
A PLURAL-TO-SINGULAR REANALYSIS CYCLE

JONAH BATES
UNIVERSITY OF KANSAS

ANDREW MCKENZIE
UNIVERSITY OF KANSAS

ABSTRACT The reanalysis of plural first and second person pronouns to singular reference constitutes a diachronic cycle involving both semantic and pragmatic processes. First comes semantic reanalysis through feature drop. Speakers change the underlying semantic content from plural to number-neutral reference by dropping plural presuppositions (carried by plural features) that they cease to accommodate. The number-neutral form then pushes out other forms, destroying the paradigmatic number contrast there. In many languages, a newly innovated plural then emerges, and pragmatic competition triggers the restriction of that previously number-neutral pronoun to singular contexts. The generative basis for this cycle appears to be a synchronic relationship of asymmetric entailment between plurals and singulars. The semantic content of number ϕ -features, where plural pronouns are marked for sums while singulars are unmarked for number, means that the restriction of the unmarked member of the pair to singular contexts of use is due to pragmatic competition in plural contexts with the more presupposition-rich plural. These facts underlie the directionality of both the reanalysis and restriction stages of the cycle.

1 REANALYSIS AT THE SURFACE

Looking at the history of numerous language families, we infer a particular cycle of reanalysis occurring in their pronominal systems, whether in agreement forms or free pronouns. Plural forms become singular, while a new plural takes their place. For instance, in (1), the proto-Arabic **ni-* ‘1st plural’ denotes ‘1st singular’ in modern Tunisian Arabic, while the new plural is *ni-...-u*. A similar change occurred in Gondi.

- (1) Tunisian Arabic (Semitic) (Isaksson 1998)
- | | | | |
|-------------|-------|-----------------|-------|
| <i>*ʔa-</i> | [1SG] | <i>*ni-</i> | [1PL] |
| <i>ni-</i> | [1SG] | <i>ni-...-u</i> | [1PL] |

(2) Gondi (Dravidian) (Krishnamurti 2003)

**ya:n* [1SG] **ñam* [1PL]
ñam [1SG] *ñam-oḥ* [1PL]

A common assumption is that cycles in changes of meaning involve an initial stage followed by extension, leading to a ‘gap’ stage, and a final stage after innovation to fill the gap. The gap approach is proposed explicitly in Helmbrecht (2015). Applying this approach to the plural-to-singular cycle, extension would involve the initial plural shifting to singular meaning, leaving a gap in the paradigm, which speakers fill by the innovation of a new plural. This hypothetical cycle is mapped in Figure 1.

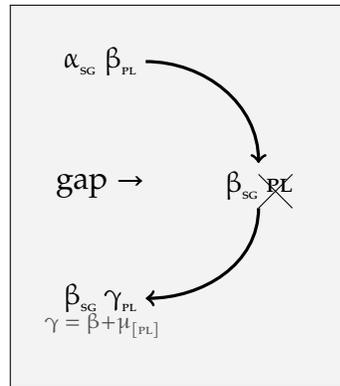


Figure 1 A hypothesized cycle of reanalysis

However, while this pattern’s initial and final stages are commonly attested, we never actually observe the intermediate stage. In fact, one wonders what such a ‘gapped’ paradigm would look like, with marking for singular and no overt expression of plural at all. Instead, we observe another cross-linguistic pattern. First, the plural form β_{PL} generalizes to cover singular SG and plural PL . This is the case for most dialects of English, for instance, and for Yao.

(3) Yao (P21, Bantu) (Babaev 2008)

PB: **u-* [2SG] **mu-* [2PL]
 Mod: *mu-* [2SG] *mu-* [2PL]

(4) English (Germanic) [most dialects]

EMod: *thou* [2SG] *you* [2PL]
 Mod: *you* [2SG] *you* [2PL]

Many varieties stopped here, but others went further, and created a plural form out of existing pluralizing morphology, like English *y’all* or *yous* (Parker

2006). However, these were not innovated to fill a gap. Instead, in many varieties the new plural co-exists with the generalized form, which is perfectly capable of expressing both singular and plural meaning. Finally, in some varieties where the new plural becomes highly conventionalized, the generalized marker shifts to only singular reference (Hyman 2006), as seen in (5) and (6).

- (5) English (Germanic) [some dialects]
 EMod: *thou* [2SG] *you* [2PL]
 <19c: *you* [2SG] *you* [2PL]
 Mod: *you* [2SG] *you-s* [2PL]
- (6) Mongol (Mongolic) (Janhunen 2003a,b)
 Proto: **ci* [2SG] **ta* [2PL]
 Mid: *ta* [2SG] *ta* [2PL]
 Mod: *ta* [2SG] *ta-nar* [2PL]

Consequently, we conclude that there is no ‘gap’ stage and that this general stage *is* the intermediate stage of the cycle. We thus propose a cycle where the middle stage is one of generalization, as schematized in Figure 2.

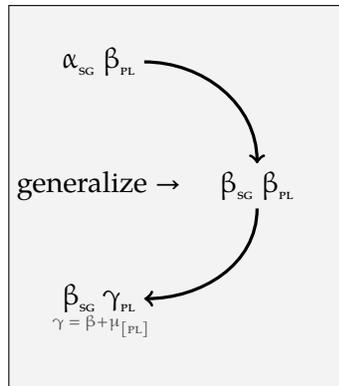


Figure 2 Revised cycle of reanalysis

Assuming that pronouns are built out of features (Section 2), we further propose that the cycle involves changes in feature specification. More precisely, we find that the process actually involves five stages once we focus on the features that build the pronouns. The first stage is driven by semantic reanalysis, which involves speakers dropping a feature and its presupposition. This leads to a general form alongside the singular and plural. Through usage, the general form pushes both those forms out of use and remains alone. This

is the stage that Yao and Standard English are at. In some languages, a new plural emerges, and by pragmatic competition, the old general form gets reinterpreted as singular. This has occurred in Tunisian Arabic and Gondi.

We also discuss how the reanalysis process works in detail with local singular and plural forms, how the pragmatic restriction takes effect, and why the semantic shifts only go from stronger meanings to weaker ones that they entail. The process can also work with other ϕ -features, including more complex number systems, though for space we leave that extension to future work. In this paper we also will not compare this cycle to cycles of grammaticalization (e.g. van Gelderen 2011), since those involve a change in syntactic category, rather than simply in semantic meaning. To begin the discussion, we will lay out our assumptions about how interpretable features are interpreted.

2 PRONOUNS AND FEATURES

Pronouns are built from ϕ -features $[F]$, where the denotation of $[F]$, or $\llbracket [F] \rrbracket$, is a partial identity function (Heim & Kratzer 1998). That is, a pronoun's feature imposes a presupposition on the entity the pronoun denotes (7).¹

- (7) Local person features, given utterance u
- a. $\llbracket [1] \rrbracket^u = \lambda x: \mathbf{spkr}(u) \leq x. x: \langle e, e \rangle$
 - b. $\llbracket [2] \rrbracket^u = \lambda x: \mathbf{addr}(u) \leq x. x: \langle e, e \rangle$

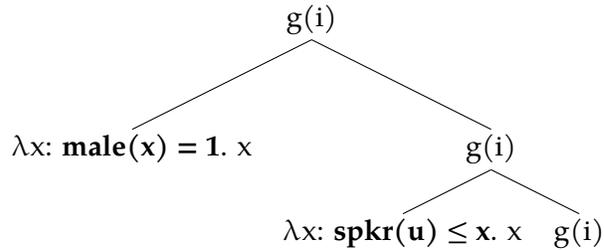
The presupposition takes effect by putting a condition on composition. In (8), the pronoun $g(i)$ is 1st person masculine.² The 1st person feature combines with the pronoun in such a way that it returns the pronoun only if $g(i)$ includes the speaker of the utterance u . If not, the composition fails and the pronoun fails to refer at all. Likewise for the masculine feature and its condition of being male.

¹ Some accounts propose that some features denote assertive content rather than presuppositions (Sudo 2012, Kratzer 2009). If these are correct, we would not see a significant difference in this analysis. It would require changing the exact processes, but any corresponding ones would work in much the same way, and not greatly affect the observed cycles.

² A reviewer points out that gender is rarely marked in the 1st person. That generalization holds, but this phenomenon does occur, for instance, in the Ndu language Ngala of New Guinea (Laycock 1965: 133).

A plural-to-singular reanalysis cycle

$$(8) \quad \llbracket g(i)_{[1.MASC]} \rrbracket^{g,u} =$$



Our focus in this paper is on number features, whose feature composition has engendered no small controversy. The consensus holds that either singular or plural is denoted by a feature, but not both. The dispute centers on which of the two it is. [Krifka \(1989\)](#) and [Sauerland \(2003\)](#) have argued for a meaningful singular and empty plural (9) on the grounds that plurals can sometimes be used in contexts where only one object is at issue. The [SG] imposes the presupposition that the entity is atomic, while the plural imposes nothing.

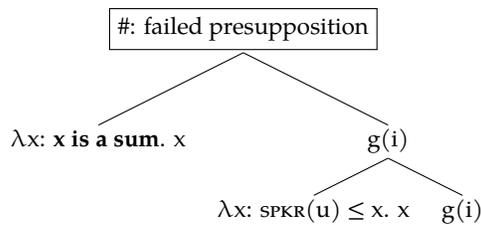
- (9) a. $\llbracket [SG] \rrbracket = \lambda x: x \text{ is an atom. } x$
 b. $\llbracket [PL] \rrbracket = \lambda x. x$

However, [Farkas & de Swart \(2010\)](#) argue the opposite: The plural imposes the presupposition that the entity is a sum of other entities, and the singular imposes nothing (10). This, they point out, fits the empirical facts better, and also fits [Horn's \(2001\)](#) proposed correspondence that semantically marked forms should also be morphologically marked.

- (10) a. $\llbracket [SG] \rrbracket = \lambda x: x$
 b. $\llbracket [PL] \rrbracket = \lambda x: x \text{ is a sum. } x$

One consequence of the proposal in (10) is that the interpretation of number in pronouns depends on the pragmatics. Singular pronouns do not impose a presupposition, but are only licensed in contexts where the singular is most applicable. In a context where a person is giving a talk at a conference by oneself, it is felicitous of that person to say $I_i \text{ am giving the talk}$ but not $We_i \text{ are giving the talk}$. The plural (11b) would impose a false presupposition that the person is in a sum of other individuals, leading to a failure to compose (11c).

- (11) a. $we \leftrightarrow [1],[PL]$
 b. $\llbracket we_i \rrbracket^{g,u} =$



- c. If $g(i)$ denotes an atom, $g(i)$ cannot be composed with $\llbracket [PL] \rrbracket$

On the other hand, in a context where the plural is licensed the singular is still available. For instance, if you are giving a talk with a colleague, splitting time evenly, *We_i are giving the talk* is true. The subject is a sum that includes the speaker. However, *#I_i am giving the talk* is not false— the subject still includes the speaker. Instead, it is rejected due to a pragmatic constraint called Maximize Presupposition (12). The singular and plural here enter a pragmatic competition, and a principle of interpretation that decides between them. Since the plural form has two presuppositions to the singular’s one, the plural wins out (13).

(12) **Maximize Presupposition** (Heim 1989)

Given a choice of 2 alternative morpheme forms, choose the one with more presuppositions satisfied by the context.

- (13)
$$\begin{array}{l} we \quad \text{spkr} \leq x \quad x \text{ is a sum} \\ \gg \\ I \quad \text{spkr} \leq x \end{array}$$

In this section we laid out how features work, and how their interpretation is built from features. We also saw that plurals are ruled out of singular contexts for presupposition failure, while singulars are ruled out of plural contexts by pragmatic competition through the Maximize Presupposition constraint. Now we will apply these concepts to our reanalysis cycle from Figure 2.

3 FEATURE REANALYSIS

In Section 1, we broke down the plural-to-singular cycle into two shifts: A generalizing shift involving a plural marker changing to number-neutral (both singular and plural) reference, and a second shift in which the marker changes from number-neutral to only singular reference. In this section we will explain how each stage works, by adding stages to the process.

We begin with a conclusion: The [PL] feature imposes a presupposition while the [SG] does not, so it follows that only the first stage of this cycle involves any necessary change to the featural content of the pronoun.

Since plural pronouns are restricted from use in singular settings, what is the process by which a pronoun with plural features comes to be used as a singular? What drives this shift? For a plural form to be used in singular contexts, it must be reanalyzed by hearers as lacking the plural feature. Interestingly, this kind of change is exactly the structural semantic reanalysis that Eckardt (2011, 2012) describes, in which a phonological form remaps from one denotation to another. She proposes that reanalysis is driven by the refusal to accommodate failed presuppositions.

Assume that u [the utterance] in the old sense ϕ_{old} requires unbacked presuppositions. The speaker makes his utterance under the assumption that the interpreter will accommodate them. The interpreter may see this possibility but finds the required accommodations implausible. As an interpretive alternative, H [the hearer] hypothesizes a new message ϕ_{new} , leading to reanalysis. (Eckardt 2012: 2688)

To understand the loss of the old $\alpha_{[\text{sc}]}$, we have to first ascertain what triggers semantic reanalysis in person marking. Under what circumstances would the plural presupposition accompanying the use of a plural person marker become so unbacked that speakers would reanalyze their interpretation and drop it from the structure?

We begin our answer by laying out what is meant by accommodation. In any utterance context u , there is a common ground, a set of propositions known and accepted by the speech act participants. Presuppositions are reliable contributors to meaning when their proposition is already in the common ground. When it is not, a hearer must decide either to reject the presupposed proposition or to place it in the common ground, treating it as if it had been there all along.³

For number reanalysis, the process begins when a common ground disparity exists between the speaker and hearer. Oftentimes, a speaker felicitously uses plural first-person reference when the hearers are unable to verify the plurality of the reference. For example, if the speaker utters *We were at the ballgame* but is the only member of the group present for the utterance, then in such a case, the plural would require the hearers to accommodate the presupposition of the sum the speaker is a part of, in order to arrive at a truth value for the utterance. This is just one circumstance of many where this accommodation is necessary. For the same reasons, when the utterance is about the addressee—whether interrogative, declarative, or imperative, sometimes speech act participants are not aware of the number of the group the addressee is involved with. For instance, if a parent tells one child (with two siblings) “Y’all are coming with me today,” the hearer needs to accommodate the group.

Some speakers take advantage of this accommodation habit, and use the plural strategically for social reasons. For example, some languages use the plural to denote social positioning dynamic of higher versus lower vertical social distance, a process referred to as Plurification (Song & Heine 2016). Others uses involve putting the speaker in a separate group from the hearer

³ See von Stechow (2008) for a lucid discussion of the debates over details of this process.

(like the ‘royal *we*’) or in the same group (like the waiter who asks *What are we having tonight?*). Still other uses express an honorific or pejorative sense toward the referent (Siewierska 2004: 214–245). Crucially, as Song and Heine point out, when this process begins, the pronoun is still plural in reference. Each use like this involves the strategic manipulation of the plural presupposition, and no shift in features has occurred. The speaker is still trying to trigger a plural message, which the hearer either accommodates or rejects as implausible.

When hearers find the invitation to accommodate a plural presupposition implausible, they then have two options:

- i. Assume that the speaker is using the form uninterpretablely
- ii. Reanalyze the message as containing a homophonous but unfamiliar lexical item

If the hearer analyzes the use as infelicitous, then no reanalysis takes place and the grammars of both speech act participants remain the same. But if the hearer instead decides for the second option they must ascertain a meaning for the new item that is satisfied in the speech context. Where is the new meaning drawn from? With items from lexical categories, the new meaning is sourced relatively freely, by implicature, guessing, or anything else one might imagine (Eckardt 2011, 2012).⁴

With items from functional or grammatical categories, there is no choice; it depends on the feature geometry that builds these categories’ meaning. Deo (2015) makes this point when examining changes in verbal categories like tense, aspect, or negation. Citing common examples like the Jespersen cycle along with new evidence from aspectual changes such as [PROGRESSIVE] → [IMPERFECTIVE], Deo shows that the relationships between the sources and goals of these changes involve asymmetric entailment between members of privative Strong/Weak dyads as outlined in Horn & Abbott (2012). Deo (2009, 2015) demonstrates that the formal denotation of [PROGRESSIVE] is semantically stronger than the more general [IMPERFECTIVE], thereby entailing it, so they form a Strong/Weak (or S/W) dyad in the semantics.

This scale underpins the reanalysis process with functional morphemes: They all involve privative features dropping, and forms that shift from stronger to weaker meanings. Since the S entails the W, the new form is still true for

⁴ We do not know how many times this process must occur before it ‘sticks’, much less spreads, but we see no reason to assume it behaves differently from any other (functional) linguistic items in this respect (Eckardt 2012: 2688).

all the forms the old one covered, and the *W* form merely implicates that the *S* form is false.

Our present observations about [PL] to [SG] shifts fit this pattern very well given that $\llbracket [PL] \rrbracket$ entails $\llbracket [SG] \rrbracket$, and is therefore the stronger of the two. Thus, speakers must rely on pragmatics to negotiate when [1.PL] should be used over [1.SG], since they are both felicitous when the speaker and others participated in an event or state with the same thematic role. This negotiation results in the standard implicature that the use of [1.SG] (Weak general form) implies that the [1.PL] (Strong specific form) could not have been used.

However, some speakers use a strategy in which they invite accommodation of plural presupposition when only the person feature be verified in context. In such a case, a hearer (perhaps a naïve language learner) may not accommodate the number presupposition and will simply assign new meaning to the form that is entailed by the previous one. The reanalysis results in the assignment of the Weak semantics to a form previously associated with Strong. In this case, the singular meaning is attached to the plural form.

Crucially, the process leading to reanalysis produces a strong directional-ity because it is driven by the avoidance of unintepretability. Conversely, the use of the weak form in contexts in which the hearer would expect the strong form will only result in a pragmatic difficulty, because the use of [1.SG] only implicates that [1.PL] could not have been used. Thus, there is no need to drop the plural’s presupposition, and there is no presupposition on the singular to drop.

4 REMOVAL OF THE OLD SINGULAR

In other words, it is not that the morpheme ‘shifts’ to a new meaning. Instead a hearer, faced with accommodation of presuppositions (via ϕ -features) that they find unlikely ceases to accommodate unbacked presuppositions (Schwenter & Waltereit 2010). Instead, they posit a new lexeme with an identical form that lacks the offending presupposition, leaving the rest intact. This step is exemplified by English and Mongol in (14).

(14) a. Stage 1: Featural distinction

	$\alpha_{[2],[SG]}$	$\beta_{[2],[PL]}$
English	<i>thou</i> _{[2],[SG]}	<i>you</i> _{[2],[PL]}
Mongol	* <i>ci</i> _{[2],[SG]}	* <i>ta</i> _{[2],[PL]}

b. Stage 2: Semantic reanalysis (via feature drop)

	$\alpha_{[2],[SG]}$	$\beta_{[2]}$	$\beta_{[2],[PL]}$
English	<i>thou</i> _{[2],[SG]}	<i>you</i> _[2]	<i>you</i> _{[2],[PL]}
Mongol	* <i>ci</i> _{[2],[SG]}	*<i>ta</i> _[2]	* <i>ta</i> _{[2],[PL]}

c. Stage 3: Generalize

	$\alpha_{[2],[SG]}$	$\beta_{[2]}$	$\beta_{[2],[PL]}$
English	<i>thou</i> _{[2],[SG]}	<i>you</i> _[2]	<i>you</i> _{[2],[PL]}
Mongol	* <i>ci</i> _{[2],[SG]}	* <i>ta</i> _[2]	* <i>ta</i> _{[2],[PL]}

The end result is that reanalysis has created a homophony of plural (old) and general (new) forms. The presence of the general form leads to the disappearance of the old singular form. Once the reanalysis has taken place, the general/plural form is used not only in strictly plural contexts but also in those where number was ambiguous. This makes the form general and available for plural and singular use while the old singular is restricted. The general form is semantically equivalent to the old singular, and thus competes with it. Faced with this competition, learners will search for some way to disambiguate the two (Shin & Miller forthcoming). If they find no way, they will prefer the more frequent item and the less frequent will fall out of use. Earlier, we referred to this step of the cycle as the ‘generalize’ stage. The more detailed stages of the cycle are depicted in Figure 3, and this stage is where ‘bare β wins’.

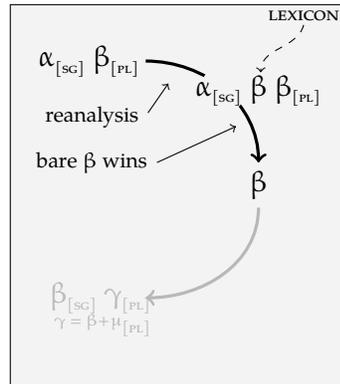


Figure 3 The general form emerges and pushes out the others

This stage is not inevitable. If language learners can identify some contextual difference between the old and new singulars, they may keep them separate. The social causes of semantic reanalysis from plural to general may sometimes provide just such contexts. As previously stated, evidence shows that speakers often used number for social reasons, either to honor or denigrate themselves or the hearer by association or disassociation with a group. It is clear that person marking is often not the only cue speakers use in honorific or pejorative contexts. In fact, a whole host of cues often accompany such uses

resulting in honorific registers. We posit that if learners associate these cues with newly reanalyzed plural, they may assume that the new general lexeme β is a lexeme for use in the formal or polite register only. In this case, the necessary competition only takes place in that register and the familiar register is left with the old dichotomy. This process is exemplified in (15) for French.

<i>(Middle) French</i>		formal/polite register		familiar register	
(15)	<i>original stage</i>	<i>tu</i> _{[2],[SG]}		<i>vous</i> _{[2],[PL]}	
	<i>reanalysis</i>	<i>tu</i> _{[2],[SG]}	<i>vous</i> _[2]	<i>vous</i> _{[2],[PL]}	
	<i>β wins</i>	<i>tu</i> _{[2],[SG]}	<i>vous</i> _[2]	<i>vous</i> _{[2],[PL]}	

Honorific and pejorative pronouns under this account involve different registers and not features within the pronouns themselves, at least in some languages. We ought to see independent changes occurring within that register as well, while avoiding other registers. This was the case in German. The second plural *ihr* became used for formal/polite second singular. After a convoluted sequence of changes, eventually the third plural form *Sie* replaced it as second singular in that register, in some grammatical cases (Hickey 2003). Importantly, the familiar uses of second singular *du* and plural *ihr* were unaffected the entire time.⁵

This register split upon reanalysis is common in [2PL]-to-[2SG] shifts in European languages, but not as common cross-linguistically. It should be seen as a disruption of the smooth procession of the cycle rather than a necessary stage in a putative [PL]-to-[HON.SG]-to-[SG] shift.

5 RENEWING THE NUMBER DISTINCTION

We began with a cycle whereby a plural becomes a singular, and a new plural replaces it. We have seen how the plural form becomes a general form, through semantic reanalysis/feature drop. We have also seen why plurals become singulars and not *vice versa*: An asymmetric entailment pattern between features allows for the feature with a stronger meaning to drop.

The general form does not itself denote singular, until the formation of a new plural form pushes it to do so. This process will also involve the semantics and pragmatics working in concert.

In some languages, a new form emerges consisting of the general form bearing a new morpheme and denoting the plural. The new morpheme is a plural form, often an affix, drawn from elsewhere in the grammar. Often it is simply the plural affix for regular nouns. Mongol and certain dialects of English exemplify this:

⁵ We thank an anonymous reviewer for bringing up this case.

- (16) Process: $\beta_{[2]} + \mu_{[PL]} = \beta - \mu_{[2],[PL]}$
 a. English: $you_{[2]} + -s_{[PL]} = yous_{[2],[PL]}$
 b. Mongol: $ta_{[2]} + -nar_{[PL]} = tanar_{[2],[PL]}$

Since β has no number feature, this new construction poses no risk of a feature conflict.

The language now has two related forms: Bare general $\beta_{[2]}$ and distinctly plural $\beta_{[2]} - \mu_{[PL]}$. Pragmatics leads speakers to distinguish between them, and they use β only for SG contexts. This restriction in turn leads to acquisition of β with a [SG] feature: $\beta_{[SG]}$. We call this stage ‘singularize’. The feature imposes no presupposition, so this stage also causes no conflict.⁶

- | | singular | plural |
|------|------------|--------------|
| (17) | <i>you</i> | <i>yous</i> |
| | <i>ta</i> | <i>tanar</i> |
| | [2],[SG] | [2],[PL] |
- (18) a. $\llbracket [2] \rrbracket^{S,U} = \lambda x: \text{ADDR}(u) \leq x. x$
 b. $\llbracket [2],[SG] \rrbracket^{S,U} = \lambda x: \text{ADDR}(u) \leq x. x$

6 A FIVE-STAGE PROCESS

We began with a three-stage process, for which only two parts are ever observed in any particular language. A plural replaces a singular, then is replaced by a new plural. Instead, we claim that each step is attested, but the middle step is a generalization. Moreover, there is no direct replacement at all. Instead, two steps involve adding new forms, and two steps involve dropping old ones. The result is a process that plays out over five stages in the grammar, modeled in Figure 4.

The reason we only see three stages at the surface is homophony. By looking underneath the surface at the features, we can ascertain each stage as it occurs, and derive each stage from ordinary processes of semantic and pragmatic interpretation. Figure 5 shows how the three surface stages correspond to the five featural stages for two languages that have gone through the cycle, which we saw in (1) and (2).⁷

⁶ A reviewer asks whether the singular feature should even emerge given a lack of meaningful difference. There may be a universal compulsion to fill paradigms that causes eventual insertion of a singular feature. And perhaps in some languages, the singular feature does impose a presupposition of atomicity (like Welsh, Mathieu 2014); in such languages, the cycle we propose may be blocked by the lack of competition and the general form may not win out.
⁷ In the last two figures, the forms are subscripted without feature brackets, to signal that these are contexts of use, not syntactic features.

A plural-to-singular reanalysis cycle

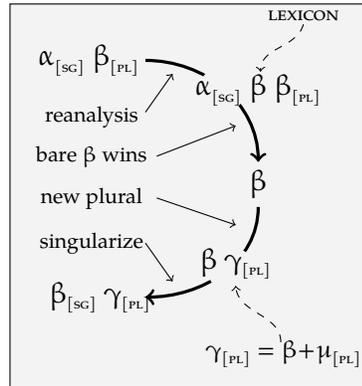


Figure 4 The plural-to-singular reanalysis cycle

	<p>LEXICON</p> <p>$\alpha_{[SG]} \beta_{[PL]}$</p> <p>reanalysis</p> <p>bare β wins</p> <p>new plural</p> <p>singularize</p> <p>$\beta_{[SG]} \gamma_{[PL]}$</p> <p>$\gamma_{[PL]} = \beta + \mu_{[PL]}$</p>	Tunisian Arabic (1)	Gondi (2)		
		$*\gamma_{a_{SG}}$	$*ni_{-PL}$	$*yan_{SG}$	$*\tilde{n}am_{PL}$
		$*ni_{-SG}$	$*ni_{-PL}$	$*\tilde{n}am_{SG}$	$*\tilde{n}am_{PL}$
		ni_{-SG}	$ni_{-...-u_{PL}}$	$\tilde{n}am_{SG}$	$\tilde{n}amo\text{t}_{PL}$

Figure 5 Applying the cycle in full

Figure 6 shows how languages in which the process stops at the generalizing stage, where the ‘bare β wins’, come to have a single general form, which we saw in (3) and (4). The process may or may not continue to the third surface stage, where a new plural is added. This has not occurred in Standard varieties of English, but has occurred in some others.

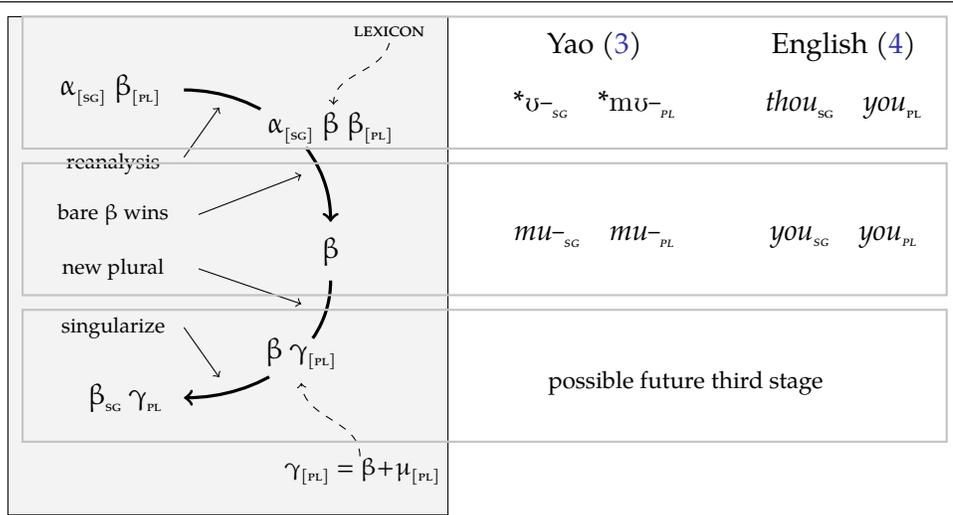


Figure 6 Applying the cycle halfway

7 CONCLUSION

In this paper we have proposed a five-stage cycle of pronominal reference shift, by which plurals become singulars. First, they generalize to become number-neutral. Through competition the old singular falls out of use, leaving only the general form. In some languages, a new plural is created with overt morphology. Through common pragmatic effects, the general form narrows to become a new singular.

We close by recalling that we do not distinguish between free pronouns and bound agreement/clitic forms, as we focus on the features themselves. Nevertheless, it is interesting that in many languages, the apparent feature geometries of free and bound forms do not match. When cycles like the proposed one do occur, they can occur with a free form or its agreement, while not necessarily applying to both. Here, we only address cases where it does apply to both, so exploring that question takes us well beyond the scope of this paper. Still, such exploration should now take place with a clearer understanding of what to look for.

REFERENCES

- Babaev, Kirill. 2008. Reconstructing Benue-Congo person marking I: Proto-Bantoid. *Journal of West African Languages* XXXV(1-2). 131–183.
- Deo, Ashwini. 2009. Unifying the imperfective and the progressive: Partitions as quantificational domains. *Linguistics and Philosophy* 32. 475–521.
- Deo, Ashwini. 2015. The semantic and pragmatic underpinnings of grammaticalization paths: The progressive to imperfective shift. *Semantics and Pragmatics* 8(14). 1–52.
- Eckardt, Regine. 2011. Semantic reanalysis and language change. *Language and Linguistics Compass* 5. 33–46.
- Eckardt, Regine. 2012. Grammaticalization and semantic reanalysis. In Claudia Maienborn, Klaus von Stechow & Paul Portner (eds.), *Semantics: An international handbook of natural language meaning*, vol. 3, 2675–2702. Berlin: Mouton de Gruyter.
- Farkas, Donka & Henriëtte de Swart. 2010. The semantics and pragmatics of plurals. *Semantics and Pragmatics* 3. 1–54.
- Heim, Irene. 1989. Artikel und Definitheit. In Arnim von Stechow & Dieter Wunderlich (eds.), *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung*, 487–535. Berlin: De Gruyter.
- Heim, Irene & Angelika Kratzer. 1998. *Semantics in generative grammar*. Malden, MA: Blackwell.
- Helmbrecht, Johannes. 2015. A typology of non-prototypical uses of personal pronouns: synchrony and diachrony. *Journal of Pragmatics* 176–189.
- Hickey, Raymond. 2003. The German address system: Binary and scalar at once. In Irma Taavitsainen & Andreas H. Jucker (eds.), *Diachronic perspectives on address term systems*, 401–425. Amsterdam: John Benjamins.
- Horn, Laurence & Barbara Abbott. 2012. <the,a>: (in)definiteness and implicature. In William Kabasenche, Michael O'Rourke & Matthew Slater (eds.), *Reference and referring*, 325–356. Cambridge, MA: MIT Press.
- Horn, Laurence R. 2001. *A natural history of negation*. Stanford, CA: CSLI Publications.
- Hyman, Eric. 2006. The all of you-all. *American Speech* 81(3). 325–331.
- Isaksson, Bo. 1998. Comparative survey of some central morphological traits in the Modern Arabic dialects. Unpublished manuscript.
- Janhunen, Juna. 2003a. Proto-Mongolic. In Juha Janhunen (ed.), *The Mongolic languages*, 1–29. London: Routledge.
- Janhunen, Juna. 2003b. Written Mongol. In Juna Janhunen (ed.), *The Mongolic languages*, 30–56. London: Routledge.
- Kratzer, Angelika. 2009. Making a pronoun: Fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40(2). 187–237.

- Krifka, Manfred. 1989. Nominal reference, temporal constitution and quantification in event semantics. In Renate Bartsch, Johan van Benthem & Peter van Emde Boas (eds.), *Semantics and contextual expression*, Dordrecht: Foris Publications.
- Krishnamurti, Bhadriraju. 2003. *The Dravidian languages*. Cambridge Univ. Press.
- Laycock, D.C. 1965. *The Ndu language family*. Canberra, Australia: Australian National University.
- Mathieu, Éric. 2014. Many a plural. In Ana Aguilar Guevara, Bert Le Bruyn & Joost Zwarts (eds.), *Weak referentiality*, Amsterdam: Amsterdam.
- Parker, David. 2006. Y'all: two early examples. *American Speech* 81(1). 110–112.
- Sauerland, Uli. 2003. Intermediate adjunction with A-movement. *Linguistic Inquiry* 34. 308–314.
- Schwenter, Scott A. & Richard Waltereit. 2010. Presupposition accommodation and language change. In Kristin Davidse, Lieven Vandelanotte & Hubert Cuyckens (eds.), *Subjectification, intersubjectification, and grammaticalization*, 75–102. Amsterdam: Mouton de Gruyter.
- Shin, Naomi & Karen Miller. Forthcoming. Children's acquisition of morphosyntactic variation. *Language Learning and Development* to appear.
- Siewierska, Anna. 2004. *Person*. New York: Cambridge Univ. Press.
- Song, Kyung-An & Bernd Heine. 2016. On the role of indirect personal reference in the development of personal pronouns. *The Linguistics Association of Korea Journal* 24(1). 1–20.
- Sudo, Yasutada. 2012. *On the semantics of phi features on pronouns*. Cambridge, MA: Massachusetts Institute of Technology dissertation.
- van Gelderen, Elly. 2011. *The linguistic cycle: Language change and the language faculty*. New York, NY: Oxford University Press.
- von Stechow, Kai. 2008. What is presupposition accommodation, again? *Philosophical Perspectives* 22. 137–170.

Jonah Bates
 Department of Linguistics
 University of Kansas
jonah_bates@ku.edu
www.jonahdavidbates.com

Andrew McKenzie
 Department of Linguistics
 University of Kansas
andrew.mckenzie@ku.edu
[people.ku.edu/~\sim\\$a326m085](http://people.ku.edu/~\sim$a326m085)