

associated with the morpheme is dominant and the uninflected lexical item is recessive.

(4) Theoretical Distinction

- (a) Phonological harmony is governed by markedness; morphological harmony is governed by faithfulness to the feature associated with the triggering morpheme.
 - (i) Disharmony in phonological harmony results in inherently ill-formed (marked) structure; disharmony in morphological harmony results in ill-formed realization of the morpheme.

1.2. Overview of the rest of the talk:

- Exceptional phonological harmony vs. morphological harmony- why they cannot be analyzed in the same manner
- Empirical predictions of a faithfulness-based analysis of morphological harmony
- Conclusions

2. Accounting for Exceptional Phonological Harmony: Strong vs. Weak Morphemes

(5) AGREE[F] as the harmony inducing morpheme (Bakovic 2000):

Adjacent segments must have the same value of the feature [F].

(6) ID[F] blocks harmony

- (a) ID[F] >> AGREE[F] No Harmony
- (b) AGREE[F] >> ID[F] Harmony

(7) Morpheme-Specific ID[F] creates a dichotomy: some morphemes are harmonic- other are not

- (a) ID[F]_{STRONG} High-ranked, Impervious to harmony
- (b) ID[F]_{WEAK} Low-ranked, Undergoes harmony
- (c) Morphemes are tagged as either strong (non-undergoer) or weak (undergoer)

(8) Ranking for languages with undergoers and non-undergoers

- (a) ID[F]_{STRONG} >> AGREE[F] >> ID[F]_{WEAK}

(9) Example: Luganda Pre-Prefixes

Weak morphemes underlined

- [o-mu-kazi] ‘woman’
- [e-ki-tabo] ‘book’

(10) Luganda Pre-Prefix

/e-mu-kazi/ 'woman'	ID [HIGH]	ID [ROUND] STRONG	ID [BACK] STRONG	AGREE [ROUND]	AGREE [BACK]	ID [ROUND] WEAK	ID [BACK] WEAK
a. [e-mu-kazi]					*!		
b. [o-mu-kazi]						*	*
c. [e-mi-kazi]		*!	*				
d. [i-mi-kazi]		*!	*				
e. [u-mu-kazi]	*!					*	*

2.3. Morphological Harmony Cannot be Accounted for in This

- Trigger as WEAK or STRONG always predicts incorrect result
- cannot treat uninflected morpheme as WEAK because this would induce vowel harmony across this lexical item, where harmony does not a regular phonological process (e.g. [fæfænəkì] 'he caresses')

(11) Treating the harmony trigger as WEAK

- strength of uninflected morpheme does not allow for weak trigger to be realized

(12) Kanembu Incompletive as a Weak Morpheme:

/fæfænəkì/ STRONG 'he caresses' INCOM-WEAK [+ATR]	ID[ATR] STRONG	AGREE [ATR]	ID[ATR] WEAK-INCOM
a. [fæfænəkì]			
b. [fāfanəkì]	*!*	*	*
c. [fæfænəkì]	*!*		

(13) Treating the harmony trigger as STRONG

- rank ID to STRONG trigger over uninflected morpheme
- causes morpheme to be realized on only one vowel: no harmony

(14) Kanembu Incompletive as a Strong Morpheme:

/gónəkì/ STRONG 'I took' [+ATR] STRONG-INCOM	ID[ATR] STRONG- INCOM	ID[ATR] STRONG	AGREE[ATR]
a. [gónəkì]	*!		
b. [gónəkì]		*	*
c. [gónəkì]		**!*	
d. [gónəkì]		*	*

2.4. How to Account for Morphological Harmony: ANCHOR

- (15) What is needed for morphological harmony to occur:
- (a) High-ranked faithfulness to the feature of the morpheme triggering harmony
 - (b) Correspondence between this feature and all vowels in the lexical item
- (16) Achieved via correspondence constraints ANCHOR and O-CONTIGUITY (McCarthy & Prince 1995):
- (a) L, ANCHOR- MORPH [α F]: The [F] feature of MORPH must be in correspondence with the leftmost vowel of the lexical domain (which therefore must be [α F])
 - (b) R-ANCHOR- MORPH [α F]: The [F] feature of MORPH must be in correspondence with the rightmost vowel of the lexical domain (which therefore must be [α F])
 - (c) O-CONTIGUITY-MORPH-[α F]: The output vowels in correspondence with a MORPH [F] feature must form a string of contiguous vowels
 - (d) L,R-ANCHOR is violated once for every vowel in which the feature of the morpheme is not in correspondence with the vowels in the output form (ANCHOR will always be violated if no vowels bear the harmonic feature (i.e. the morpheme is not realized))

(17) Kanembu Incompletives:

/gɔnəkɪ/ INCOM [+ATR]	L- ANCHOR- [+ATR] INCOM	R- ANCHOR- [+ATR] INCOM	O- CONTIGUITY- [+ATR] INCOM	ID[ATR]
a. [gɔnəkɪ]	*!***	*!***		
b. [gɔnɔki] [+ATR]	*!	*		*
c. [gɔnəkɪ] [+ATR]			*!	**
d. ☞ [gɔnɔki] [+ATR]				***

3. Predictions made by the faithfulness-based analysis of morphological harmony:

3.1. Harmony/Inventory Theorem May be Violated

(18) Harmony/Inventory Theorem (Kiparsky 1973, Smolensky 2005)

In any harmony language, all non-participating vowels behave as such because participation in harmony would create a vowel disallowed on the surface.

- opaque vowels in Turkish
 - o high-ranked *[-HIGH, -ROUND] blocks participation of [-HIGH] vowels in round harmony
 - *[-HIGH, -ROUND] >> AGREE[ROUND] >> ID[ROUND]

(19) Why the Prediction?

- Morphological harmony controlled by faithfulness to a morpheme, not to general featural markedness
- This allows for ID[F] to outrank both the harmony-inducing constraint *and* the featural markedness constraint, allowing for both non-participation and occurrence in the inventory
 - ID[F] >> ANCHOR[F], *[F]

(20) Counterexample to the Harmony/Inventory Theorem: Korean Ideophones

(a)	DARK	LIGHT	GLOSS
	[hinɪl]	[hanɪl]	‘in an airy manner’
	[umullək]	[omullak]	‘chewing’

(21) LIGHT Korean Ideophones:

/k [?] ubudʒəŋ/ ‘bented’ [-HIGH] ₁ [-ATR] ₂	L- ANCHOR [HIGH]	ID [HIGH]	R- ANCHOR [HIGH]	O- CONTIG [HIGH]	L- ANCHOR [ATR]	R- ANCHOR [ATR]	O- CONTIG [ATR]	ID [ATR]
a. [k [?] ubudʒəŋ]	*!				***	***		
b. [k [?] o ₁ bo ₁ dʒa ₁₂ ŋ]		**!			**			*
c. [k [?] o ₁ budʒəŋ]		*		*	***!	***		
d. ☞ [k [?] o ₁ budʒa ₁₂ ŋ]		*		*	**			*

3.2. Prediction 2: Allophones Created by the Presence of a Morpheme

(22) A faithfulness-based account of harmony allows for ANCHOR[F] to outrank *[F] >> ID[F], allowing for the vowel to be present *only* when ANCHOR is triggered.

(23) Pasiego Montañes Spanish [-ATR] vowels are banned in the language- except in the presence of the harmony-inducing morphemes

(24) [ATR] harmony in Pasiego dialect of Montañes Spanish (McCarthy 1984)

[+ATR]	[-ATR]	'gloss'	Semantic Distinction
[soldæus]	[soldáus]	'soldier'	plural/singular
[pustíjæ]	[pustíja]	'scab'	sing/dim.

(25) Pasiego [ATR] harmony:

/ermænu/ Count-Singular (CS) [-ATR] 'brother'	*[ɛ]	L- ANCHOR [ATR] CS	R- ANCHOR [ATR] CS	O- CONTIG [ATR] CS	*[-ATR]	ID [ATR]
a. ☞ [ermanu]		*			**	**
b. [ermanu]	*!				***	***
c. [ermænu]		**!*	***			

3.3. Prediction 3: The Interaction of Morphological and Phonological Harmony

If morphological and phonological harmony are separate, we would expect them to interact in some way. This is found in Datooga nominals.

(26) Datooga has regular dominant-recessive ([+ATR] is dominant) vowel harmony (Rottland 1983)

Actual	Habitual	Gloss	Root
[geɲi:ci]	[geɲi:dayi]	'we fill'	[ɲi:d]
[gebisji]	[gebisayi]	'we uncover'	[bis]

(27) But nouns in Datooga must be [+ATR], except for a class of morphemes which requires [-ATR] harmony:

[be:ɟd ^a]	'elephant'	[be:ɟdaŋ ^u]	'your elephant'
[gæ:tind ^a]	'hand'	[ga:tinda:ŋ ^u]	'your hand'

(28) Because [+ATR] is dominant, the requirement for possessives to be [-ATR] can only be accounted for using morphological harmony, whose correspondence constraints must be ranked above phonological harmony constraints

(29) Datooga Nominals

/qwe.ndo:/ [-ATR] -ni DEM 'this firewood'	*[HIGH, -ATR]	R- ANCHOR DEM [ATR]	L- ANCHOR DEM [ATR]	O- CONT DEM [ATR]	*[-ATR] & ID [ATR]	AGREE [ATR]	ID [ATR]
a. [e: o: i]		***!	***				
b. ☞ [ɛ: ɔ: i]		*			**	*	**
c. [ɛ: ɔ: ɪ]	*!				***		***

3.4. Prediction 4: Specificity of feature values

Because the feature associated with the morpheme bears a specific value (e.g. [+/-ATR]), this predicts that no morpheme should trigger *general* harmony. For example, a morpheme might be realized by requiring all vowels to agree in some feature, regardless of the value of that feature. To my knowledge, no such morpheme exists in any language.

4. Conclusions

- Morphological and phonological harmony are both theoretically and empirically distinguishable
 - o I have shown that the analysis for exceptional phonological harmony does not carry over to morphological harmony
 - o The predictions made by the analysis of morphological harmony apply *only* to morphological harmony- thus it would not be desirable to incorporate phonological harmony into the analysis of morphological harmony.
- Morphological influences on vowel harmony (and phonology as a whole) are varied, and deep. More research is needed on the exact ways in which morphology affects other aspects of phonology (specifically other long-distance phenomena, such as tone)

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