Evidence for rule conflation

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Complex affixes

Morphological theory has long been dominated by the assumption that affixes are minimal units of morphological analysis, insusceptible to division into smaller grammatically significant forms.

Wikipedia, “Affix”:
In linguistics, an **affix** is a morpheme that is attached to a word stem to form a new word or word form.

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Though this assumption has sometimes been questioned *(e.g. by Bauer 1988, Bochner 1992, Raffelsiefen 1992, Luís & Spencer 2005)* and though descriptive grammars *(e.g. Arnott 1970, Soukka 2000)* sometimes abandon it, it remains a matter of wide consensus across the theoretical landscape.

Yet, evidence suggests that affixes do in fact combine to form more complex affixes.

Complex affixes

Here, I discuss some of this evidence from the perspective of rule-based morphology; I focus less on principles of affix combination per se than on the principle by which simpler rules of affixation are conflated to form more complex rules.

Complex affixes

(1)	Notation:	[**-yz**] :	the rule that suffixes *-yz*
		[**-ab-yz**] :	the conflation of [**-yz**] with [**-ab**]

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(1) Notation: [**-yz**] : the rule that suffixes *-yz*
[**-ab-yz**] : the conflation of [**-yz**] with [**-ab**]

(2) Conflation of two suffixation rules:

By default, [**-ab-yz**] = ([**-yz**] ○ [**-ab**]);
this default may be overridden.

Five kinds of evidence for postulating a principle of rule conflation

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I. Asymmetrical rule oppositions
II. Processing frequent affix sequences
III. Dependent rules
IV. Noncomputable content
V. “Inward potentiation”

I. Asymmetrical rule oppositions

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Ordinarily, morphological systems conform to a “symmetry principle” according to which relations of paradigmatic opposition among morphological rules are relations between individual rules.

This symmetry principle is what allows affix position classes to be represented as columns of individual affixes.

Yet, there are instances in which the application of an individual rule seems to be paradigmatically opposed to the successive application of two rules.

I. Asymmetrical rule oppositions

Table 1. Present-system forms (indicative and subjunctive) of Latin PARĀRE ‘prepare’

	Present					Imperfect					Future				
	Active		Passive			Active		Passive			Active		Passive		
Indicative															
1sg	*par*	*-ō*	*par*	*-o*	*-r*	*parāba*	*-m*	*parāba*	—	*-r*	*parāb*	*-ō*	*parāb*	*-o*	*-r*
2sg	*parā*	*-s*	*parā*	*-r*	*-is*	*parābā*	*-s*	*parābā*	*-r*	*-is*	*parābi*	*-s*	*parābe*	*-r*	*-is*
3sg	*para*	*-t*	*parā*	*-t*	*-ur*	*parāba*	*-t*	*parābā*	*-t*	*-ur*	*parābi*	*-t*	*parābi*	*-t*	*-ur*
1pl	*parā*	*-mus*	*parā*	*-mu*	*-r*	*parābā*	*-mus*	*parābā*	*-mu*	*-r*	*parābi*	*-mus*	*parābi*	*-mu*	*-r*
2pl	*parā*	*-tis*	*parā*	*-minī*		*parābā*	*-tis*	*parābā*	*-minī*		*parābi*	*-tis*	*parābi*	*-minī*	
3pl	*para*	*-nt*	*para*	*-nt*	*-ur*	*parāba*	*-nt*	*parāba*	*-nt*	*-ur*	*parāb*	*-unt*	*parābu*	*-nt*	*-ur*
Subjunctive															
1sg	*pare*	*-m*	*pare*	—	*-r*	*parāre*	*-m*	*parāre*	—	*-r*					
2sg	*parē*	*-s*	*parē*	*-r*	*-is*	*parārē*	*-s*	*parārē*	*-r*	*-is*					
3sg	*pare*	*-t*	*parē*	*-t*	*-ur*	*parāre*	*-t*	*parārē*	*-t*	*-ur*					
1pl	*parē*	*-mus*	*parē*	*-mu*	*-r*	*parārē*	*-mus*	*parārē*	*-mu*	*-r*					
2pl	*parē*	*-tis*	*parē*	*-minī*		*parārē*	*-tis*	*parārē*	*-minī*						
3pl	*pare*	*-nt*	*pare*	*-nt*	*-ur*	*parāre*	*-nt*	*parāre*	*-nt*	*-ur*					

I. Asymmetrical rule oppositions

Table 1 (detail). Present indicative forms of Latin PARĀRE 'prepare'

	Active		Passive		
1sg	*par*	***-ō***	*par*	***-o***	***-r***
2sg	*parā*	***-s***	*parā*	***-r***	***-is***
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1pl	*parā*	***-mus***	*parā*	***-mu***	***-r***
2pl	*parā*	***-tis***	*parā*	***-minī***	
3pl	*para*	***-nt***	*para*	***-nt***	***-ur***

In Latin, the application of the 2pl passive rule [**-minī**] is paradigmatically opposed to the successive application of two rules, one expressing subject agreement (e.g. 3pl [**-nt**]), the other expressing passive voice ([**-ur**]).

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3pl	*para*	***-nt***	*para*	***-nt***	***-ur***

This apparent asymmetry is reconcilable with the symmetry principle if one assumes that [**-ur**] generally conflates with a subject-agreement rule to form a complex rule such as [**-nt-ur**] and that it is to the application of such conflated rules that the application of the simple [**-minī**] rule is opposed.

II. Processing frequent affix sequences

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The null hypothesis is that affix sequences of equal length require the same processing time.

Bilgin 2016, however, show that this is not the case—that controlling for frequency differences among individual affixes, stems, and affix-stem combinations, affix sequences that are frequent are processed more rapidly than those that are less frequent.

II. Processing frequent affix sequences

frequent affix sequence

	frequent	frequent	frequent
	↓	↓	↓
gergedan	***-laş***	***-tır***	***-dı***
rhino	-BECOME	-CAUS	-PAST

infrequent stem and stem-affix combinations

Figure 1. The parts of the word form
'caused to become a rhino' in Turkish

II. Processing frequent affix sequences

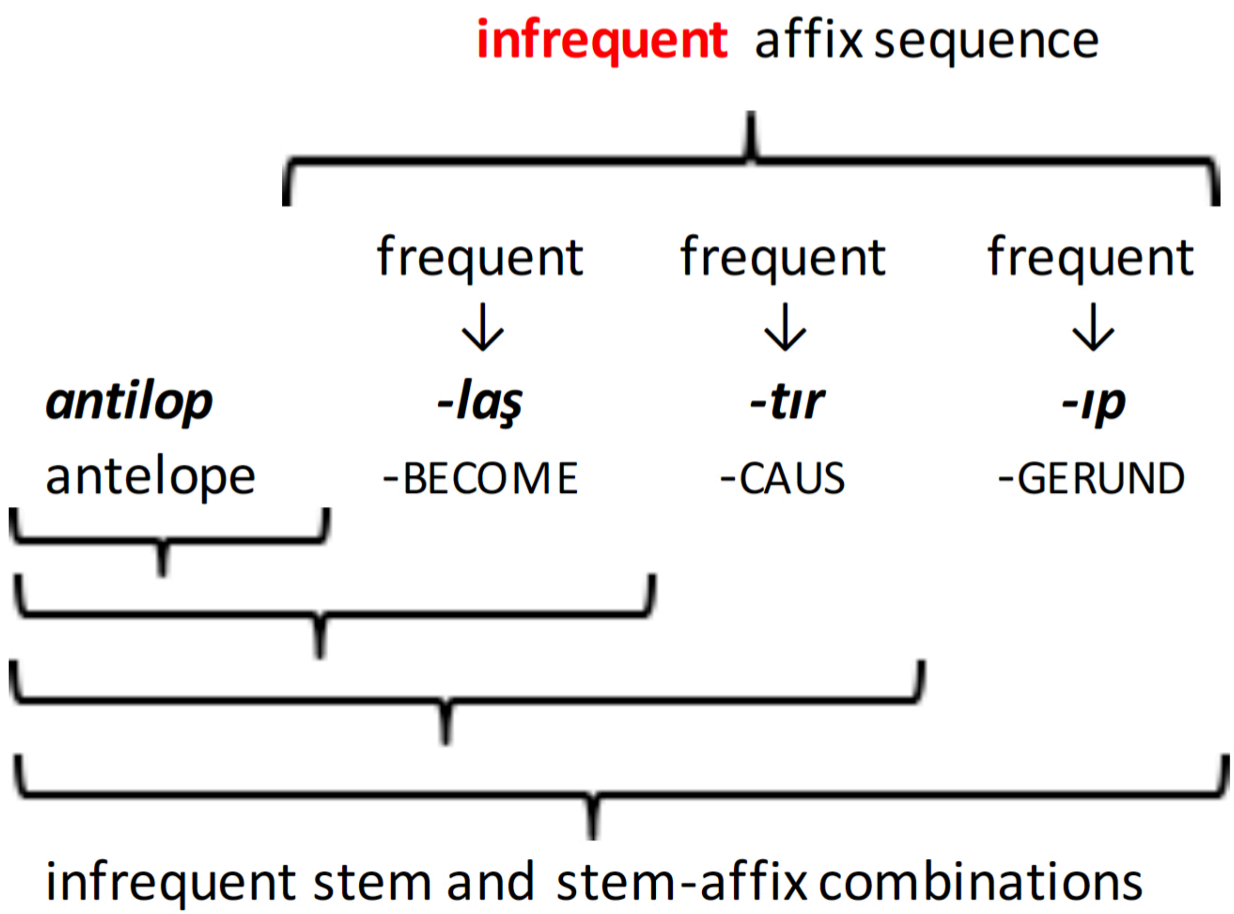

Figure 2. The parts of the word form
'having caused to become an antelope'
in Turkish

II. Processing frequent affix sequences

Bilgin's evidence suggests that if the joint application of successive rules is frequent enough, their conflation may be stored in memory. *(Cf. O'Donnell 2015.)*

III. Dependent rules

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Ordinarily, a morphological rule’s application is not directly conditioned by that of another rule.

Yet, there are instances in which a rule’s application seems to depend directly on that of a “carrier” rule (Harris 2017).

III. Dependent rules

In Limbu [Kiranti; Nepal], the 1sg agent rule [**-ŋ**] is dependent in this way: it must always piggy-back on an appropriate carrier rule.

Table 2. 1sg agent forms in the positive nonpreterite paradigm of Limbu HUʔMAʔ ‘teach’

	agent → patient	stem	**suffix**					
			1	**4**	**5**	**8**	**9**	
a.	1sg → 2sg	*huʔ*	*-nɛ*					‘I teach you (sg.)’
b.	1sg → 2du	*huʔ*	*-nɛ*			***-ci***[1]	***-ŋ***	‘I teach you (du.)’
c.	1sg → 2pl	*huʔ*	*-n(ɛ)*			***-i***	***-ŋ***	‘I teach you (pl.)’
d.	1sg → 3sg	*huʔr*		***-u***	***-ŋ***			‘I teach her/him’
e.	1sg → 3nonsg	*huʔr*		***-u***	***-ŋ***	***-si***	***-ŋ***	‘I teach them’

1. alternant of *si* (van Driem 1987: 77)

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The appropriate carrier rules are those filling **suffix positions 4 and 8** in a verb's inflectional morphology (Table 1).

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In the absence of a carrier rule, the 1sg agent property remains unrealized by [**-ŋ**].

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The relation between a dependent rule and its carrier can be formally represented as a relation of rule conflation.

On this view, a dependent rule such as [**-ŋ**] is a rule that never applies except as part of a conflation with a carrier rule, e.g. [**-u-ŋ**], [**-i-ŋ**], [**-si-ŋ**].

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In the cases considered so far, rule conflation has the effect of rule composition; but other evidence shows that this is only a default property of rule conflation, and may be overridden.

III. Dependent rules

Table 3. Inflection of the adjective YAK 'big' in Noon (Cangin, Senegal)

			Noun class	Indefinite	Definite		
					Location 1	Location 2	Location 3
Nondiminutive	Inanimate	sg	1	*wiyak*	*wiyakwii*	*wiyakwum*	*wiyakwaa*
			2	*fiyak*	*fiyakfii*	*fiyakfum*	*fiyakfaa*
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			5	*piyak*	*piyakpii*	*piyakpum*	*piyakpaa*
			6	*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
		pl	1–3	*ciyak*	*ciyakcii*	*ciyakcum*	*ciyakcaa*
			4–6	*tiyak*	*tiyaktii*	*tiyaktum*	*tiyaktaa*
	Animate	sg		*yiyak*	*yiyakyii*	*yiyakyum*	*yiyakyaa*
		pl		*ɓiyak*	*ɓiyakɓii*	*ɓiyakɓum*	*ɓiyakɓaa*
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(Soukka 2000: 86ff)

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			5	*piyak*	*piyakpii*	*piyakpum*	*piyakpaa*
			6	*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
		pl	1–3	*ciyak*	*ciyakcii*	*ciyakcum*	*ciyakcaa*
			4–6	*tiyak*	*tiyaktii*	*tiyaktum*	*tiyaktaa*
	Animate	sg		*yiyak*	*yiyakyii*	*yiyakyum*	*yiyakyaa*
		pl		*ɓiyak*	*ɓiyakɓii*	*ɓiyakɓum*	*ɓiyakɓaa*
Diminutive		sg		*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
		pl		*tiyak*	*tiyaktii*	*tiyaktum*	*tiyaktaa*

(Soukka 2000: 86ff)

III. Dependent rules

Table 3. Inflection of the adjective YAK 'big' in Noon (Cangin, Senegal)

			Noun class	Indefinite	Definite		
					Location 1	Location 2	Location 3
Nondiminutive	Inanimate	sg	1	*wiyak*	*wiyakwii*	*wiyakwum*	*wiyakwaa*
			2	*fiyak*	*fiyakfii*	*fiyakfum*	*fiyakfaa*
			3	*miyak*	*miyakmii*	*miyakmum*	*miyakmaa*
			4	*kiyak*	*kiyakkii*	*kiyakkum*	*kiyakkaa*
			5	*piyak*	*piyakpii*	*piyakpum*	*piyakpaa*
			6	*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
		pl	1–3	*ciyak*	*ciyakcii*	*ciyakcum*	*ciyakcaa*
			4–6	*tiyak*	*tiyaktii*	*tiyaktum*	*tiyaktaa*
	Animate	sg		*yiyak*	*yiyakyii*	*yiyakyum*	*yiyakyaa*
		pl		*ɓiyak*	*ɓiyakɓii*	*ɓiyakɓum*	*ɓiyakɓaa*
Diminutive		sg		*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
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			2	*fiyak*	*fiyakfii*	*fiyakfum*	*fiyakfaa*
			3	*miyak*	*miyakmii*	*miyakmum*	*miyakmaa*
			4	*kiyak*	*kiyakkii*	*kiyakkum*	*kiyakkaa*
			5	*piyak*	*piyakpii*	*piyakpum*	*piyakpaa*
			6	*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
		pl	1–3	*ciyak*	*ciyakcii*	*ciyakcum*	*ciyakcaa*
			4–6	*tiyak*	*tiyaktii*	*tiyaktum*	*tiyaktaa*
	Animate	sg		*yiyak*	*yiyakyii*	*yiyakyum*	*yiyakyaa*
		pl		*ɓiyak*	*ɓiyakɓii*	*ɓiyakɓum*	*ɓiyakɓaa*
Diminutive		sg		*jiyak*	*jiyakjii*	*jiyakjum*	*jiyakjaa*
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			3	*miyak*	*miyakmii*	*miyakmum*	*miyakmaa*
			4	*kiyak*	*kiyakkii*	*kiyakkum*	*kiyakkaa*
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		pl	1–3	*ciyak*	*ciyakcii*	*ciyakcum*	*ciyakcaa*
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III. Dependent rules

Table 3 (detail). Inflection of the adjective YAK ‘big’ in Noon

			Noun class	Definite Location 2
Non-diminutive	Inanimate	sg	1	*wiyakwum*
			2	*fiyakfum*
			3	*miyakmum*
			4	*kiyakkum*
			5	*piyakpum*
			6	*jiyakjum*
		pl	1–3	*ciyakcum*
			4–6	*tiyaktum*
	Animate	sg		*yiyakyum*
		pl		*ɓiyakɓum*
Diminutive		sg		*jiyakjum*
		pl		*tiyaktum*

III. Dependent rules

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			Noun class	Definite Location 2				
				–2	**–1**	**Stem**	**1**	**2**
Non-diminutive	Inanimate	sg	1	*w-*	*i-*	***yak***	*-w*	*-um*
			2	*f-*	*i-*	***yak***	*-f*	*-um*
			3	*m-*	*i-*	***yak***	*-m*	*-um*
			4	*k-*	*i-*	***yak***	*-k*	*-um*
			5	*p-*	*i-*	***yak***	*-p*	*-um*
			6	*j-*	*i-*	***yak***	*-j*	*-um*
		pl	1–3	*c-*	*i-*	***yak***	*-c*	*-um*
			4–6	*t-*	*i-*	***yak***	*-t*	*-um*
	Animate	sg		*y-*	*i-*	***yak***	*-y*	*-um*
		pl		*ɓ-*	*i-*	***yak***	*-ɓ*	*-um*
Diminutive		sg		*j-*	*i-*	***yak***	*-j*	*-um*
		pl		*t-*	*i-*	***yak***	*-t*	*-um*

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				–2	**–1**	**Stem**	**1**	**2**
Non-diminutive	Inanimate	sg	1	*w-*	*i-*	***yak***	*-w*	*-um*
			2	*f-*	*i-*	***yak***	*-f*	*-um*
			3	*m-*	*i-*	***yak***	*-m*	*-um*
			4	*k-*	*i-*	***yak***	*-k*	*-um*
			5	*p-*	*i-*	***yak***	*-p*	*-um*
			6	*j-*	*i-*	***yak***	*-j*	*-um*
		pl	1–3	*c-*	*i-*	***yak***	*-c*	*-um*
			4–6	*t-*	*i-*	***yak***	*-t*	*-um*
	Animate	sg		*y-*	*i-*	***yak***	*-y*	*-um*
		pl		*ɓ-*	*i-*	***yak***	*-ɓ*	*-um*
Diminutive		sg		*j-*	*i-*	***yak***	*-j*	*-um*
		pl		*t-*	*i-*	***yak***	*-t*	*-um*

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				–2	**–1**	**Stem**	**1**	**2**
Non-diminutive	Inanimate	sg	1	*w-*	*i-*	***yak***	*-w*	*-um*
			2	*f-*	*i-*	***yak***	*-f*	*-um*
			3	*m-*	*i-*	***yak***	*-m*	*-um*
			4	*k-*	*i-*	***yak***	*-k*	*-um*
			5	*p-*	*i-*	***yak***	*-p*	*-um*
			6	*j-*	*i-*	***yak***	*-j*	*-um*
		pl	1–3	*c-*	*i-*	***yak***	*-c*	*-um*
			4–6	*t-*	*i-*	***yak***	*-t*	*-um*
	Animate	sg		*y-*	*i-*	***yak***	*-y*	*-um*
		pl		*ɓ-*	*i-*	***yak***	*-ɓ*	*-um*
Diminutive		sg		*j-*	*i-*	***yak***	*-j*	*-um*
		pl		*t-*	*i-*	***yak***	*-t*	*-um*

III. Dependent rules

Table 3 (detail). Inflection of the adjective YAK 'big' in Noon

			Noun class	Prefixal concord	Stem	Definite suffix
Non-diminutive	Inanimate	sg	1	*w-i-*	***yak***	*-w-um*
			2	*f-i-*	***yak***	*-f-um*
			3	*m-i-*	***yak***	*-m-um*
			4	*k-i-*	***yak***	*-k-um*
			5	*p-i-*	***yak***	*-p-um*
			6	*j-i-*	***yak***	*-j-um*
		pl	1–3	*c-i-*	***yak***	*-c-um*
			4–6	*t-i-*	***yak***	*-t-um*
	Animate	sg		*y-i-*	***yak***	*-y-um*
		pl		*ɓ-i-*	***yak***	*-ɓ-um*
Diminutive		sg		*j-i-*	***yak***	*-j-um*
		pl		*t-i-*	***yak***	*-t-um*

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Non-diminutive	Inanimate	sg	1	*w-i-*	***yak***	*-w-um*
			2	*f-i-*	***yak***	*-f-um*
			3	*m-i-*	***yak***	*-m-um*
			4	*k-i-*	***yak***	*-k-um*
			5	*p-i-*	***yak***	*-p-um*
			6	*j-i-*	***yak***	*-j-um*
		pl	1–3	*c-i-*	***yak***	*-c-um*
			4–6	*t-i-*	***yak***	*-t-um*
	Animate	sg		*y-i-*	***yak***	*-y-um*
		pl		*ɓ-i-*	***yak***	*-ɓ-um*
Diminutive		sg		*j-i-*	***yak***	*-j-um*
		pl		*t-i-*	***yak***	*-t-um*

III. Dependent rules

In the inflection of Noon adjectives, the affixational noun-class rules conflate are dependent, taking as their carrier rule either the rule introducing the prefixal formative *i-* or a rule introducing a locational suffix. The carrier rule determines whether the resulting conflation is a rule of prefixation or suffixation.

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Here, rule conflation is not the same as rule composition. In particular, the conflation of a prefixation rule P with a suffixation rule S has an effect different from the composition of P with S:

(3) a. Conflation of [**w-**] with [**-um**] : suffixes stem with *-w-um*

b. Composition of [**w-**] with [**-um**] : prefixes stem with *w-*, suffixes stem with *-um*

IV. Noncomputable content

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Ordinarily, the content expressed by a sequence of rule applications is derivable from the content expressed by the individual rules in that sequence. Yet, some rule sequences seem to express a more specific content than can be deduced from their members.

IV. Noncomputable content

Neither rule of affixation that applies in the realization of Breton 2pl fut ***skriv-o-c'h*** unambiguously realizes the future tense. Both [**-o**] and [**-c'h**] apply in nonfutures:

Table 4. Finite forms of Breton SKRIVAÑ 'write'

	Indicative				Irrealis		Imperative
	Present	Imperfect	**Future**	Past	Present	Past	
1SG	*skriv-an*	*skriv-e-n*	*skriv-i-n*	*skriv-is*	*skriv-f-e-n*	*skriv-j-e-n*	
2SG	*skriv-ez*	*skriv-e-s*	*skriv-i*	*skriv-j-out*	*skriv-f-e-s*	*skriv-j-e-s*	*skriv*
3SG	*skriv*	*skriv-e*	*skriv-o*	*skriv-as*	*skriv-f-e*	*skriv-j-e*	*skriv-e-t*
1PL	*skriv-o-mp*	*skriv-e-mp*	*skriv-i-mp*	*skriv-j-o-mp*	*skriv-f-e-mp*	*skriv-j-e-mp*	*skriv-o-mp*
2PL	*skriv-i-t*	*skriv-e-c'h*	***skriv-o-c'h***	*skriv-j-o-c'h*	*skriv-f-e-c'h*	*skriv-j-e-c'h*	*skriv-i-t*
3PL	*skriv-o-nt*	*skriv-e-nt*	*skriv-i-nt*	*skriv-j-o-nt*	*skriv-f-e-nt*	*skriv-j-e-nt*	*skriv-e-nt*
IMPS	*skriv-e-r*	*skriv-e-d*	*skriv-o-r*	*skriv-j-o-d*	*skriv-f-e-d*	*skriv-j-e-d*	

Yet, ***skrivoc'h*** is itself unambiguously future-tense.

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3SG	*skriv*	*skriv-e*	*skriv-o*	*skriv-as*	*skriv-f-e*	*skriv-j-e*	*skriv-e-t*
1PL	*skriv-o-mp*	*skriv-e-mp*	*skriv-i-mp*	*skriv-j-o-mp*	*skriv-f-e-mp*	*skriv-j-e-mp*	*skriv-o-mp*
2PL	*skriv-i-t*	*skriv-e-c'h*	***skriv-o-c'h***	*skriv-j-o-c'h*	*skriv-f-e-c'h*	*skriv-j-e-c'h*	*skriv-i-t*
3PL	*skriv-o-nt*	*skriv-e-nt*	*skriv-i-nt*	*skriv-j-o-nt*	*skriv-f-e-nt*	*skriv-j-e-nt*	*skriv-e-nt*
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3SG	*skriv*	*skriv-e*	*skriv-o*	*skriv-as*	*skriv-f-e*	*skriv-j-e*	*skriv-e-t*
1PL	*skriv-o-mp*	*skriv-e-mp*	*skriv-i-mp*	*skriv-j-o-mp*	*skriv-f-e-mp*	*skriv-j-e-mp*	*skriv-o-mp*
2PL	*skriv-i-t*	*skriv-e-c'h*	***skriv-o-c'h***	*skriv-j-o-c'h*	*skriv-f-e-c'h*	*skriv-j-e-c'h*	*skriv-i-t*
3PL	*skriv-o-nt*	*skriv-e-nt*	*skriv-i-nt*	*skriv-j-o-nt*	*skriv-f-e-nt*	*skriv-j-e-nt*	*skriv-e-nt*
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This peculiarity of ***skrivoc'h*** can be seen as the effect of a kind of poverty in the system of realization rules for Breton verbs. That is, one can assume that in the realization of the pairing

⟨***skriv-***, {2pl fut}⟩,

there is no rule associating the future-tense property with an exponent—that this property simply goes unrealized.

But this is an unsatisfying analysis: although the future-tense property of ***skrivoc'h*** is realized neither by [**-o**] nor by [**-c'h**], it is nevertheless unambiguously realized by the combination of these two rules.

IV. Noncomputable content

A better analysis: Unlike either [**-o**] or [**-c’h**], [**-o-c’h**] realizes future tense.

Because more specific content may be associated with a conflated rule than is derivable from its component rules, the conflated rule cannot simply be equated with the composition of the smaller rules that it subsumes.

V. “Inward potentiation”

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Potentiation (Williams 1981: 249f) is an outward relation: the application of rule A expands the domain of forms to which rule B may subsequently apply; e.g. [**-able**] potentiates [**-ity**].

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Table 5. Three seeming instances of “inward potentiation” of rule A by rule B

Bases	Rule A		Rule B	compare:
whimsy	→	**whimsic*		
nonsense	→	**nonsensic*		

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simple	→	**simplist*			

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simple	→	**simplist*	→	*simplistic*	

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simple	→	**simplist*	→	*simplistic*	
beauty	→	**beautic*			
mort-	→	**mortic*			

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simple	→	**simplist*	→	*simplistic*	
beauty	→	**beautic*	→	*beautician*	*academic(ian)*
mort-	→	**mortic*	→	*mortician*	

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- ❑ In instances of inward potentiation, the domain of [**-ab-yz**] includes forms that are absent from the domain of [**-ab**]; e.g. the domain of the conflation [**-ic-al**] includes *whimsy* and *nonsense*, while that of [**-ic**] does not.

V. “Inward potentiation”

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- In instances of inward potentiation, the domain of [**-ab-yz**] includes forms that are absent from the domain of [**-ab**]; e.g. the domain of the conflation [**-ic-al**] includes *whimsy* and *nonsense*, while that of [**-ic**] does not.

In view of this difference, the conflation [**-ic-al**] (unlike [**-able-ity**]) cannot simply be equated with the composition of [**-al**] with [**-ic**]; its domain of application is not what simple composition entails.

VI. Conclusion and discussion

General conclusion

A sequence of rules may behave like a single rule under certain circumstances—

- its application may be paradigmatically opposed to that of a single rule
- it may be processed like a single rule
- the application of one of its members may be dependent on that of its other member
- it may realize noncomputable content
- its domain of application may differ from that of its first member rule.

This behavior follows from the assumption that the conflation of two rules is itself a rule.

The nature of conflation

The evidence presented here suggests that in the default case, a conflated rule [**-ab-yz**] is the same as the composed rule ([**-yz**] ○ [**-ab**]), defining the same form, expressing the same content, and applying to the same domain.

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Nevertheless, conflation and composition cannot be equated, for at least two reasons:

(i) Once [**-ab-yz**] is stored as an independent rule, its properties of form, category, content and domain of application may gradually deviate from those of ([**-yz**] ○ [**-ab**]).

(ii) Where A is a rule of prefixation and B a rule of suffixation, the conflation of A with B (or that of B with A) is not the same as their composition (see again (3)).

Conflation and affix telescoping

Over time, a conflated rule [**-ab-yz**] may undergo "affix telescoping" (Haspelmath 1995)—a wholesale reanalysis as a simple rule of affixation [**-abyz**].

Conflation and affix telescoping

Example: the reanalysis of Latin [**-ā-t**] as English [**-ate**]

	Latin		English	
Nominal (‘captive’):	*captīv-*		*captive*	
	↓	CONVERSION	↓	SUFFIXAL DERIVATION
Verb (‘take captive’):	*captīv-*			
• 1st conjugation:	*captīv-ā-*			
• Perf. pass. ptcp.:	*captīv-ā-t-*		*captiv-ate*	

Conflation and affix telescoping

The Telescoping Question: Is rule C a synchronic conflation of two simpler rules A and B or a synchronically unconflated rule that has arisen through the diachronic telescoping of A and B?

To resolve this issue, it is important to consider the properties of conflated rules.

Conflation and affix telescoping

Table 6. Properties of the conflation C of rule B with rule A

a. ***Form transparency*****.** The form defined by C is like a form defined by the successive application of A and B.

e.g. *national-ist-ic*
with possible (morpho)phonological effects: *beauti-ful-ly* /ˈbju.tɪ.fli/
read-abil-ity

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b. ***Category transparency*****.** The category of the form defined by C is the same as the category of a form defined by B.

e.g. *nation-al-ize*$_V$ (cf. *vapor-ize*$_V$)
with possible category narrowing: *statist-ic-ian*$_{N/*A}$ (cf. *Egypt-ian*$_{N/A}$)

Conflation and affix telescoping

Table 6. Properties of the conflation C of rule B with rule A

c. ***Semantic transparency*.** By default, the content realized by C is the same as the content realized by the successive application of A and B.

e.g. *nation-al-ize* Override: *statist-ic-ian* (cf. *Egypt-ian, scen-ic*)

Conflation and affix telescoping

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d. ***Domain transparency*.** By default, the domain of C is a subset of the domain of A.

e.g. *national-ist-ic* Override: *character-ist-ic* (**character-ist*)

Conflation and affix telescoping

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VI. Conclusion and discussion

Conflation and affix telescoping

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Table 7. Three conflated rules of adjective derivation and their variability with respect to semantic transparency and domain composition.

semantic transparency?	domain transparency?	Conflated rules exhibiting both form and category transparency		
		[**-ist-ic**]	[**-ic-al**]	[**-ari-an**]
Yes	Yes	*capitalist*$_A$ *capitalistic*	*satiric* *satirical*	*parliamentary* *parliamentarian*

VI. Conclusion and discussion

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Overridden	Yes	*novelist* *novelistic*	*historic* *historical*	*unitary* *unitarian*

VI. Conclusion and discussion

Conflation and affix telescoping

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Overridden	Yes	*novelist* *novelistic*	*historic* *historical*	*unitary* *unitarian*
NA	Overridden	**characterist* *characteristic*	**whimsic* *whimsical*	**vegetary* *vegetarian*

Conflation and affix telescoping

Answering the Telescoping Question requires some care.

> We have chosen to treat *-ical* as a single suffix, rather than as a sequence of *-ic* and *-al* for two reasons. First, there are a fair number of forms in *-ical* that do not have corresponding bases in *-ic*, for example, *practical*, *vertical*, *biblical*, *commonsensical*, *indexical*, *quizzical*, and especially medical terms like *colovesical*, *surgical*, and the like. Second, for many forms in *-ical*, even where there is a corresponding *-ic* form attested, there is no sense in which the two suffixes are semantically additive. (Bauer et al. 2013: 289)

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domain transparency
overridden

Conflation and affix telescoping

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domain transparency overridden

semantic transparency overridden

Conflation and affix telescoping

Although some adjectives in *-ical* no longer exhibit domain transparency or semantic transparency, many do, and all still exhibit form transparency and category transparency; therefore, the English conflated rule [**-ic-al**] hasn't yet been replaced by the telescoped rule [**-ical**]—even though the default transparency of the content that it expresses and of its domain of application are sometimes overridden.

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The most decisive kinds of evidence that a conflated rule [**-ab-yz**] has been reanalyzed as a simple rule [**-abyz**] are

(i) the diachronic loss of form transparency and/or category transparency, and

(ii) the eventual disappearance of either or both of [**-ab**] and [**-yz**] as independent rules.

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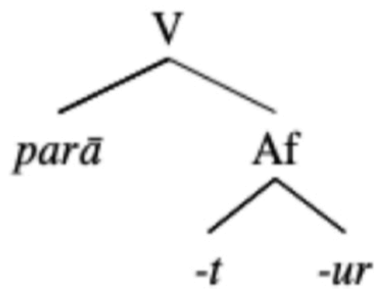
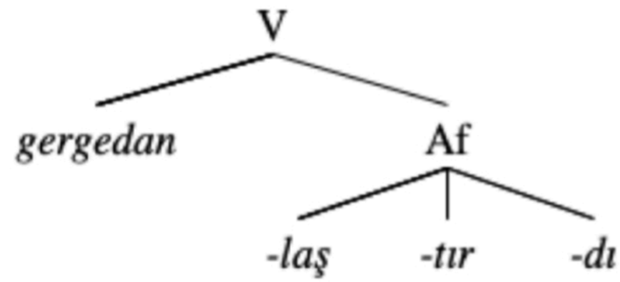
Why rule conflation rather than affix conflation?

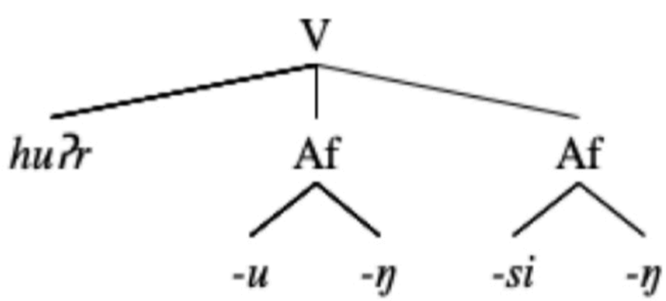
Stem	Past	-*t*	/i/ → /ɛ/
burn	*burn-t*	✓	
feed	*fed*		✓
mean	*mean-t*	✓	✓



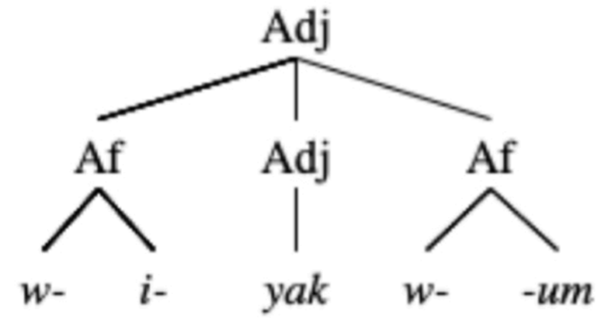
Latin: ‘it is prepared’



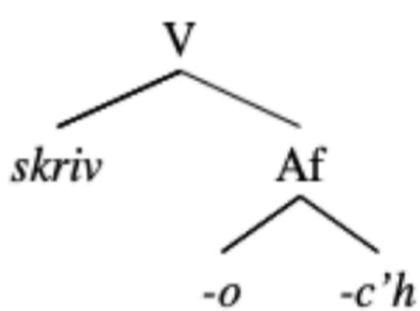
Turkish: ‘caused to become a rhino’



Limbu: ‘I teach them’



Noon: ‘big’ [sg, class 1, location 2]



Breton: ‘you (pl.) will write’