Two Patterns of Reduplication in Washo*

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Early descriptions of Washo treat reduplication in the language as a monolithic phenomenon (Jacobsen 1964, Winter 1970; cf. Kroeber 1907): the reduplicant copies the onset of the final syllable when the root is vowel-initial (1)a, otherwise, the CV of the final syllable is copied and is infixed to the stressed, thus penultimate, syllable (1)b. This paper argues that Washo in fact has two patterns of reduplication, partial and full, each serves different morphosemantic functions. It is argued that forms in (1)c are in fact instances of full reduplication of CV(C) roots, distinct from the partial reduplication pattern instantiated in (1)ab. The vowel-initial forms in (1)c, to the extent they are attested, are the results of truncation that applies under restricted circumstances.

(1)	a.	áhad-[1]	háhad-	'across'
		áŋkaš-	káŋkaš-	'hollow'
		émc'i-	c'ímc'i-	'wake up'
	b.	dámal-	damámal-	'to hear'
		bókoŋ-	bokókoŋ-	'to snore'
		ʔéw.ši ʔ-	ʔešíw.ši ʔ-	'father's brothers'
		t'é:liw-	t'elí:liw-	'to be a man'
	c.	ínkin-	kínkin-	'black'
		áynay-	náynay-	'muddy, gooey'

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[1] The data presented in this paper is given in a modified phonemic orthography adopted from Jacobsen 1964. In syllable-final positions, the three-way (voiced, voiceless, ejective) laryngeal contrast neutralizes toward voicelessness. Capitalized /M, W, L, Y, Ŋ/ stand for the voiceless counterparts of modal voiced sonorants. Voiced and ejective affricates are represented as /z/ and /c'/ respectively. Long vowels are found only in stressed syllables; short vowels can occur in any syllable. For more details on Washo stress and vowel length distribution, see Yu 2005 & In press.

This paper is organized as follows: Section 1 introduces the main analytic puzzle, which we argue, in Section 2, is understandable if two patterns of reduplication are distinguished in Washo. Section 3 raises a complication concerning the behavior of certain fully-reduplicated forms. Section 4 resolves this complication by arguing that the apparent resemblance between the two reduplicative patterns results from a truncation process that operates on the full-reduplicated forms. Implications and conclusion are given in Section 5.

1. Washo reduplication: the basics

Washo is a severely moribund language spoken by approximately 13 elderly speakers in an area around Lake Tahoe, California and Nevada. Early accounts of Washo morphology recognize only one type of reduplicative morphology in the language: ***partial reduplication*** (Jacobsen 1964, Winter 1970). At its most basic form, the CV of the root-final syllable is copied and serves as the penultimate syllable (1)b.[2] The penultimate distribution of the reduplicant can be clearly established in roots that contain an internal consonant sequence; the reduplicant is lodged before the sequence in such forms (e.g., *nént'uš-u* 'old woman' ~ *net'únt'uš-u* 'old women'). The shape of the reduplicant differs when the root is vowel-initial, as already seen in (1)a. The reduplicant copies only the onset of the final syllable when the root is vowel-initial (e.g., *émc'iyi*[3] 's/he wakes up' ~ *c'imc'iyi* 'they wake up').

While the morpho-phonology of this partial reduplication pattern has been worked out in some detail (Broselow & McCarthy 1983, Urbanczyk 1993, Winter 1970, Yu 2005), there remain important issues that are unresolved. Consider, for example, the data in (2).

(2)	a.		b.		
		ál?mul-		?mól?mol-	'big and round'
		ámk'um-		k'ómk'om-	'arched'
		ínkin-		kínkin-	'black'
		áynay-		náynay-	'muddy, gooey'
		í?si?-		sí?si?-	'fast'

What is peculiar about the data in (2) is the fact that the first and final syllables of the forms in (2)b – the presumed partially reduplicated counterparts of the vowel-

[22] The interpretation of partial reduplication adopted here follows that of Yu 2005.

[3] Underlying vowel-initial roots are realized with an initial glottal stop phonetically. Whether a root is glottal-stop-initial or vowel-initial can be determined by the choice of the prefixal person allomorphs. For example, when a root is consonant-initial, the first person possessive prefix is *di-* (e.g., *di?á:t'u* 'my older brother'); when the root is vowel-initial, the first person subject prefix is *l(E)-* where *E* indicates the type of vowel coloring effect the first person prefix has on the root-initial vowel (e.g., *láyuk* 'my parent in law).

initial forms in (2)a – are identical. Why might this be? Two possible explanations readily come to mind. As is assumed in previous accounts, the appearance of root-internal syllable identity could be an accidental consequence of partial reduplication. Alternatively, syllable identity observed in (2)b might reflect a previously undocumented process of full reduplication of CV(C) roots in Washo. Upon closer examination, we found converging evidence in support of the two-pattern analysis. The next section reviews the evidence.

2. Arguments for two reduplications in Washo

Support for establishing a full reduplication pattern distinct from partial reduplication comes from two main sources: (i) the morphosemantic behavior of fully vs. partially reduplicated stems, and (ii) the phonotactics of fully reduplicated forms. Let us first consider the morphosemantic evidence.

2.1 Morphosemantic distribution

Plurality in Washo is not obligatorily marked. However, nominal plurality may nonetheless be indicated via partial reduplication (e.g., *dáʔa* 'mother's brother' ~ *daʔáʔa* 'mother's brothers'; *p'ísew* 'ear' ~ *p'isésew* 'ears'). When verbs are partially reduplicated, readings of pluractionality obtain. That is, the event denoted by the verb might be interpreted variously as repetitive (3)a, distributed (3)b, durative (3)c, or having multiple participants (3)d, depending on the context. For example, *dámal-i* 's/he hears' has a multiple-experiencer reading when the verb is partially reduplicated (*damámal-i* 'they hear'). According to Jacobsen (1964: 530), there are instances where partially reduplicated verbs yield multiple interpretations. For example, the stem *-itiʔ-* 'down, downward' may pluralize the subject as in *tuktétiʔi* 'they're looking down' or the object *tumʔtétiʔi* 'he has both feet hanging down'. The verb *tumʔŋáŋaʔi* (< *-aŋaʔ-* 'on') may mean either 'he has both feet on it', 'he keeps putting his foot (or both feet) on it', 'they have their feet (either one or two each) on it', or 'they keep putting their feet (either one or two each) on it'.

(3)

a.	biŋíŋil- (< bíŋil- 'to try to')	'to try repeatedly'
b.	gepúpuʔi (< ípuʔ- 'to find')	'he found several things in several places'
	gašášdɨmi (< ášdɨm- 'to hide')	'he's hiding things in different places'
c.	duwéweʔ- (< dúweʔ- 'to want to, be about to')	'to keep trying to'
d.	mémeʔi (< ímeʔ- 'to drink')	'they're drinking'
	šélšɨmi (< élšɨm- 'to sleep'	'they're sleeping'

The morphosemantic functions of fully reduplicated stems, henceforth **F-STEMS**, are far more diverse by comparison. The majority of f-stems are adjectival:

(4)				
	túltul-	‘coarse’	šápšab-	‘fuzzy’
	ʔyɨ́nʔyɨn-	‘varicolored’	háwhaw-	‘light’
	púypuy-	‘thin’	k’áwkaw-	‘hard’
	húːhu-	‘striped’	ʔmólʔmol-	‘big and round’
	p’ɨ́šp’ɨš-	‘long, narrow (of eyes)’	tóʔtoʔ-	‘gray’
	káykay-	‘long’	k’ómk’om-	‘arched, hunched’

Many animal names are either intrinsically fully reduplicated (e.g., *gówgow* ‘Canadian goose’) or derived from f-stems. For example, the word for ‘carrot’, *c’ilut’ɨ́nt’ɨn*, is derived from the lexical prefix *c’ilu-* ‘hip’ and the fully reduplicated adjective *t’ɨ́nt’ɨn* ‘wrinkled, rough’. One of the bird names, *síwsiwhu*, is derived from the adjective *sɨ́wsiw* ‘smooth, slippery’ and the nominalizing suffix *-hu*.

(5)				
	dezítzidiʔ	‘snowbird’	daʔmuk’áyk’ay	‘mosquito’
	zíwziwhu	woodpecker sp.	mákmak	bird sp.
	ʔit’óŋt’oŋ	‘Jew’s harp’	dewgeltúktuk	‘gasoline engine’
	gáːzagaza[4]	bird sp.	deyk’úyk’uyi	‘a crooked person’
	c’élc’el	Squirrel sp.	gówgow	‘Canadian goose’

Besides its adjectival and name-forming usages, full reduplication might serve certain onomatopoetic/iconic function. Full reduplication is, for example, observed in two types of verbs. One major class depicts noise generating events.

(6)				
	wákwag-	‘to bark’	ziŋíːŋi-	‘to ring’
	dɨníːnɨ-	‘to roar’	ʔɨ́yʔɨy-	‘to sob’
	wékweg-	‘to quack’	siyɨ́ːyɨ-	‘to hum’
	wétwed-	‘to quack’	k’ótk’od-	‘to cluck’

It is possible that some of the names of animals/objects contain sound-symbolic full reduplication as well. Take, for example, the names of two types of drums in

[4] This form suggests that full reduplication might not be restricted to monosyllabic roots only.

Washo, *ʔitmukhéŋheŋ* ‘bass drum’ and *dewgebúgbug* ‘drum’. Both contain a fully reduplicated component.

The other class of f-stems describes semelfactive actions that prototypically occur in multiple consecutive iterations. Since all the forms in (7) are fully inflected, the f-stem is underlined for ease of reference.

(7)

leʔlesénseni	‘it’s nibbling me’
tukc’ímc’imi	‘he’s blinking’
tumʔsópsobi	‘he’s splashing his feet’
bákbagi	‘he’s smoking’
hesɬpsɨbi	‘it’s sprinkling; raindrop’

While the forms in (7) involve repeated actions, they are not to be confused with the pluractional functions of partial reduplication discussed earlier, however. As argued in Wood 2007, there are two subtypes of pluractional verbs: event-internal vs. event-external. Event-internal pluractionals prototypically are semelfactive or achievement verbs that are typically or inherently repeated. They also tend to have high degree of continuity, pertaining to a single occasion with a common goal or completion. The distribution of event-external pluractionals, on the other hand, is far less restrictive. Event-external pluractionals may be found with verbs of all Aktionzarten involving either single or multiple occasions with either a continuous or intermittent reading. Verbs with full reduplication appear to be pluractionals of the event-internal type, while verbs with partial reduplication are pluractionals of the event-external type. Further research is needed to substantiate this analysis. The morphosemantic evidence reviewed thus far, however, strongly supports differentiating the f-stems from those that participate in partial reduplication, henceforth **P-STEMS**. Full reduplication is found in adjectives, names of animals, instruments, and human relations, as well as verbs of noise-generating events and of event-internal repetitive actions. Partial reduplication is only observed when nouns and verbs are pluralized. The fact that fully reduplicated nouns may be partially reduplicated when pluralized (e.g., *sáksak* ‘grandfather’s brother’ ~ *sasáksak* ‘grandfather’s brothers’) further supports distinguishing partial reduplication from full reduplication.

2.2 The phonotactics of full and partial reduplications

The morphosemantic evidence notwithstanding, there also are strong phonological reasons for analyzing the f-stems and p-stems differently. Syllables in the native Washo lexicon are maximally CV(C) in shape.[5] Given the relatively

[5] Jacobsen considers syllable-initial glottalized sonorants sequences of glottal stop plus modal voice sonorant. However, the status of glottalized sonorants as consonant cluster is currently in dispute. See Peachey 2006 for more discussion.

simple syllable canon of Washo, the range of root-internal consonant sequences are restricted. A few phonotactic restrictions further limit the range of possible root-internal consonant sequences. To begin with, the three-way laryngeal contrast is neutralized toward the plain series in coda position (e.g., *waːt* 'tomorrow' ~ *waːdiŋ* 'now' ~ *watlíː* 'morning'). Thus, the final consonants of the base and the reduplicant of the f-stem may differ in voicing (e.g., *gawgap'ótp'odi* 'it's crackling' vs. *gawgap'ótp'othayi* 'he's causing it to crackle').[6] Voiceless sonorants are also never found in coda position. Given these restrictions, let us consider the set of possible post-tonic -C_1C_2- sequences in Washo, summarized in Table 1. Of the 136 attested post-tonic consonant sequences in Washo, 106 of these post-tonic consonant sequences are found in p-stems, which include both roots that participate in partial reduplication as well as roots that do not participate in any form of reduplication at all; the set of roots that may be pluralized is limited. Although 23 of these 106 post-tonic consonant sequences are also observed in the set of f-stems, there remains 30 additional post-tonic consonant sequences that are attested only in roots with full reduplication and not elsewhere. Why should the f-stems permit a deviant set of post-tonic consonant sequence phonotactics? This outcome is to be expected given the analysis advocated here. When a CVC root is reduplicated, the coda consonant will come in contact with the first consonant of the root syllable, creating a consonant sequence that might not otherwise be attested in the non-reduplicated roots in the language. For example, the post-tonic consonant sequence *-tw-* is only observed in fully reduplicated words such as *wátwadi* 'the day after tomorrow', which is derived from the root *wáːt* 'tomorrow'.

The divergent post-tonic -C_1C_2- phonotactics of p-stems and f-stems highlights the morphologically complex nature of the f-stems. Consonant sequences that are not otherwise found in monomorphemic roots in Washo are nonetheless observed in the f-stems. What then is the status of the CVC roots that form the bases of the f-stems, if forms such as /wekweg/ 'to quack' are supposed to be derived from the full reduplication of /weg/? For the majority of f-stems, the corresponding CV(C) bases are not free standing. Thus, the synchronic status of these monosyllabic roots is open to debate. Languages with frozen fully reduplicated forms are not uncommon, however. Scholars have often recognized their special status and have generally assumed that such forms are derived from some simplex base forms (Bat-El 2006, Buckley 1997, Rose 1997). To be sure, while the synchronic status of the monosyllabic roots might be questionable, the

[6] Recent studies have found that many languages purported to have a voicing contrast are better analyzed as having an aspiration contrast (e.g., Petrova et al. 2006). This might be the case in Washo. The so-called "voiced" stops are rarely fully voiced word-initially; they are generally voiceless unaspirated. In intervocalic positions, the observed voicing might be better analyzed as a matter of passive voicing. If such an analysis is proven correct for Washo, then the final consonants of the base and the reduplicant of roots such as /waːd/ is better analyzed as /waːt/.

productivity of full reduplication *per se* is not in doubt. Recent loanwords may undergo full reduplication, as evidenced by the adaptation of English 'ball' as *bólbol* 'spherical' in Washo. Also, certain time expressions are transparently derived from full reduplication (e.g., *ʔlóːt* 'yesterday' ~ *ʔlótʔlodi* 'the day before yesterday'; *wáːt* 'today' ~ *wátwadi* 'tomorrow').

p	t	k	ʔ	s	š	h	m	n	ŋ	l	w	y	
							x						p
x		x						?			?	?	t
			x						x	x	?		k
												x	ʔ
x	x		x				x			x	x		b
x	x	x	x	x	x		x	x		x	x	x	d
	x	x	x	x	x		x		x	x	x		g
		?		x			x	?	x			x	z
	x				x		x						p'
x				x			x	x		x		x	t'
							x	x				x	c'
	x						x	x	x?			x	k'
x	x	x	x				x		x	?			s
		x	x				x			x	x	x	š
							x			?	x	x	h
			x	x	x	x				x		?	m
			x										n
			x							x	x	x	ŋ
	x		x		x	x	x		x		x	?	l
		x	x							x		x	w
	x		x				x						y
										x			M
											x		L

Table 1. The inventory of all possible post-tonic C_1C_2 sequences in Washo. C1 consonants is presented horizontally (in columns) while the set of possible C2 is given vertically (in rows). The symbol "x" indicates C_1C_2 sequences observed in native Washo monomorphemic roots; consonant sequences only found in Washo proper names are marked as "?"; consonant sequences attested in fully reduplicated forms are indicated by the shaded cells.

3. Discussion

Now that we have established that certain reduplicated stems are the product of full reduplication while others are that of partial reduplication, a new set of base-reduplicant relationship emerges. That is, in the case of partial reduplication, the relationship between the reduplicant and the base remains unchanged: the

reduplicant is CV when the penultimate syllable of the base is consonant-initial; the reduplicant is C when the base form is disyllabic and vowel-initial. However, in the case of full reduplication, the base is presumably underlyingly CV(C) in shape. The reduplicant copies the entire base form. A summary of these two reduplicative patterns is given in (8).

(8) a. Partial reduplication

P-stems	→	*Pluralized p-stems*
$C_1V(X)C_2V(C_3)$		$C_1V\underline{C_1V}(X)C_2V(C_3)$
nént'uš- 'to be an old woman'		*net'únt'uš-* 'to be old women'
$V(X)C_1(V)(C_2)$		$\underline{C_1}V(X)C_1(V)(C_2)$
élšɨm- 'to sleep'		*šélšɨm-* '(pl.) to sleep'

b. Full reduplication

CV(C)-roots	→	*F-stems*
$C_1V(C_2)$		$C_1V(C_2)C_1V(C_2)$
-nay-		*náynay-* 'muddy, gooey'

This two-pattern analysis of reduplicative morphology in Washo gives rise to a curious puzzle. As the data in (2) suggests, fully reduplicated forms actually have $V(C_2)C_1V(C_2)$ counterparts akin to the vowel-initial p-stems in (1)a. Previous analyses took these vowel-initial f-stems as nothing more than the non-pluralized counterparts of f-stems. Thus, according to Jacobsen (1964), the base form of *náynay* 'muddy, gooey' is *-áynay* (p. 329); the base form of *p'ilp'il* 'blue' is *-ilp'il* (p. 336). The fact that the f-stems resemble products of full reduplication was considered epiphenomenal under Jacobsen's analysis. What is the status of these vowel-initial f-stems (henceforth VF-STEMS) under the current analysis? As will be demonstrated in the next section, the nature of the vf-stems becomes apparent when the distribution of the vf-stems is viewed within the context of Washo verbal morphology: vf-stems are the dependent version of the more freely occurring f-stems, derived via a process of truncation.

4. Dependent-stem truncation

As argued in Jacobsen's (1980) seminal paper, many verb stems in Washo are bipartite. That is, many stems are decomposable into two components, the lexical prefix and the dependent stem. What is crucial for the present purpose is the notion of the dependent stem. Dependent stems are bound morphemes that have concrete meanings and must combine with either a lexical prefix or another stem in order to be realized. For example, the stem *-íːgel* 'around something, around in a circle' may combine with a multitude of lexical prefixes:

(9) Múːgel- 'to run around something, around in a circle'
beyúːgel- 'to flow around in a circle (as in a whirlpool)'

hú:gel-	‘to mix up, scramble with side of long object’
yú:gel-	‘to wind something around something’
mú:gel-	‘to stir’
meʔbú:gel-	‘to be dizzy’

Likewise, the lexical prefix *dulˇ-* ‘with hand, arm, descriptive of hand, paw’[7] may occur with a variety of dependent verb stems:

(10)

dulá:š-	‘to have one’s hand in something’
dulé:kʼɨl-	‘to cook’; literally ‘to swing one’s arm around’
duléšɨl-	‘to offer one’s hand to someone’
dulakákd-	‘to move hands slowly’
duleʔwíʔwid-	‘to wave’
dulé:tiʔ-	‘to hold his hand down’
dulepépeš-	‘to have black, dirty, greasy hands’

An important generalization concerning the vf-stems is that they are only observed as dependent stems in bipartite constructions.

(11)

kinkin-	‘dark’	wedenkin-	‘night’
siwsiw-	‘slippery’	yewsiw-	‘to slide’
kʼawkʼaw-	‘to be hard’	tugáwkʼaw-	‘to have one’s eyes tightly closed’
cʼipciʼb-	‘perfect’	Múpcʼibi	‘it’s running perfectly’
pʼílpʼil-	‘blue’	tugílpʼil-	‘to have blue eyes’
witwid-	‘hard, stiff’	métuʔétwid-	‘to be frozen stiff’
náynay-	‘gooey’	ʔí:bikʼáynay-	‘to be soft from over-cooking, from being over-ripe’

The f-stems, on the other hand, are never found in this context; they are readily observable in the predicative adjectival construction, however (e.g., *ʔɨlcʼipcʼibiʔɨ* ‘it’s perfect’). Why do vf-stems only appear as dependent stems while their supposed partially reduplicated f-stem counterparts appear in the complementary contexts? To be sure, genuine p-stems can function as dependent stems whether they are partially reduplicated or not (12).

[7] The symbol [ˇ] indicates the presence of a floating mora that docks onto the stressed syllable if the stressed syllable is open.

(12)	P-stem	Dependent p-stem	Dependent pluralized p-stem
	ipeš- ‘rotten’	dúpeš- ‘to be blacken by sunlight’	dulepépeš- ‘to have black, dirty, greasy hands’
	-iti?- ‘down’	šíːleti?- ‘to fall with a crash’	tuktéti?i ‘they’re looking down’
	-ips- ‘up, lift’	bípsi ‘he’s picking it up’	tukpépsi ‘they're opening their eyes’

Also, p-stems often can appear both within and outside the confine of the dependent stem position. For example, the verb *-ihuk’-* ‘(to be) dry’ may appear freely on its own, as in *ʔíhuk’i* ‘it’s dry’. The same verb may occur with a few lexical prefixes expressing manner of drying, such as *léːhuk’-* ‘to dry by wiping, mopping’ vs. *séːhuk’-* ‘to put out to dry’. More importantly, *-ihuk’-* may also function as the first part of a bipartite stem (e.g., *ʔíhuk’eti?-* ‘to get dry’, literally, ‘to dry down’; *ʔíhuk’étwid-* ‘to be dry, stale, and stiff (e.g., bread)’; *ʔíhuk’átp’udi* ‘it’s dry and crumbly’). Thus the fact that vf-stems can only appear as dependent stems in bipartite structures cannot be attributed to any intrinsic properties of dependent stems. Likewise, that the f-stem cannot serve as dependent stems does not fall out from the morphosyntatic properties of partial reduplication.

Here, we propose to relate the vf-stems to the f-stems by way of a truncation process. The truncation process eliminates the first consonant of an f-stem. A schematic summary of the relationship between the different types of reduplicative morphology as well as the truncation process is given in (13).

(13) a. Partial reduplication

P-stems		*Pluralized p-stems*
$C_1VC_2V(C_3)$	→	$C_1V\underline{C_1}\underline{V}C_2V(C_3)$
$VC_1V(C_2)$	→	$\underline{C_1}VC_1V(C_2)$

b. Full reduplication Dependent-stem formation

CV(C)-roots		*F-stems*		*Vf-stems*
$C_1V(C_2)$	→	$C_1V(C_2)C_1V(C_2)$	→	$-V(C_2)C_1V(C_2)$

What is the nature of this truncation process? To understand its source, it is important to first understand the phonotactics of the dependent stems. All dependent stems are vowel-initial. A quick examination of all reduplicable stems surveyed in Jacobsen 1964 will illustrate this point more clearly. Out of the 117 reduplicable stems examined, 38 are nouns and 69 are verbs. Within the set of verbs, it can be further decomposed into verbs that may only be used as dependent verbs (which all vf-stems belong) and those that have no restricted usage. As summarized in (14), while the non-dependent verbs are almost evenly split

between being C-initial and V-initial, all dependent verb stems are vowel-initial. Nouns, on the other hand, are overwhelmingly consonant-initial.

(14)

	C-initial	V-initial	Total
Verb (free)	15	12	27
Verb (dependent)	0	52	52
Noun	37	1	38

The data in (14) suggests that C-reduplication mainly applies to vowel-initial verbs; the only vowel-initial noun has irregular plural form (*-áyuk* 'parent-in-law' vs. *yóːk* 'parents-in-law'). That dependent stems must be vowel-initial is further confirmed by an examination of the 94 dependent stems surveyed in Jacobsen 1980. 91 are vowel-initial. The ones that are not vowel-initial, *bélbel-* 'high (of voice)', *síːlu-* '(speech) hard to understand, with foreign accent' and *t'át'ad* 'rattling', appear to attach to prefixes that only take C-initial stems. Such prefixes (e.g., the attributive *ʔil-*; classifier-plural marking *wgV-*) might not be lexical prefixes, however. Non-lexical prefixes in Washo (e.g., the instrumental nominalizing prefix *ʔit-*) do not take a dependent-stem as its right-sister. Thus, if this interpretation is correct, there is no exception to the vowel-initial generalization of dependent stems. What this suggestion is that truncation of the initial consonant of f-stems might be triggered by structural analogy to the predominance of vowel-initial dependent stems.

5. Conclusion

To summarize, this paper establishes that there are two types of reduplicative morphology in Washo. Fully reduplicated stems exhibit different morphosyntactic functions and phonotactic properties than those with partial reduplication. The vf-stems are derived from a process of dependent stem truncation. This truncation process appears to be motivated by the fact that the phonotactics of dependent stems are invariably vowel-initial. Thus when an f-stem is used in a bipartite construction, by analogy to all other dependent stems, the initial consonant of the f-stem is eliminated, rendering the dependent f-stem vowel-initial. This pattern of truncation is unique among truncation processes cross-linguistically. As Weeda (1992: Section 1.3) points out, subtractive aphaeresis – the elimination of the beginning of a string (thus keeping the end) where the truncated portion is of a certain size/shape – generally have limited functionalities. In particular, all identified instances of subtractive aphaeresis, notes Weeda, furnish word variants and are only pragmatically distinctive; subtractive aphaeresis does not appear to ever be used derivationally. The uniqueness of Washo dependent-stem truncation might stem from the fact that truncation itself is not motivated by prosodic reasons, as truncation patterns generally are; instead, it emerges as a result of structural analogy motivated by the fact that all dependent-stems are vowel-initial.

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