat (physically)' No inchoative layer
b. *ɪs-ɪ-n-dɪr-*
√-v-BECOME-v.CAUSE
'cause to warm up to (emotionally)' Inchoative layer required

Another type of case is where the lexical causative has marked semantic drift, and an outer causative embedding the inchoative is necessary to causativize the sense of the intransitive verb.

(48) a. *bay-ø-*
√-v.CAUSE
'bore to tears'

b. *bay-ıl-* F3
√-v.BECOME
'lose consciousness, faint'

c. *bay-ıl-t-*
√-v.BECOME-CAUSE
'cause to faint'

Note that the verb stem *bayıl-*, when paired with *bay-*, belongs in group A, but when paired with *bayılt-* belongs in F3.

4 Conclusion

The decomposition of little v into a pure verbalizer (little *v* proper) and a flavor head allows a fine-grained morphological analysis of the causative/inchoative alternation in Turkish. Three derivational patterns are attested. Separate derivations from a common base may occur at different levels: alternation of little *v* morphemes on a root, or alternation of flavor morphemes on little *v* (among other possibilities). Pairs that apparently support decausativization make up only 16.4% of the data set.
Also recall that in Persian, the decausativization pattern is quite rare. It is possible to maintain decausativization only if morphological evidence is discounted (relegating morphology to a separate module).

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Appendix

A: Ø	-Il	
transitive	intransitive	
aç-	açıl-	‘open’
boz-	bozul-	‘ruin’
böl-	bölün-	‘divide’
bur-	*burkul-*	‘sprain’
dök-	dökül-	‘pour, spill’
eğ-	eğil-	‘bend
göm-	gömül-	‘bury’
kır-	kırıl-	‘break’
üz-	üzül-	‘sadden’
yor-	yorul-	‘tire’
ayır-	ayrıl-	‘separate’
kavur-	kavrul-	‘roast’

B1: Ø	-n	
transitive	intransitive	
boşa-	boşan-	‘divorce’
yıka-	yıkan-	‘clean’
B2: Ø	-n	
transitive	intransitive	
gizle-	gizlen-	‘hide’
sakla-	saklan-	‘hide’
bağla-	bağlan-	‘attach’
topla-	toplan-	‘gather’
parçala-	parçalan-	‘shred/shatter’
kilitle-	kilitlen-	‘lock’
temizle-	temizlen-	‘clean’
durula-	*durulan-*	‘rinse’
toparla-	*toparlan-*	‘tidy’
yarala-	yaralan-	‘injure’

C -Ir	Ø	
transitive	intransitive	
artır-	art-	‘increase’
batır-	bat-	‘sink’
bitir-	bit-	‘finish’
doğur-	doğ-	‘be born’
doyur-	doy-	‘satiate’
düşür-	düş-	‘fall’
kaçır-	kaç-	‘flee’
pişir-	piş-	‘cook’
şişir-	şiş-	‘swell’
taşır-	taş-	‘overflow’
yatır-	yat-	‘lie/lay’

D: -Ar/-Art	Ø	
transitive	intransitive	
çıkar-/*çıkart-*	çık-	‘emerge’
kopar-/kopart-	kop-	‘break off’
çöker-/çökert-	çök-	‘collapse’
göçer-/göçert-	göç-	‘cave in’

E1: -DIr	Ø	
transitive	intransitive	
dindir-	din-	‘subside’
doldur-	dol-	‘fill’
dondur-	don-	‘freeze’
kaldır-	kalk-	‘rise’
öldür-	öl-	‘die’
söndür-	sön-	‘extinguish’
sustur-	sus-	‘silence’
döndür-	dön-	‘turn’
durdur-	dur-	‘stop’
oldur-	ol-	‘become’
saptır-	sap-	‘turn’

E2: -DIr	Ø	
transitive	intransitive	
sevindir-	sevin-	‘cheer up’
uyandır-	uyan-	‘awaken’
E3: -DIr	Ø	
transitive	intransitive	
değiştir-	değiş-	‘change’
dönüştür-	dönüş-	‘metamorphose’
oluştur-	oluş-	‘form’
sıkıştır-	sıkış-	‘jam’
buruştur-	buruş-	‘crumple’
barıştır-	barış-	‘make peace’
E4: -DIr	Ø	
transitive	intransitive	
acıktır-	acık-	‘get hungry’
biriktir-	birik-	‘accumulate’

F1: -t	Ø	
transitive	intransitive	
gebert-	geber-	‘croak (die)’
karart-	karar-	‘blacken’
kızart-	kızar-	‘redden/fry’
sarart-	sarar-	‘yellow’
yaşart-	yaşar-	‘water (eyes)’
F2: -t	Ø	
transitive	intransitive	
çıldırt-	çıldır-	‘go crazy’
delirt-	delir-	‘go crazy’
belirt-	belir-	‘manifest’

F3: -t	Ø	
transitive	intransitive	
alçalt-	alçal-	‘lower’
azalt-	azal-	‘decrease’
boşalt-	boşal-	‘empty’
çoğalt-	çoğal-	‘increase’
düzelt-	düzel-	‘straighten’
kısalt-	kısal-	‘shorten’
yükselt-	yüksel-	‘rise’
F3: -t	Ø	
transitive	intransitive	
ayılt-	ayıl-	‘come to’
bayılt-	bayıl-	‘faint’
darılt-	darıl-	‘offend’
eksilt-	eksil-	‘reduce’
yanılt-	yanıl-	‘go astray’
F4: -t	Ø	
transitive	intransitive	
susat-	susa-	‘thirst’
kaynat-	kayna-	‘boil’
uzat-	uza-	‘extend’
F5: -t	Ø	
transitive	intransitive	
büyüt-	büyü-	‘grow’
erit-	eri-	‘melt’
eskit-	eski-	‘age’
kurut-	kuru-	‘dry’
soğut-	soğu-	‘chill’

F6: -t Ø

transitive	intransitive	
bayatlat-	bayatla-	‘go stale’
şişmanlat-	şişmanla-	‘fatten’
gerilet-	gerile-	‘regress’
ihtiyarlat-	ihtiyarla-	‘age’
ucuzlat-	ucuzla-	‘get cheap’
yavaşlat-	yavaşla-	‘slow’
zayıflat-	zayıfla-	‘get thin’
başlat-	başla-	‘start’

G1: -DIr Ø

transitive	intransitive	
buharlaştır-	buharlaş-	‘vaporize’
yerleştir-	yerleş-	‘settle’
zorlaştır-	zorlaş-	‘get difficult’
yaklaştır-	yaklaş-	‘approach’
birleştir-	*birleş-*	‘unite’
fenalaştır-	fenalaş-	‘deteriorate’
gerçekleştir-	gerçekleş-	‘realize’
iyileştir-	iyileş-	‘improve’
kolaylaştır-	kolaylaş-	‘facilitate’
kötüleştir-	kötüleş-	‘deteriorate’
uzaklaştır-	uzaklaş-	‘distance’

G2: -DIr Ø

transitive	intransitive	
bulandır-	bulan-	‘become turbid’
ayaklandır-	ayaklan-	‘revolt’
evlendir-	evlen-	‘marry’
hastalandır-	hastalan-	‘get sick’
umutlandır-	umutlan-	‘get hopeful’
yaşlandır-	yaşlan-	‘age’
neşelendir-	neşelen-	‘cheer up’
onurlandır-	*onurlan-*	‘honor’
öfkelendir-	öfkelen-	‘enrage’
heyecanlandır-	heyecanlan-	‘excite’
hüzünlendir-	hüzünlen-	‘sadden’
kaygılandır-	kaygılan-	‘get anxious’

H1: -t -n

transitive	intransitive	
ıslat-	ıslan-	‘get wet’
kirlet-	kirlen-	‘get dirty’
pislet-	pislen-	‘get filthy’

H2: -t -n

transitive	intransitive	
ısıt-	ısın-	‘heat’
tüket-	*tüken-*	‘exhaust’
yıprat-	yıpran-	‘wear out’
kapa-/kapat-	kapan-	‘open’

I: unique patterns

transitive	intransitive	
yak-	yan-	‘burn’
dağıt-	dağıl-	‘scatter’
kurtar-	kurtul-	‘get free’

J et-	ol- (light verb alternation)	
transitive	intransitive	
hall-et-	*hall-ol-*	‘solve’
icat et-	*icat ol-*	‘invent’
ihraç et-	*ihraç ol-*	‘export’
israf et-	*israf ol-*	‘waste’
kabul et-	*kabul ol-*	‘accept’
kahr-et-	*kahr-ol-*	‘damn’
kayb-et-	*kayb-ol-*	‘lose’
kayd-et-	*kayd-ol-*	‘record’
meşgul et-	*meşgul ol-*	‘occupy’
rahatsız et-	*rahatsız ol-*	‘bother’
sünnet et-	*sünnet ol-*	‘circumcise’
tahrik et-	*tahrik ol-*	‘arouse’
tamir et-	*tamir ol-*	‘repair’
tedavi et-	*tedavi ol-*	‘treat’
teslim et-	*teslim ol-*	‘surrender’
var et-	*var ol-*	‘come into existence’
yok et-	*yok ol-*	‘cease existence’