

Lexicalization Patterns in Color Naming in Korean

1. Introduction

- Korean has arguably one of the richest inventories of color terms across languages.
- Lexicographers list a large number of native terms expressing colors across nominal, adjectival and adverbial categories. (But the listing is not exhaustive. cf. Koo, 2009)

- (1) a. Park (1989): 362 adjectives/verbs and 98 adverbs that describe colors and hues
b. Nam (1992): 41 nouns that denote color names

- native terms (nominal) for 5 focal colors:

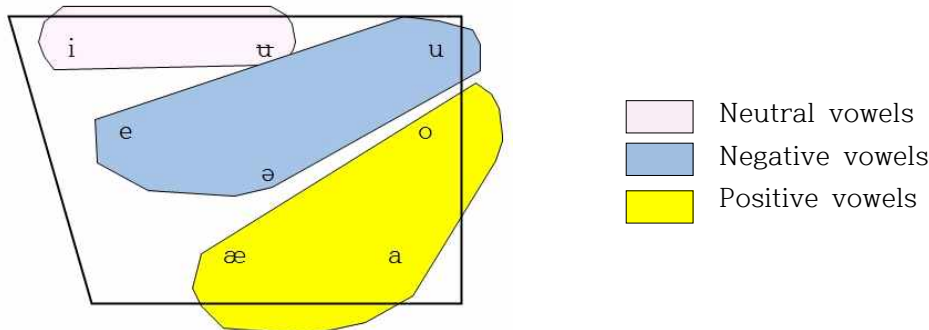
- (2) Nominals ending with *-(a)ng*
 - a. 'black': *kkamang, kemceng*
 - b. 'white': *hayang*
 - c. 'yellow': *nolang, nwuleng*
 - d. 'red': *ppalkang, kemyang*
 - e. 'grue': *phalang*

2. Preliminaries: Sound symbolism

2.1 Vowel Polarity

- Korean has a very elaborate system of sound symbolism for consonants and vowels (Kim 1976, Kim-Renaud 1976, Martin 1962, Koo 2007)

- (3) vowel polarity



- (4) (i) 'positive' vowels: [a], [o], [æ], and diphthongs involving them describing small, delicate, and bright objects, and movements arousing such sensation
(ii) 'negative' vowels: [ə], [e], [u], and diphthongs involving them describing big, crude, and dark objects, and movements arousing such sensation

2.2 Iconicity of Force Dynamics

- force iconicity: Forces involved in tensing and aspiration in articulatory gestures are systematically represented in semanticization of word derivation and new word coinage (Koo 2007: 201-202). > Plain-Tensed-Aspirated tripartite correlation

- (5) Tensed: more localized and intensified force

- a. [bogʌlbogʌ] e.g. water boiling in a small pot
- b. [b'ogʌlb'ogʌ] e.g. thick stew boiling

(Koo 2007: 201)

- (6) Aspirated: more strongly exerted, but diffused, force
 a. [jolanjolan] e.g. a colt walking behind its mother
 b. [tʰolanʃʰolan] e.g. a colt trotting along behind its mother (Koo 2007: 202)

2.3 Reduplication: Iconicity of Multiplicity

- Korean onomatopoeic words often involve phonological (partial) reduplication.

- (7) reduplication: repetition of sound or motion
 a. [pʰuŋdən] e.g. a big object falling into deep water
 b. [pʰuŋdənʃpʰuŋdən] e.g. big objects falling into deep water in succession
 c. [pʰuŋdədəŋ] e.g. a big object with irregular surface falling into deep water, thus creating multiple splashes

3. Lexicalization Patterns

3.1 Nominal Category

- (i) derived names from native adjectives with an adnominal and the noun denoting 'color'

- (8)
- | | Nominal | Adjective-Adnominal-'color' |
|--------------|-----------------------------------|---|
| a. 'black': | <i>kkamang</i> (<i>kemceng</i>) | <i>kkamah-n-sayk</i> ('be.black-ADN-color') |
| b. 'white': | <i>hayang</i> | <i>hayah-n-sayk</i> ('be.white-ADN-color') |
| c. 'yellow': | <i>nolang</i> | <i>nolah-n-sayk</i> ('be.yellow-ADN-color') |
| d. 'red': | <i>ppalkang</i> | <i>ppalkh-n-sayk</i> ('be.red-ADN-color') |
| e. 'grue': | <i>phalang</i> | <i>phalah-n-sayk</i> ('be.grue-ADN-color') |

- (ii) derived names from compounding involving an object name and a noun *pich* 'light'

- (9)
- | | | |
|---------------|------------------|---|
| a. 'yellow': | <i>kumpich</i> | < <i>kum-pich</i> ('gold-light') |
| b. 'crimson': | <i>phisich</i> | < <i>phi-s-pich</i> ('blood-Gen-light') |
| c. 'green': | <i>phwulpich</i> | < <i>phwul-pich</i> ('grass-light') |
| d. 'blue': | <i>hanulpich</i> | < <i>hanul-pich</i> ('sky-light') |

- (iii) borrowing from foreign languages

- (10)
- | | | |
|-------------------|------------------------|--|
| a. 'crimson red': | <i>tahong</i> [dahon] | (< Chin <i>duōhóng</i> (多紅) 'much.red') |
| b. 'purple': | <i>pola</i> [bora] | (< M.Mong <i>boro</i> 'purple') (Baek 2014) |
| c. 'purple': | <i>cacwu</i> [jaju] | (< Chin <i>zīzhū</i> (紫朱) 'purple.vermilion') |
| d. 'dark blue': | <i>yacheng</i> [yaʃən] | (< Chin <i>yāqīng</i> (雅青) 'elegant.grue'; Manchu <i>yacin</i>) |

3.2 Adjectival/Adverbial Categories

- In lexicalizing colors and hues in adjectival and adverbial categories, diverse strategies are recruited.

[Prefixation] (for saturation)

- (11) prefixation of intensifying prefix
 prefixes: *say-* [sæ-], *says-* [sæt-], *si-* [si-], *sis-* [sit] for darker, stronger hue (higher saturation)
- | | | | |
|-----------|--------------------|-------------|------------------------|
| a. Plain: | <i>phalah-</i> | [parat-] | 'be grue (blue/green)' |
| Prefixed: | <i>saysphalah-</i> | [sætparat-] | 'be strongly grue' |
| b. Plain: | <i>hayah-</i> | [hayat-] | 'be white' |
| Prefixed: | <i>sayhayah-</i> | [sæhayat-] | 'be very white' |

[Vowel Polarity] (for luminosity)

(12) positive vowels for bright hue vs. negative vowels for darker hue

Positive: [a], [o], [æ] Negative: [ə], [e], [u]

a. Positive: *nolah-* [norat-] 'be (bright) yellow'

Negative: *nwuleh-* [nurət-] 'be dark yellow'

b. Positive: *ppalkah-* [p'algat-] 'be (bright) red'

Negative: *ppelkeh-* [p'əlgət-] 'be dark red'

[Consonant Tensing/De-tensing] (for saturation)

(13) tense consonants for stronger hue vs. non-tense consonant for weaker hue (Note: If the base form is already tense, the alternative is de-tensification.)

a. Tensed (base form): *ppalkah-* [p'algat-] 'be red'

De-tensed: *palkah-* [balgat-] 'be reddish'

b. Plain (base form): *kem-* [gəm-] 'be black'

Tensed: *kkem-* [k'əm-] 'be dark black, pitch black'

[Reduplication] (for evenness of distribution)

(14) reduplication of color terms for multiple occurrences of saturated coloration over a space (i.e. spotty)

a. Plain: *pwulk-* [bulk-] adj. 'be red'

Reduplicated: *pwulkuspwulkus* [bulgʊtbulgʊt] adv. 'be reddish here and there'

b. Plain: *nolah-* [norat-] adj. 'be yellow'

Reduplicated: *nolusnolus* [norʊtnorʊt] adv. 'be yellowish here and there'

[Phonetic Extension via Suffixation] (for distribution & saturation)

- Phonetic extension by way of suffixing invokes the sense of extended surface and/or subdued hue.

(15) suffixes: [-ək'eha-, -ureha-, -ʊsrʊmha-, -ək'ʊrʊmha-, -ʊmureha-, -ək'ʊmureha-], etc.

a. Plain: *nolah-* [norat-] 'be yellow'

Suffixed: *nolukkeyha-* [norək'eha-] 'be slightly yellowish'

b. Plain: *phalah-* [parat-] 'be grue'

Suffixed: *phalukkeyha-* [parək'eha-] 'be slightly grue'

[Phonetic Extension via Reduplicative Suffixation] (for distribution, saturation & attitude)

- Reduplicative suffixation invokes the sense of extended surface, uneven distribution, spottiness, and evaluation of the color being less pleasurable.

(16) reduplicative suffixes: [-ʊsʊksʊkha-, -ʊjəpjəpha-/ -ʊjəpjəpha-, -ʊjəkjəkha-/ -ʊjukjukha-/ -ʊjəkjəkha-, -ʊʃikʃikha-/ -ʊʃukʃukha-/ -ʊʃukʃukha-, -ʊʃʊnʃʊnha-, -ʊdədəha-/ -ʊdədəha-, -ʊtwehweha-/ -ʊtwithwiha-, -ʊdenʒenʒha-/ -ʊdɪnɪnha-/ -ʊdʊnʊnha-/ -ʊtʊntʊnha-], etc.

a. Plain: *kem-* [gəm-] 'be black'

Suffixed: *kemwucwukcwukha-* [gəmujukjukha-] 'be unevenly, unpleasingly black'

b. Plain: *phwulu-* [pʊrʊ-] 'be grue'

Suffixed: *phwuluthwungthwung* [pʊrutʊntʊn] 'be unevenly, unpleasingly grue'

[Phonetic Extension via Discontinuous Reduplicative Suffixation] (for distribution)

- Discontinuous reduplicative suffixation invokes the sense of extended surface and uneven distribution.

(17) discontinuous reduplicative suffixes: [-ut -utha-, -uṭ -uṭha-, -suṇ -suṇha-, -jəḳ -jəḳha-, -siḷ -siḷha-], etc.

- | | | | | |
|----|-----------|--------------------------|-------------------|---------------------|
| a. | Plain: | <i>kkam-</i> | [k'am-] | 'be strongly black' |
| | Suffixed: | <i>kkamwuskkamwusha-</i> | [k'amutk'amutha-] | 'be spotty black' |
| b. | Plain: | <i>nolah-</i> | [norat-] | 'be yellow' |
| | Suffixed: | <i>nolusnolusha-</i> | [noruṭnoruṭha-] | 'be spotty yellow' |

4. Discussion

4.1 Iconicity

- There is an iconic relationship between the perceived state of affairs in the world and the linguistic forms in intricate application of elaborate sound symbolism.

- (18) a. saturation (intensity): intensifying prefixes (stronger), tensed consonants (stronger)
 b. luminosity: positive vowels (brighter)
 c. extent: reduplicative suffixes (larger area)
 d. solidity: reduplicative suffixes (uneven, spotty)
 e. pleasurability: reduplicative suffixes (less pleasurable), positive vowels (more pleasurable)

4.2 Synesthesia of Multiple Senses

- Color term formation borders on, and sometimes blends into, other related perceptual domains such as auditory perception, distance perception, opacity perception, etc.
- Some of the suffixes are sound-onomatopoeic, suggesting that extended color distribution is similarly conceived of as sound ringing out in the air.

(19) color & sound perception

- usulum* [-ʊsʊrʊm]: sound coming from minimal friction of a gliding motion (e.g. of a sliding door smoothly opening along a rail)
- tututu* [tʊrʊrʊ]: sound coming from a round or lubricated object rolling on a smooth surface (e.g. of a bead rolling on a platter)
- chikchik* [tʃʰikʃʰik]: sound of a wet stubby object brushing on a surface repeatedly (e.g. of a paint brush on canvas, or of an aerosol paint sprayed unto canvas)
- swuk* [suk]: sound of an object moving into an object with minimal friction for certain depth (e.g. a well-sharpened knife deeply driven into a pumpkin)
- tengteng* [dɛŋdɛŋ]: sound of a metal object hitting another metal object (e.g. a metal club hitting a bell)
- cwukcwuk* [dʒukdʒuk]: sound of a sharp object scratching on a surface (e.g. a chalk drawing a long line on a blackboard)
- thwungthwung* [tʰʊŋtʰʊŋ]: sound of a wooden container hit by an object (e.g. an oak-barrel hit by a stick)

(20) color & distance perception

- | | | | |
|----|-------------|---------------|--|
| a. | kkam- | [k'am-] | (i) 'be black' |
| | kkamatukha- | [k'amadukha-] | (ii) 'be faraway, hazy' (cf. <i>atukha-</i> 'faraway') |
| b. | asulaha- | [asuraha-] | (i) 'dim, gray, shadowy' |
| | | | (ii) 'be far off' |

(21) color & opacity perception

- | | | | |
|----|------------|-------------|--------------------------------------|
| a. | pwuyeh- | [buyət-] | (i) 'be whitish, milky' |
| | | | (ii) 'be thick, turbid, impure' |
| b. | huypwuyeh- | [hibuyət-] | (i) 'be milky white' |
| | | | (ii) 'be murky' |
| c. | malk- | [mal-] | (i) 'be clear, clean, lucid, bright' |
| | | | (ii) 'be limpid, pure, transparent' |
| d. | malkah- | [malgat-] | (i) 'be clear, clean, lucid, bright' |
| | | | (ii) 'be limpid, thin (of liquid)' |
| e. | haymalkah- | [hæmalgat-] | (i) 'be very white' |
| | | | (ii) 'be pure, uncontaminated' |

4.3 Color and Evaluation (Attitude)

- Color term formation incorporates value judgment on the object being described.
- Color terms derived from suffixation of certain suffixes (*-cwukcwukha-*, *-teyngteynggha-*, *-(k)kumuleyha-*, *-(k)kumuleyha-*, *-thwungthwunggha-*, *-thepwunha-*, *-thepthepgha-*, etc.), esp. when they occur with negative-polarity vowels in the stem, bring forth undesirable, displeasurable quality of the coloration.

4.4 Productivity and Novel Coinage

- Equipped with a rich derivation system, Korean has a paradigm of extraordinarily fine-grained color terms that defies faithful translation into other languages.
- Since the sound symbolism has a robust representation in the minds of the native speakers, when new color terms are encountered, they can conceive of the colors and hues denoted by the novel expressions without trouble.

(22) a made-up term not listed in Park (1989) & Nam (1992) (see appendix for "red"-terms)
ppwulkumwuliha-: reddish:

- (i) red hue < base *pwulk-*
- (ii) dark hue < negative vowel *wu*[u]
- (iii) has a point of concentration < tensed consonant *pp* [p']
- (iv) extended surface < suffix *-umwuli-*
- (v) displeasurable < suffix *-umwuli-* & negative vowel *wu* [u]

5. Summary & Conclusion

- The color lexicalization pattern in Korean shows the following:

- (23) a. There exists an elaborate iconic relationship between the perceived states of affairs and linguistic coding via sound symbolism.
- b. Perception of color borders on, and sometimes blends into, other perceptual domains such as auditory, distance and opacity perceptions.
 - c. Color lexicalization patterns incorporate value judgment as a semantic component (i.e. pleasurable or displeasurable).
 - d. The derivational processes in color lexicalization are highly productive, and thus the color vocabulary is systematically expandable.

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Appendix: 127 RED-words in Korean

BRT: bright; DRK: dark; EXT: extended surface; INT: intense; SPT: spotty; UND: undesirable; WK: weak

Korean	Translit.	Pronun.	Meaning	Korean	Translit.	Pronun.	Meaning
		Noun					
빨강	ppalkang	p'algan	red	빨그당당하-	ppelkuteyngteyngaha-	p'algadenderaha-	reddish DRK EXT
빨간색	ppalkansayk	p'algansæk	red BRT	빨그레하-	ppelkuleyha-	p'algareha-	reddish DRK
붉은색	pwulunsayk	bulgünsæk	red DRK	빨그름하-	ppelkulumha-	p'algarumha-	reddish DRK
Adjective (most derived with the light verb ha-)				빨그무레하-	ppelkumwuleyha-	p'algamureha-	reddish DRK EXT UND
발가아드르르하-	palkayatululuha-	balgayadururuha-	reddish BRT WK EXT	빨그속속하-	ppelkusuwukwukha-	p'algasuksukha-	reddish DRK EXT UND
발가우리하-	palkawulihaha-	balgauniha-	reddish BRT WK EXT	빨그스름하-	ppelkusulumha-	p'algasurumha-	reddish DRK EXT
발강-	palkah-	balgat-	reddish BRT WK	빨그족족하-	ppelkucwukwukha-	p'algajukjukha-	reddish DRK EXT UND
발그대데하-	palkutaytayha-	balgadadeha-	reddish BRT WK EXT	빨긋빨긋하-	ppelkuspelkusha-	p'algakp'algutha-	reddish DRK SPT
발그당당하-	palkutayngtayngaha-	balgadadyeongaha-	reddish BRT WK EXT	빨긋하-	ppelkusha-	p'algutha-	reddish DRK
발그레하-	palkuleyha-	balgureha-	reddish BRT WK	빨그스름하-	ppolkulumha-	p'olgarumha-	reddish BRT
발그름하-	palkulumha-	balgarumha-	reddish BRT WK	빨그족족하-	ppolkucokkoha-	p'olgajokjukha-	reddish BRT EXT
발그무레하-	palkumwuleyha-	balgamureha-	reddish BRT WK EXT	빨긋빨긋하-	ppolkuspelkusha-	p'olgap'algutha-	reddish BRT SPT
발그속속하-	palkusoksokha-	balgusoksokha-	reddish BRT WK EXT	빨긋하-	ppolkusha-	p'olgutha-	reddish BRT
발그스름하-	palkusulumha-	balgasurumha-	reddish BRT WK EXT	빨그스름하-	ppwulkusulumha-	p'ulgaurumha-	reddish DRK
발그족족하-	palkucokkoha-	balgajokjukha-	reddish BRT WK EXT	빨그속속하-	ppwulkucwukwukha-	p'ulgajukjukha-	reddish DRK EXT UND
발긋발긋하-	palkuspalkusha-	balgatbalgutha-	reddish BRT WK SPT	빨긋빨긋하-	ppwulkuspwulkusha-	p'ulgatp'ulgutha-	reddish DRK SPT
발긋하-	palkusha-	balgutha-	reddish BRT WK	빨긋하-	ppwulkusha-	p'ulgutha-	reddish DRK
발가아드르르하-	pelkeyetuluha-	balgayedaruruha-	reddish DRK WK EXT	뽀-	ppwulk-	p'ulk-	reddish DRK
벌거우리하-	pelkewulihaha-	balgauniha-	reddish DRK WK EXT	새빨강-	sayppalkah-	saep'algat-	red BRT INT
벌강-	pelkeh-	balgat-	reddish DRK WK	셋빨강-	seyppalkah-	saet'algat-	red BRT INT
벌그대데하-	pelkuteyeyha-	balgadadeha-	reddish DRK WK EXT UND	시빨강-	sippelkeh-	sip'algat-	red DRK INT
벌그당당하-	pelkuteyngteyngaha-	balgadenderaha-	reddish DRK WK EXT UND	잇빨강-	sispelkeh-	sitp'algat-	red DRK INT
벌그레하-	pelkuleyha-	balgureha-	reddish DRK WK	울긋불긋하-	wulkuspwulkusha-	ulgatbulgutha-	reddish DRK (mixed)
벌그름하-	pelkulumha-	balgarumha-	reddish DRK WK	Verb (derived from the causative affix -ci-)			
벌그무레하-	pelkumwuleyha-	balgamureha-	reddish DRK WK EXT UND	발개지-	palkayci-	balgaji-	become reddish BRT WK
벌그속속하-	pelkusuwukwukha-	balgusuksukha-	reddish DRK WK EXT UND	빨개지-	ppalkayci-	p'algaji-	become red
벌그스름하-	pelkusulumha-	balgasurumha-	reddish DRK WK EXT	벌개지-	pelkayci-	balgaji-	become reddish DRK WK
벌그족족하-	pelkucwukwukha-	balgajukjukha-	reddish DRK WK EXT UND	붉어지-	pwuleci-	bulgaji-	become red DRK
벌긋빨긋하-	pelkuspelkusha-	balgatbalgutha-	reddish DRK WK SPT	빨개지-	ppelkayci-	p'algaji-	become reddish DRK
벌긋하-	pelkusha-	balgutha-	reddish DRK WK	새빨개지-	sayppalkayci-	saep'algaji-	become red INT
불그대데하-	polkutaytayha-	bolgadadeha-	reddish BRT WK EXT	셋빨개지-	seyppalkayci-	saet'algaji-	become red INT
불그당당하-	polkutayngtayngaha-	bolgadadyeongaha-	reddish BRT WK EXT	시빨개지-	sippelkayci-	sip'algaji-	become red DRK INT
불그레하-	polkuleyha-	bolgureha-	reddish BRT WK	잇빨개지-	sispelkayci-	sitp'algaji-	become red DRK INT
불그름하-	polkulumha-	bolgarumha-	reddish BRT WK	Adverb ('in such a manner of being adjective')			
불그무레하-	polkumwuleyha-	bolgamureha-	reddish BRT WK EXT	발그스름히	palkusulumhi	balgasurumhi	reddish BRT WK EXT
불그속속하-	polkusoksokha-	balgusoksokha-	reddish BRT WK EXT	발긋발긋	palkuspalkus	balgatbalgat	reddish BRT WK SPT
불그스름하-	palkusulumha-	balgasurumha-	reddish BRT WK EXT	벌그름히	pelkulumhi	balgarumhi	reddish DRK WK
불그족족하-	polkucokkoha-	balgajokjukha-	reddish BRT WK EXT	발그스름히	pelkusulumhi	balgasurumhi	reddish DRK WK EXT
불긋불긋하-	polkuspalkusha-	balgatbalgutha-	reddish BRT WK SPT	벌긋벌긋	pelkuspelkus	balgatbalgat	reddish DRK WK SPT
불긋하-	polkusha-	balgutha-	reddish BRT WK	불그름히	polkulumhi	balgarumhi	reddish BRT WK
불그대데하-	pwulkuteyeyha-	bulgadadeha-	reddish DRK WK EXT UND	불그스름히	polkusulumhi	balgasurumhi	reddish BRT WK EXT
불그당당하-	pwulkuteyngteyngaha-	bulgadenderaha-	reddish DRK WK EXT UND	불긋불긋	polkuspalkus	balgatbalgat	reddish BRT WK SPT
불그레하-	pwulkuleyha-	bulgureha-	reddish DRK WK	불긋이	polkusi	bulgasi	reddish BRT WK
불그름하-	pwulkulumha-	bulgarumha-	reddish DRK WK	불그름히	pwulkulumhi	bulgarumhi	reddish DRK WK
불그무레하-	pwulkumwuleyha-	bulgamureha-	reddish DRK WK EXT UND	불그스름히	pwulkusulumhi	balgasurumhi	reddish DRK WK EXT
불그속속하-	pwulkusuwukwukha-	bulgusuksukha-	reddish DRK WK EXT UND	불긋불긋	pwulkuspwulkus	ulgatbulgat	reddish DRK WK SPT
불그스름하-	pwulkusulumha-	balgasurumha-	reddish DRK WK EXT	불긋이	pwulkusi	bulgasi	reddish DRK WK
불그족족하-	pwulkucwukwukha-	bulgajokjukha-	reddish DRK WK EXT UND	붉으락푸르락	bulgrakpuruak	bulgrakpuruak	reddish DRK WK (mixed)
불긋불긋하-	pwulkuspwulkusha-	ulgatulgutha-	reddish DRK WK SPT	빨그스름히	ppalkusulumhi	p'algasurumhi	reddish BRT EXT
불긋하-	pwulkusha-	ulgutha-	reddish DRK WK	빨긋빨긋	ppalkuspalkus	p'algatp'algat	reddish BRT SPT
붉-	pwulk-	bulk-	red DRK	빨그름히	ppelkulumhi	p'algarumhi	reddish DRK
붉으락푸르락하-	pwulkulakpuruakha-	bulgrakpuruakha-	reddish SPT (mixed)	빨그스름히	ppelkusulumhi	p'algasurumhi	reddish DRK EXT
빨강-	ppalkah-	p'algat-	red	빨긋빨긋	ppelkuspelkus	p'algatp'algat	reddish DRK SPT
빨그대데하-	ppalkutaytayha-	p'algadadeha-	reddish BRT EXT	빨그름히	ppolkulumhi	p'olgarumhi	reddish BRT
빨그당당하-	ppalkutayngtayngaha-	p'algadadyeongaha-	reddish BRT EXT	빨그스름히	ppolisulumhi	p'olgasurumhi	reddish BRT EXT
빨그레하-	ppalkuleyha-	p'algureha-	reddish BRT	빨긋빨긋	ppolkuspalkus	p'olgap'algat	reddish BRT SPT
빨그름하-	ppalkulumha-	p'algarumha-	reddish BRT	빨긋이	ppolkusi	p'olgasi	reddish BRT
빨그무레하-	ppalkumwuleyha-	p'algamureha-	reddish BRT EXT	빨그스름히	ppwulkulumhi	p'ulgaurumhi	reddish DRK
빨그속속하-	ppalkusoksokha-	p'algusoksokha-	reddish BRT EXT	빨그스름히	ppwulkusulumhi	p'ulgaurumhi	reddish DRK EXT
빨그스름하-	ppalkusulumha-	p'algasurumha-	reddish BRT EXT	빨긋빨긋	ppwulkuspwulkus	p'ulgatp'ulgat	reddish DRK SPT
빨그족족하-	ppalkucokkoha-	p'algajokjukha-	reddish BRT EXT	빨긋이	ppwulkusi	p'ulgasi	reddish DRK
빨긋빨긋하-	ppalkuspalkusha-	p'algatp'algutha-	reddish BRT SPT	울긋불긋	olkuspalkus	ulgatbulgat	reddish BRT (mixed)
빨긋하-	ppalkusha-	p'algutha-	reddish BRT	울긋불긋	wulkuspwulkus	ulgatbulgat	reddish DRK (mixed)
빨강-	ppelkeh-	p'algat-	reddish DRK				
빨그대데하-	ppelkuteyeyha-	p'algadadeha-	reddish DRK EXT UND				