

Notes on bidirectional syncretism

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(1) *Bidirectional syncretism in Bonan noun declension:*

		[-pronoun]	[+pronoun]
		Noun	Pronoun
		'foliage'	'he'
[-a, -b, -c]	NOM	labčon-Ø	ndžan-Ø
[+a, -b, -c]	GEN	labčon-ne	ndžan-ne
[+a, +b, -c]	ACC	labčon-ne	ndžan-de
[-a, +b, -c]	DAT	labčon-de	ndžan-de
[-a, -b, +c]	ABL	labčon-se	ndžan-se
[+a, -b, +c]	INS	labčon-gale	ndžan-gale

- Baerman (2004) notes that the distribution of *-de* and *-ne* in accusative contexts is a case of convergent bidirectional syncretism.

(2) *Convergent bidirectional syncretism*

There is a feature value *x* that takes the form associated with feature value *y* in some contexts, and in other contexts takes the form associated with feature value *z*.

- Here the feature value ACC takes the form associated with feature value GEN ([+a]) in [-pronoun] contexts, and takes the form associated with DAT ([+b]) in [+pronoun] contexts.
- This can be captured by two rules of referral (restating the observation above) or by underspecification and two ordering statements:

- (3) a. Acc and Gen form a natural class = [+a]
b. Acc and Dat form a natural class = [+b]

- (4) a. In [-pronoun] contexts: [+a] > [+b]
b. In [+pronoun] contexts: [+b] > [+a]

- The exponents for accusative come from underspecified markers with a partially overlapping distribution:

- (5) a. [+a] ↔ *-ne*
b. [+b] ↔ *-de*

- Harley (2008) offers a different implementation using a single ordering statement and impoverishment:

- (6) a. [+a] → Ø / [+b, -c, __], [+pronoun]
b. Ordering statement: [+a] > [+b]
(‘Exponents realizing [+a] are ordered before exponents realizing [+b]’)

- The impoverishment rule in (6a) applies to remove the [+a] feature from ACC PRONOUN cell (bleeding insertion of *-ne*).
- Both exponents still equally fit the ACC PRONOUN cell, though.
- The ordering statement in (6b) ensures that *-ne* is inserted there, despite the fact the *-de* marker also fits the context [+a, +b, -c, -pron].

Note

It might be a conceptual worry that we have hierarchies over hypothesized sub-features like [+a], which might correspond to something like [+structural] or [+governed] in another system, rather than over broader categories like Number, Gender, Person (and Case) like Noyer originally proposed.

- If we are willing to accept this extrinsic ordering between sub-features we can capture bidirectional syncretism as a ‘symmetrical syncretism’.
- Baerman (2004) claims that the following kind of pattern resists this kind of approach though:

(7) *Bidirectional syncretism in the Latin second declension:*

		[+A, -B]	[+A, +B]	[-A, +B]
		Neuter _a	Masculine	Neuter _b
		'war'	'slave'	'crowd'
[+a, -b, -c]	NOM SG	bell-um	serv-us	vulg-us
[+a, +b, -c]	ACC SG	bell-um	serv-um	vulg-us
[+a, -b, +c]	GEN SG	bell-ī	servi-ī	vulg-ī
[-a, +b, +c]	DAT SG	bell-ō	serv-ō	vulg-ō
[-a, -b, +c]	ABL SG	bellō	serv-ō	vulg-ō

(8) *Divergent bidirectional syncretism*

There is a feature value x that takes the form associated with feature value y in some contexts, while in other contexts y takes the form associated with x .

- Here, the feature value NOM SG takes the form associated with feature value ACC SG in Neuter_a contexts, while in Neuter_b contexts, the feature value ACC SG takes the form associated with feature value NOM SG
- Baerman's (2004) claim is that this cannot be accounted for in terms of natural classes of decomposed features (i.e. symmetrical syncretism):
- Unlike with the Russian example, the distribution of the two markers *-um* and *-us* is perfectly overlapping.

- (9) a. $-us \leftrightarrow [+a,]$
 b. $-um \leftrightarrow [+a]$

- If we try to restrict the markers distribution to a particular column, it will no longer fit the:

- (10) a. $-us \leftrightarrow [+a, \text{Neuter}_b]$
 b. $-um \leftrightarrow [+a, \text{Neuter}_a]$

- But what about if we decompose the contexts for bidirectional syncretism (i.e. the columns)?

- (11) a. $-us \leftrightarrow [+a, +A]$
 b. $-um \leftrightarrow [+a, +B]$

- However, couldn't this be resolved by simply deleting [+B] in the nominative and giving *-um* a [+A] distribution?
- This is the first clue that convergent and divergent syncretism are just two sides of the same coin.
- If we rotate the paradigm (focussing just on the relevant part), we see that this can also be viewed as a convergent directional syncretism:

(12) *Latin second declension (revisited):*

		[+a, -b, -c]	[+a, +b, -c]	
		ACC SG	NOM SG	...
[+A, -B]	Neuter _a	bell-um	bell-um	
[+A, +B]	Masculine	bell-um	bell-us	
[-A, +B]	Neuter _b	bell-us	bell-us	

- Recall the definition of convergent BDS:

(13) *Convergent bidirectional syncretism*

There is a feature value x that takes the form associated with feature value y in some contexts, in other contexts takes the form associated with feature value z .

- There is a feature value ACC SG that takes the form associated with feature value Neuter_a ([+A]) in some contexts, and in other contexts takes the form associated with feature value Neuter_b ([+B])
- On this view, *-um* is actually a Neuter_a marker, rather than an accusative marker, that spreads to the masculine in accusative sg. contexts. Equally, *-us* is a Neuter_a marker (not nominative) that spreads to the masculine in nominative sg. contexts.
- This can be achieved with exactly the same kind of analysis Harley had for Bonan:

- (14) a. $-us \leftrightarrow [+a, +A]$
 b. $-um \leftrightarrow [+a, +B]$

- (15) a. $[+A] \rightarrow \emptyset / [+B, _], [+a, +b, -c]$
 b. Ordering statement: $[+A] > [+B]$
 ('Exponents realizing [+A] are ordered before exponents realizing [+B])

Final thought

This might suggest that the distinction between the two types of bidirectional syncretism is spurious. A paradigm with divergent bidirectional syncretism can be viewed as convergent bidirectional syncretism as long we can decompose the 'context'. However, we might be concerned about stipulations like (15b): this implies that there is some (universally motivated) markedness hierarchy for sub-features defining inflection classes. Perhaps this goes too far?

References

- Baerman, Matthew (2004). Directionality and (Un)Natural Classes in Syncretism. *Language* 80(4). 807–827.
- Harley, Heidi (2008). When is a Syncretism more than a Syncretism? Impoverishment, Metasyntactic, and Underspecification. In D. Harbour, D. Adger and S. Béjar (eds). *Phi Theory: Phi-Features across Modules and Interfaces*. Oxford University Press: Oxford. 251–294.