

Cross-linguistic variation in phonaesthetic canonicity

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RESEARCH TARGET

Phonaesthemes

- Recurrent pairings of sound and meaning (Firth 1930)
 - gl-* 'light/vision' *glow, glisten, gleam, glitter, ...*
 - sn-* 'nasal/oral area' *sneer, sniff, snore, snarl, ...*
 ? *snow, snake, snail, ...*

Relative iconicity

- A mapping of relations among forms in multiple words onto relations among meanings

(Adapted from Dingemanse et al. 2015: 605)

Phonaesthemes in ideophones

- Ideophones (also known as mimetics or expressives) depict sensory experiences, e.g., sound, manner, state, motion, etc.
- Often analyzed as containing phonaesthemes arranged into paradigms
 - Semai *ghu:p; gho:p* 'neutral; intense acrid odor' (Tufvesson 2011: 89)
 - Japanese *kira-kira; gira-gira* 'twinkling; glaring'

Korean phonaesthemes

Form	Meaning	Example
Vowel quality	Size-related	<i>pinkil; penkil</i> 'a big, small object twirling'
Consonant quality	Intensity-related	<i>penpen; phenphen</i> 'a neutral; violent motion of circling'
		<i>tals'ak; t'als'ak</i> 'a neutral; strong motion of an object rising and sinking'

Aim

Cross-linguistic multidimensional comparisons of phonaesthemes, with special reference to English and Korean

CONCEPTUAL METHODOLOGY

Canonical Typology (Corbett 2003, 2005, etc.)

- Three concept parts (Brown & Chumakina 2013):
 - Base: A minimal definition of a phenomenon, P
 - Criteria: The scales along which variability is systematically characterized. Each criterion defines a dimension within the base.
 - Core: A logically maximal instance of P

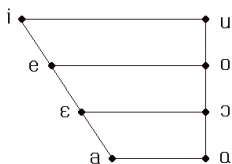
Canonical base

- A broad theoretical space that accommodates various occurring instances of P (Bond 2013)
- Canonical base for phonaesthemes (Kwon & Round 2015)

"A phonaestheme is a sound-meaning pairing which occurs as part of a lexical stem"

Canonical core

- Canonical ideal, which is analogous to the system of cardinal vowels, sets a logically maximal endpoint from which examples of P can be calibrated within the base (Baerman & Corbett 2012).



Cardinal vowel diagram (<http://www.phonetics.ucla.edu/course/chapter9/cardinal/cardinal.html>)

Canonical core

- A characterization of the canonical core for phonaesthemes (Kwon & Round 2015)

The most canonical phonaesthemes are:

- sound-symbolic pairing of sound and meaning;
- identifiable by virtue of their frequent occurrence in the lexical stems of a language

Stems containing the most canonical phonaesthemes:

- have a transparent formal composition;
- are comprised of the phonaestheme, plus a 'residue' which does not recur as a sound-meaning pairing elsewhere in the lexicon

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Canonical criteria

- The base is then given a potentially uncorrelated multi-dimensional structure by applying various scales.
- Each scale has a logical endpoint and all possible ranges of data for P in the base receive multi-dimensional evaluation.

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Canonical criteria

- Canonical criteria for phonaesthemes (Kwon & Round 2015)
 - Criterion 1: A canonical phonaestheme occurs in many lexical stems
 - Criterion 2: It occurs in many parts of speech
 - Criterion 3: It is strongly image-iconic
 - Criterion 4: Its form is paired with only one meaning
 - Criterion 5: Its meaning is paired with only one form
 - Criterion 6: It combines only with non-recurring residues
 - Criterion 7: It combines agglutinatively with residue

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Summary

Canonical Typology provides explicit mechanisms to conduct comparisons between several possibly occurring instances of a given linguistic phenomenon in multiple dimensions across and within languages.

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CANONICITY VALUES OF ENGLISH PHONAESTHEMES

Kwon & Round (2015)

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Criterion 1

- Occurs in many lexical stems > in few

Phonaesthemes occur not just once in the lexicon, but are recurrent (Bergen 2004; Blust 2003; Healy 2011; Householder 1946; Nygaard et al. 2009; Parault & Parkinson 2008).

	Phonaestheme	Stems
C	<i>cl-</i> 'denoting sound'	<i>cluck, click, clap, clack, clash, clutter, clang, clank, clamber, clamour, clam, clump, clip</i> (Marchand 1969: 410)
NC	<i>spr-</i> 'spread'	<i>sprout, spread, spring, sprawl, sprinkle</i> (Marchand 1969: 406)

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Criterion 2

- Occurs in many parts of speech > in few

Phonaesthemes do not in general restrict their occurrences to a single grammatical category.

	Phonaesthemes	Stems
C	<i>gl-</i> 'visual salience of activity; darkness or ponderous'	<i>gloom</i> (N), <i>gloat</i> (V), <i>glower</i> (V), <i>glum</i> (Adj) (Fordyce 1988: 28-29)
NC	<i>-ask</i> (no definition given)	<i>cask</i> (N), <i>flask</i> (N) (Bloomfield 1953: 163)

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Criterion 3

- Is strongly image-iconic > weakly > not image-iconic
- Phonaesthemes are sound-symbolic phenomena.
- image iconicity is arguably the most canonical manifestation of sound symbolism.

	Phonaesthemes	Stems
C	-ng 'resonant sounds' -nk 'resonant sounds cut short' -ck 'abruptly terminating sounds'	<i>bang, clang, ding, twang, boing</i> <i>bonk, clank, clunk, clink, boink</i> <i>whack, thwack, tick</i> (Oswalt 1994: 295-304)
I	sn- 'nasal'	<i>snarl, sniff, sneeze, snore, sneer</i>
NC	gl- 'vision; light'	<i>glow, glisten, glitter, ...</i>

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Criterion 4

- Form is paired with only one meaning > with many

Phonaesthemes possess a strictly one-to-one correspondence between form and meaning, with no polysemy, homophony or allomorphy.

	Phonaesthemes	Stems
C	tr- 'tread'	<i>tread, tramp, trample, trip, trudge, trot</i> (Marchand 1969: 408)
NC	sl- 'falling or sliding movement' 'a falling blow' 'slimy/slushy matter'	<i>slide, slither, slip, slouch, slump</i> <i>slay, slaughter, slit, sling, slash</i> <i>slime, slush, slop, slough, slobber</i> (Marchand 1969: 416)

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Criterion 5

- Meaning is paired with only one form > with many

Phonaesthemes possess a strictly one-to-one correspondence between form and meaning, with no polysemy, homophony or allomorphy.

	Phonaesthemes	Stems
C	sw- 'swing, sway'	<i>sweep, swing, swag, swap, swirl, swagger, swat</i> (Marchand 1969: 413)
NC	cl- 'grasp'	<i>clutch, claw, cling, close, clasp</i> (Fordyce 1988: 181)
	gr- 'grasp'	<i>grasp, grip, grab, grapple, grope</i> (Hutchins 1998: Appendix A)

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Criterion 6

- Combines only with non-recurring residues > also with recurrent residues > able to occur alone

Criterion 6 refers to a phonaestheme's residue, and whether the residue is 'recurring', that is, whether the phonaestheme's residue appears with the same meaning in the wider lexicon.

	Phonaesthemes	Stems
C	gl- 'vision, light'	<i>glow, glitter, glare, glaze, gleam</i>
I	sn- 'nasal'	<i>snaffle, sneer, sneeze, sniff</i> (Blust 2003: 188)
	-eer 'expression of contempt'	<i>sneer, leer, jeer</i> (Bergen 2004: 294)
NC	-owl 'sinister'	<i>owl, prowl, foul, scowl, growl, howl, jowl, yowl, cowl</i> (Bolinger 1950: 123)

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Criterion 7

- Combines agglutinatively with residue > non-agglutinatively

A canonical phonaestheme will concatenate with its residue in a simple, agglutinative fashion to form a stem.

	Phonaesthemes	Stems
C	Most of them	
NC	i; o 'higher; lower pitched'	<i>drip, drop; clip, clop; ding, dong;</i> <i>plink, plonk; tick, tock</i>

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CANONICAL ANALYSIS OF KOREAN PHONAESTHEMES

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The seven canonical criteria are applied to the assessment of Korean phonaestemes, to capture the similarities and differences of phonaesthetic canonicity between the two languages.

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Autosegmental theory of morphology (McCarthy 1983)

(capital letter indicates consonant slot unspecified for laryngeal features)

Tals'ak 'an object rising and sinking'

[± stiff v.c.]
[± spread gl.] } feature-sized morpheme

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Autosegmental theory of morphology (McCarthy 1983)

(capital V indicates vowel slot unspecified for height feature)

pVŋkil 'twirling of an object'

[± low] feature-sized morpheme

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Underlying representation of KP

Vocalic phonaestemes	Semantic features (Sohn 1999: 96-97)
[-low]	darkness, heaviness, dullness, slowness, deepness, and thickness
[+low]	brightness, sharpness, lightness, smallness, thinness, and quickness
Consonantal phonaestemes	
[-stiff v.c, +spread gl.]	slowness, gentleness, heaviness, and bigness
[+stiff v.c, -spread gl.]	compactness, tightness, hardness, smallness, and extra swiftness
[+stiff v.c, +spread gl.]	flexibility, elasticity, crispness, and swiftness

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Surface representation of KP

Underlying form	Surface form
[-low]	[i], [ɨ], [e], [u]
[+low]	[ɛ], [a]
Underlying form	Surface form
[-stiff v.c, +spread gl.]	[p], [t], [k], [s]
[+stiff v.c, -spread gl.]	[pʰ], [tʰ], [kʰ], [sʰ]
[+stiff v.c, +spread gl.]	[pʰ], [tʰ], [kʰ]

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- ### Canonical base for KP
- Underlying form of a KP
 - It always constitutes a pairing of sound and meaning and that it always contributes to the composition of a lexical stem
 - Canonical base for phonaestemes (Kwon & Round 2015)
 - "A phonaestheme is a sound-meaning pairing which occurs as part of a lexical stem"
 - Surface form of a KP
 - It always contributes to the composition of a lexical stem

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For comparison

Measure the canonicity of the *underlying* form of a Korean phonaestheme against the seven criteria

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Data

- A written corpus that contains 29,015 Korean ideophones (<http://www.hangeul.pe.kr/symbol/words.htm>)
- Attended to *bipartite* lexical stems only
 - Ideophonic stems (3,048, 10% of the corpus)
 - Prosaic stems (250, 8% of the corpus)

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Criterion 1

- Occurs in many lexical stems > in few

Phonaesthemes occur not just once in the lexicon, but are recurrent (Bergen 2004; Blust 2003; Healy 2011; Householder 1946; Nygaard et al. 2009; Parault & Parkinson 2008).

	Phonaestheme	Stems
C	[-low]; [+low] 'strong; weak'	Some ideophones (e.g., <i>cikil</i> ; <i>cakil</i> 'strong; weak sound of sizzling') Some prosaic words (e.g., <i>kalk-</i> ; <i>kalk-</i> 'scrape strongly; scrape')
NC	[-low]; [+low] 'neutral; pejorative'	only in few prosaic words (e.g., <i>kačitmal</i> ; <i>kačitmal</i> 'lie; cunning lie', <i>pacilən-</i> ; <i>pacilən-</i> 'diligent;...even for small matters')

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Criterion 2

- Occurs in many parts of speech > in few

Phonaesthemes do not in general restrict their occurrences to a single grammatical category.

	Phonaesthemes	Stems
C	[-stiff v.c. +spread gl.]; [+stiff v.c. -spread gl.] 'weak; strong'	<i>kaŋcuŋ</i> ; <i>k'aŋc'uŋ</i> 'jumping;...strongly' (Adv) <i>tasa-</i> ; <i>t'asa-</i> 'warm; very...' (Adj) <i>tutil-</i> ; <i>t'utit-</i> 'knock; ...strongly' (V) <i>kasi</i> ; <i>k'asi</i> 'thorn; (stinging) thorn' (N) (colloquial)
NC	[-low]; [+low] 'dark; bright'	<i>nuləh-</i> ; <i>noləh-</i> 'dark yellow; yellow', <i>hwən-</i> ; <i>hwan-</i> 'bright; clearly bright' (Adj)

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Criterion 3

- Is strongly image-iconic > weakly > not image-iconic
 - Phonaesthemes are sound-symbolic phenomena.
 - image iconicity is arguably the most canonical manifestation of sound symbolism.

! The underlying form of a KP, which is not phonetically realized, cannot possess any canonical values against this criterion.

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Criterion 4

- Form is paired with only one meaning > with many

Phonaesthemes possess a strictly one-to-one correspondence between form and meaning, with no polysemy, homophony or allomorphy.

	Phonaesthemes	Stems
C	-	-
NC	All	<i>cik'in</i> ; <i>cak'in</i> 'the snapping of a big; small object' <i>cikil</i> ; <i>cakil</i> 'a strong; weak sound of sizzling' <i>pałt'ək</i> ; <i>p'əłt'ək</i> 'slow; fast pit-a-pat' <i>pałtil</i> ; <i>p'əłtil</i> 'a neutral; greater degree of indolence'

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Criterion 5

- Meaning is paired with only one form > with many

Phonaesthemes possess a strictly one-to-one correspondence between form and meaning, with no polysemy, homophony or allomorphy.

	Phonaesthemes	Meaning
C	[+stiff v.c, +spread gl.] 'strong and violent'	<i>pʰənc'ək</i> 'strong and violent flash'
NC	[-low]; [+low] 'strong; weak'	<i>cikil; cakil</i> 'strong; weak sound of sizzling'
	[+stiff v.c, -spread gl.]; [-stiff v.c, +spread gl.] 'strong, weak'	<i>t'ɛŋkəŋ; tɛŋkəŋ</i> 'strong; weak clinking'

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Criterion 6

- Combines only with non-recurring residues > also with recurrent residues > able to occur alone

Criterion 6 refers to a phonaestheme's residue, and whether the residue is 'recurring', that is, whether the phonaestheme's residue appears with the same meaning in the wider lexicon.

	Phonaesthemes	Stems
C	All	The residues do not recur in the lexicon outside of their phonaesthetic paradigms.
NC	—	—

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Criterion 7

- Combines agglutinatively with residue > non-agglutinatively

A canonical phonaestheme will concatenate with its residue in a simple, agglutinative fashion to form a stem.

! The relative linear order of morphemes is determined only once they are linked autosegmentally to ordered strings of timing slots with a *surface* representation (McCarthy 1989).

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Findings

Criteria	English	Korean
1 ("frequency in lexical stems")	C, NC	C, NC
2 ("frequency across parts of speech")	C, NC	C, NC
3 ("image iconicity")	C, I, NC	—
4 ("one form – one meaning")	C, NC	NC
5 ("one meaning – one form")	C, NC	C, NC
6 ("recurrence of residue")	C (most), I, NC	C
7 ("linear ordering")	C (most), NC	—

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Conclusion

- KP is similar to EP on four dimensions but different from it on one dimension
- KP is not measurable against criteria 3 and 7
- Cross-linguistic applicability of the two criteria needs to be examined in a broader typological context.
- Languages where the paradigmatic organization of phonaesthemes is pervasive, e.g., Wasco (Silverstein 1994), Semai (Tuvesson 2011)

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