On certain crosslinguistic variations: Universal rich base vs. Gricean reasoning

Thomas McFadden (ZAS) & Sandhya Sundaresan (Göttingen) & Hedde Zeijlstra (Göttingen)

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1 Background

1.1 Language universals & variation

A fundamental question in linguistics involves the tension between what is language-universal and what varies across languages:

> ☞ What is the inventory, organization and distribution of grammatical building blocks?
>
> ☞ I.e. what are they, and how are they ordered and distributed across languages?

As discussed in Wiltschko (2014):

- Universal ordering effects of categories, and parallels in the function and hierarchy of nominal vs. verbal categories support the idea that linguistic categories are universal.
- At the same time, mismatches between categorial inventories and distributions across languages, and the existence of language-specific categories challenge this idea.

We can identify two extreme positions here:

Universal Base Hypothesis (UBH): This is the idea (going back to Chomsky, 1965; Ross, 1970 a.o.) that "The deep structures of all languages are identical, up to the ordering of constituents immediately dominated by the same node" (Ross, 1970, 260).

No Base Hypothesis (NBH): This is the idea (Evans and Levison, 2009; Haspelmath, 2007 a.o.) that there are no universal building blocks or ordering effects: languages can vary in unsystematic and potentially infinite ways.

- Within the Minimalist Framework, the Strong Minimalist Thesis (SMT) provides a heuristic guideline for adjudicating the balance between these extremes.
- "The optimal situation would be that UG reduces to the simplest computational principles which operate in accord with conditions of computational efficiency. This conjecture is ... called the Strong Minimalist Thesis (SMT)" (Chomsky and Berwick, 2016, 94).
- This in turn entails that UG must involve an optimally economical universal base.

1.2 The two sides of the debate

☞ Given these considerations, we will identify two analytical poles to debate, going forward: Side A (Rich Universal Base or **RUB**) vs. Side B (Poor Universal Base or **PUB**).

- The building blocks of syntactic structure, i.e. the inventory and hierarchical ordering of grammatical features, are universal even at fine levels of detail.
- Any differences in surface forms across languages stem from language-specific spell-out rules.
- The building blocks of syntactic structure, i.e. the inventory and hierarchical ordering of grammatical features, are not necessarily universal, and can vary considerably across languages.
- Language universals should modelled via external factors (e.g. pertaining to language use, acquisition or efficient computation).

Note that our focus on grammatical features deliberately side-steps the separate discussion about how such features map onto structural projections (heads) and onto categories:

- The cartographic enterprise (Rizzi, 1997; Cinque, 1999, et seq.) in its strongest version assumes a one-to-one mapping between features and heads.
- It is a classic instantiation of **RUB**, advocating for a rich sequence of functional heads (*fseq*) whose inventory and hierarchy is universal across languages.
- But other accounts assume a universal hierarchy and inventory of grammatical features without having these map one-to-one onto functional heads (see e.g. the head-bundling approach in Pylkkänen, 2002, or head-splitting idea in Martinović, 2015).
- These would potentially also be compatible with the **RUB**.

1.3 *ABA patterns as a testing-ground

We will illustrate the tension between **RUB** and **PUB** by comparing two approaches to patterns of crosslinguistic syncretism:

- Per *ABA, two non-contiguous cells in a paradigm cannot bear the same morphological form (= A) to the exclusion of an intermediate cell which has a different form (= B).

- Patterns of syncretism for e.g. case and comparative/superlative adjectives have been shown to respect the *ABA gap crosslinguistically (Caha, 2009; Bobaljik, 2012).

1.3.1 *ABA as an argument for RUB

- *ABA patterns can be seen to build on the idea that morphological patterns must respect *containment hierarchies*.

- I.e. syncretisms must involve *contiguous* regions or *spans* of the functional spine: two non-contiguous functional spans cannot be syncretic to the exclusion of the intervening span.

- To the extent that *ABA patterns are crosslinguistically robust, they can provide support for the **RUB** view that grammatical features are universal wrt. inventory and hierarchy.

1.3.2 A PUB account of *ABA

- A **PUB**-minded explanation for *ABA patterns could be in terms of (neo-)Gricean reasoning involving Maximize Presupposition/Quantity Maxim, on the part of the language-learner.

- The idea here would be that whenever a stronger morphological form B stands in pragmatic competition with a weaker form A, A may not expone anything stronger than B.

- This yields *ABA: i.e. AAB and ABB patterns are licit (as indeed are AAA/BBB and ABC), but ABA is ruled out.

In this talk, we will thus explore the following contrast:

☞ Do systematic interpretive contrasts across languages derive from the employment of distinct amounts of structure from universal feature hierarchies?

☞ Or do they stem from differing semantic specifications on simplex formatives that feed into (Neo-Gricean) pragmatic reasoning?

- In the following slides, we will first showcase the analytic tension between **RUB** and **PUB** wrt. *ABA patterns for anaphors/pronouns (Middleton, 2020).
- We will then explore:

  (i) to what extent an intermediate conceptual position between **RUB** and **PUB** is viable and what this might concretely look like;
  (ii) possible ways to independently test **RUB** vs. **PUB** via empirical diagnostics, so that this doesn't regress into an idle argument over aesthetic preference.

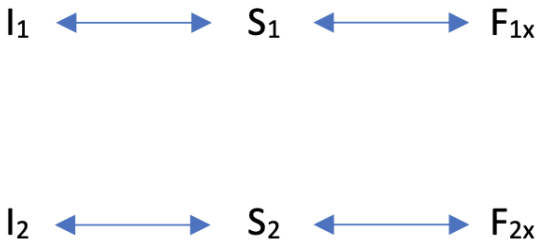
2 Side A: Rich Universal Base (RUB)

(1) **Side A (RUB):**
- The basic building blocks of syntactic structure — the inventory and hierarchical ordering of grammatical features — are universal even at fine levels of detail.
- Structure for which there is overt morpho-syntactic evidence in one language should be assumed to be present (covertly) in all languages.

2.1 Illustrating RUB with a model

Let's unpack what this means for a typical analytic scenario where we compare patterns in two different languages:

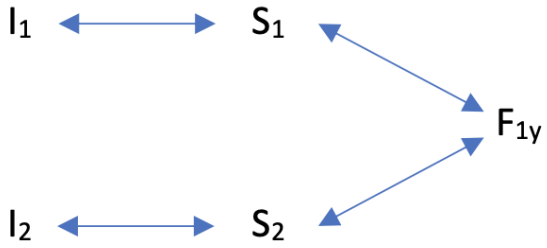
- Language x shows evidence that a particular interpretive contrast is derived from a structural contrast.
- I.e. interpretations I_1 and I_2 correspond to forms F_{1_x} and F_{2_x}, respectively, where $I_1 \neq I_2$ and $F_{1_x} \neq F_{2_x}$.
- This suggests that there are distinct structures S_1 and S_2 which mediate the interpretive and formal contrasts:



In contrast, language y provides no morpho-syntactic evidence for such a structural contrast.

- I.e. there is a single form F_{1_y} which is associated with both interpretations I_1 and I_2.

☞ **RUB** says that (ceteris paribus) we should nonetheless assume a structural contrast between S_1 and S_2, mediating between the two interpretations and the single form:



2.2 The argument from *ABA in case

One important class of evidence for **RUB** comes from *ABA patterns.

> "Morphological paradigms can be ordered so as to observe the *ABA restriction, i.e. such that only contiguous cells in a paradigm are syncretic. Syncretisms thus reveal a hierarchy in paradigms, which is in turn accounted for in terms of a hierarchy of underlying features. Consequently, syncretisms can be used as a tool for the diagnosis of feature structures." (Caha and vanden Wyngaerd, 2017)

To see how this works, let's consider one of the foundational examples of this argumentation, from Caha (2009)'s examination of case systems cross-linguistically.

- Building on an idea from Blake (2001) and a large empirical study, Caha argues that there is a universal ordering of case categories that looks something like this:

(2) **Simplified Blake/Caha hierarchy** Nominative < Accusative < Genitive < Dative < Instrumental < Comitative

This hierarchy is motivated by (at least) two sets of facts cross-linguistically:

1. If a language has a given case, it will also have all of the cases to the left in (2). E.g. Old French N – A, Classical Arabic N – A – G, Modern German N – A – G – D, Old English N – A – G – D – I etc.

2. Within a single language, syncretisms overwhelmingly involve contiguous regions of the hierarchy. Consider Modern Greek:

	'fighters'	**'fighter'**	**'alpha'**	**[not attested]**
Nom	maxités	maxitís	alfa	A
Acc	maxités	maxití	alfa	B
Gen	maxitón	maxití	alfa	A

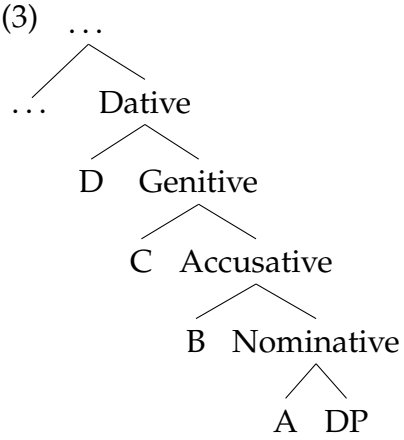
Here's how Caha explains the descriptive hierarchy in (2):

☞ Cases are articulated structures, each containing the next one down as in (3).

☞ The underlying feature structures are universal.

☞ Languages differ in how they spell them out (and, relatedly, how they move things around).

(3)



With suitable assumptions about morphosyntax, this can be used to derive the two sets of cross-linguistic facts. For inventories:

- 'Having a case' means realizing the relevant structure via affixes or other morphology on (elements of) the noun (phrase) rather than as adpositions.
- Whatever operation turns heads into affixes: if it applies in a language to the structure defining, say, Dat, it will also apply to the smaller structures defining Gen and Acc.

For syncretism:

- The fact that the cases are in strict containment relationships with each other sets up structural implications connecting them as is implied by the hierarchy.
- The logic of underspecification and the Elsewhere Principle operating on these implicational structures will make it possible to get ABC, AAB, ABB and AAA patterns, but not ABA (aside from accidental homophony).
- The details depend on whether you assume Minimal Superset (e.g. Nanosyntax) or Maximal Subset (e.g. DM), but the broad results are the same.

(For concreteness I'll use Maximal Subset, though Caha uses Minimal Superset.)

Take the following VIs, with relevant underspecification:

a. [A] ⇔ X
b. [B [A]] ⇔ Y
c. [E [D [C [B [A]]]]] ⇔ W

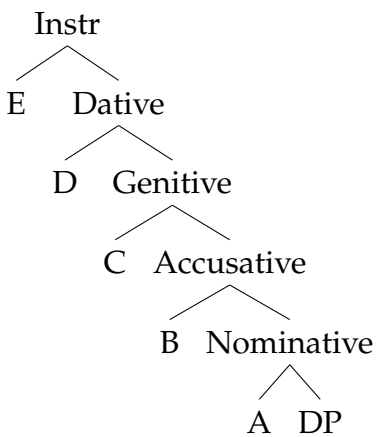
- This yields syncretism of Acc, Gen and Dat:

X Nom

Y Acc, Gen, Dat

W Ins

➪ That's an AAA pattern.



To get ABA, we might try to add a VI specified precisely for Gen:

a. [A] ⇔ *X*
b. [B [A]] ⇔ *Y*
c. [C [B [A]]] ⇔ *Z*
d. [E [D [C [B [A]]]]] ⇔ *W*

- But Z will spread to Dat:

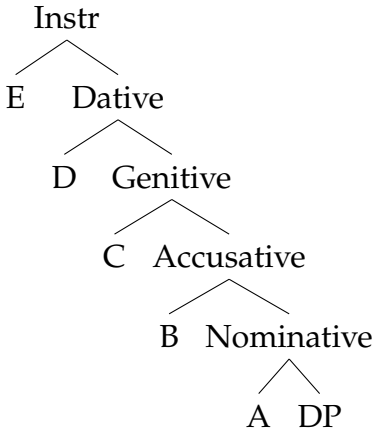
X Nom

Y Acc

Z Gen, Dat

W Ins

➪ That's ABB, not ABA.



Why is this evidence for **RUB**?

☞ The restrictions on possible syncretisms are derived crucially from the implicational containment structure.

☞ Since the restrictions are cross-linguistically consistent, that containment structure has to be universal.

☞ Otherwise, individual languages could fail to display *ABA, or could each have their own *ABA defined on language-specific case hierarchies.

☞ See McFadden (2007) for an attempt to do this using unordered feature bundles, which explicitly *fails* to predict a cross-linguistically consistent *ABA.

2.3 *ABA applied to pronouns & anaphors

Middleton (2020) presents a detailed study of form-meaning patterns in pronouns and anaphors across 80 languages:

- She reports that languages have dedicated forms distinguishing up to three distinct interpretations:

Pronominal	**Logical Function**
ANAPHOR	Diana λx (x thinks only Charles λy (y loves y))
DIAPHOR	Only Diana λx (x thinks Charles λy (y loves x))
PRONOUN	Only Diana λx (x thinks Charles λy (y loves z))

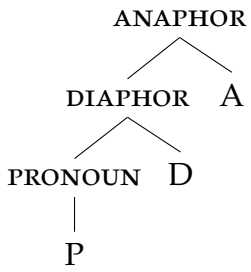
- Some languages do have 3 distinct forms, but many collapse one or more of the distinctions, having a single form corresponding to multiple interpretations.

Middleton shows that these correspondences crucially show a *ABA pattern cross-linguistically:

- Again, some languages distinguish all three — ABC (Icelandic, Yoruba).
- Others have a single form for pronouns and diaphors, distinct from anaphors — AAB (English, Balinese).
- Still others have a single form for diaphors and anaphors, distinct from pronouns — ABB (Cantonese, Turkish).
- Some don't make any distinctions — AAA (Kinyarwande, Samoan).
- But no languages have a single form for pronouns and anaphors that is distinct from that for diaphors — ABA.

The core of Middleton's analysis is in (4):

(4)



- The structure of the anaphor **contains** that of the diaphor, which **contains** that of the pronoun.

- Coupled with suitable assumptions about spell-out, this will capture the constraints on possible syncretisms.

Consider a language with the following spell-out rules:

a. [P] $\Leftrightarrow$ X
b. [D [P]] $\Leftrightarrow$ Y

- Clearly, X will expone pronouns, and Y diaphors. To get ABA, X would also have to expone anaphors.
- Based solely on a. it **could** do so, because it is specified for a subset of the features of the anaphor structure.
- However, given b. it will never be able to do so, since by the Maximal Subset Principle Y is a better match. We thus would get here an ABB pattern.

The only way to get ABA would be by accidental homophony:

a. [P] $\Leftrightarrow$ X
b. [D [P]] $\Leftrightarrow$ Y
c. [A [D [P]]] $\Leftrightarrow$ X

- ☞ This system is like the previous one, but it has an additional spell-out rule c. specified to match exactly with the anaphor structure.
- ☞ Crucially, the form that it expones happens — purely by accident — to be identical to the form supplied by a. for the pronoun structure.

Middleton shows that this analysis is motivated not only by syncretism patterns, but also by transparent morphology:

- I.e. there are languages where the make-up of the forms directly supports the proposed containment structure.
- E.g. in many languages the anaphor is transparently built out of the pronoun plus some additional element, as in English *her-self*.

Crucially, the cross-linguistic consistency of the syncretism patterns motivates positing this structure even in languages where it isn't transparent, i.e. it supports **RUB**.

- Imagine that languages could vary in how the different interpretations were mapped onto structure.

- In some languages the containment relationships would be different. In others the pronoun and anaphor interpretations would simply have no structural component in common.
- If this were the case, there would be no cross-linguistically consistent arrangement of the three interpretations associated with an *ABA pattern.
- And we would expect 'reverse' transparent morphology, e.g. complex pronouns built on simplex anaphors where, say, *self* is an anaphor and *self-her* is a pronoun.

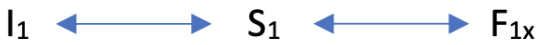
3 Side B: Poor Universal Base (PUB)

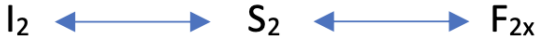
(5) **Side B (PUB):**

- The basic building blocks of syntactic structure — the inventory and hiearchical ordering of grammatical features — are *not* necessarily universal, and can vary considerably across languages.
- Only structure for which there is overt morpho-syntactic evidence in a language should be assumed to be present that language.

Recall our analytic scenario:

- Language x shows evidence that a particular interpretive contrast is derived from a structural contrast.





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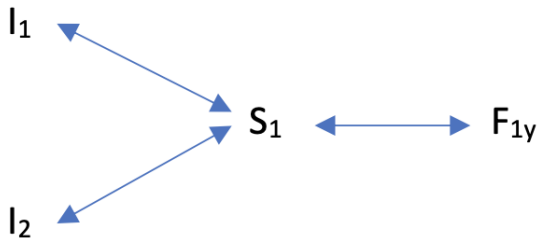
☞ **PUB** says that (ceteris paribus) we should assume that the interpretive contrast does **not** reflect a structural contrast between S_1 and S_2, but a single structure S_1, which mediates between the two interpretations and the single form:



Background: UG and learnability

3.1 Background: UG and learnability

- Is the hierarchical sequence of functional heads in a particular language determined by UG or is it acquired during the language acquisition process?
- The default answer to this question should be the latter (emergence during acquisition).
- The evidence for attributing grammatical knowledge to UG should be based on Poverty-of-Stimulus (PoS) arguments (grammatical knowledge that cannot be acquired on the language input solely).
- Here, the relevant grammatical properties of the target language are learnable.
- A language-learning child can postulate the existence of some morpho-syntactic feature is if there is overt evidence for it in the language input.
- Without any allusion to UG, only those morpho-syntactic features of which there is a grammatical reflex (different parts of speech, involvement in agreement, trigger of movement) can be considered part of the formal feature inventory of the target language.
- Other potential morpho-syntactic features must be absent, even if they are active in other languages.
- The same holds for the internal structuring of those morpho-syntactic features.
- Hierarchical relations as such are learnable (provided that the child knows that syntactic structures are hierarchical in the first place), if these hierarchies reflect themselves in the language input.
- Reflections of such hierarchical relations can be inflectional orderings, (certain) word order effects, scopal relations, etc.

3.2 Universal hierarchies within PUB

- At the same time, such a perspective does not explain why the same hierarchical relations are attested across languages.
- An emergenist perspective would predict the possibility of substantial cross-linguistic variation in this respect.
- Why is it, then, that various universal hierarchies can be identified?
- Such hierarchies only provide evidence for a universal feature structure if they cannot be explained on extra-grammatical grounds.
- To what extent are such extra-grammatical explanations available?
- In relation to the earlier discussion, to what extent are such explanations available for *ABA patterns, such as observed by (Caha, 2009; Bobaljik, 2012; McFadden, 2018; Middleton, 2020)?

3.3 Back to *ABA patterns for anaphors/pronouns

- *ABA patterns can be explained extra-grammatically if the different elements participating in it stand in a pragma-semantic entailment relation.
- To see this, look at Middleton's anaphoric hierarchy again.

Middleton's hierarchy:

(6) ANAPHOR > DIAPHOR > PRONOUN

3.3.1 (Neo-)Gricean reasoning

- Now let's assume that syncretisms do not result from spell-out rules targeting different parts of structures, but rather single meanings. (I.e., what look like syncretisms are actually cases of polysemy (underspecified meanings), not homophony (same forms for different meanings)).
- To see this, let's look at English, which morphologically distinguishes pronouns and diaphors from anaphors, yielding a AAB pattern.

(7) Oprah thinks that only Meghan loves *herself*.
Oprah λx (x thinks that only Meghan λy (y loves y))

(8) Oprah thinks that only Meghan loves *her*.
Oprah λx (x thinks that only Meghan λy (y loves z)), *where* $z \neq y$

- This captures the meaning distinctions observed for *her/herself*
- But there is another way ...

(9) Oprah thinks that only Meghan loves *herself*.
Oprah λx (x thinks that only Meghan λy (y loves z)), *where z is y*

(10) Oprah thinks that only Meghan loves *her*.
Oprah λx (x thinks that only Meghan λy (y loves z)), *where z is x, y or z.*

- Now, only the first example has a pragma-semantic restriction to anaphoricity (i.e., *herself* must refer to Meghan).
- The second example has no such restriction whatsoever (i.e., *her* may refer to Meghan/Oprah/Catherine/...)
- However, the two examples now stand in a pragma-semantic entailment relation.
- (Neo-)Gricean reasoning will ensure that by uttering the *her*-example, the hearer will infer that the speaker does not intend to convey the meaning expressed by the *herself*-example.
- The 'Principle B'-effect results from pragma-semantic competition, not from underlying differences in feature structure.

3.3.2 Consequences

- That Principle B effects do not have to be syntactically encoded, but are rather pragmatic in nature comes with two major advantages:
- (i) Syntactic operations are not known to trigger distinctness effects.
- (ii) Delay-of-Principle-B effects: children acquire Principle B effects much later than Principle A effects; Principle B-effects are only acquired at the time where children have already acquired pragmatic, (Neo-)Gricean reasoning (Chien and Wexler, 1990, et seq.).
- In the absence of a morphological distinction between any (dia-/anaphoric) pronoun, there is simply one lexical item and not more than one.
- For instance, Mechelen Dutch *haar* ('her(self)'), which can be used for all relevant meanings, is simply the spell-out of one pronoun that presupposes a feminine referent and has no other restrictions of the kind (yielding an AAA pattern).

3.3.3 Deriving *ABA

How do *ABA patterns follow?

- If stronger B stands in pragmatic competition with weaker A, there is no way that A can be the exponent of anything stronger than B.
- This means that three meaning constructs P, Q and R can never be realized by means of A-B-A, where A is the Spellout of P, B the Spellout of Q and A again the Spellout of R if R entails Q and Q entails P (modulo purely accidental homophony).
- This derives *ABA patterns.

To see this, take the following anaphoric, diaphoric and pronominal readings:

(11) Anaphoric reading Oprah λx (x thinks that Meghan λy (y loves z)), *where z is y*
(12) Diaphoric reading Oprah λx (x thinks that Meghan λy (y loves z)), *where z is x or y*
(13) Pronominal readingOprah λx (x thinks that Meghan λy (y loves z)), *where z is x, y or z*

Now, consider a language with the following spell-out rules for a pronoun and a corresponding diaphor:

a. Pronoun $\Leftrightarrow$ *X*
b. Diaphor $\Leftrightarrow$ *Y*

- Clearly, usage of *X* will give rise to the pronominal reading, and usage of *Y* to the diaphoric reading.
- Based solely on a.-b., both *Y* and *X* may in principle also give rise to anaphoric readings (as they are semantically compatible with those).
- However, since the reading of *Y* is stronger than *X*, the usage of *X* for an anaphoric reading is blocked.
- Similarly, since the reading of *Y* is stronger than *X*, the usage of *X* for a diaphoric reading is blocked.
- This creates a *ABA effect: usage of pronoun *X* will never result in an anaphoric reading.

The only way to get ABA would be by accidental homophony:

a. Pronoun $\Leftrightarrow$ *X*

b. Diaphor $\Leftrightarrow$ *Y*
c. Anaphor $\Leftrightarrow$ *X*

☞ This system is like the previous one, but it has an additional exponent for an anaphor.

☞ Crucially, the form that it expones happens — purely by accident — to be identical to the form supplied by a. for the pronoun.

- The above shows that *ABA patterns can be derived for those elements whose underlying meanings stand in a pragma-semantic entailment relation.
- Consequently, such *ABA patterns do not form evidence for a universal inventory of building blocks a là **RUB**.
- Finally, the observation that in many languages the anaphor is transparently built out of the pronoun plus some additional element, as in English *herself*, still can be explained, as by entailment the meaning of the pronoun is contained in the meaning of the anaphor.
- Naturally, this does not make any claims about the status with respect to the universal base of underlying *ABA patterns that cannot be reduced to pragma-semantic blocking (though see (Bobaljik, 2012)).
- However, it shows that *ABA patterns *as such* do not form evidence in favour of **RUB**.

4 A vs. B: comparisons and consequences

- In the previous slides, we have pushed the implications of the underlying premises in Sides A vs. B to their logical extremes.
- But it's important to keep in mind that the choice is not ultimately a binary one: rather, the poles we've just discussed define a *continuum* of possible ways to capture patterns of language variation.

4.1 Types of intermediate solution: between RUB and PUB

☞ Concretely, then, the question is not about whether **RUB** is correct or **PUB**.

☞ Rather, it has to do with where along the continuum we find the optimal balance between detailed empirical coverage of crosslinguistic variation and language universals.

4.1.1 I. Universally sparse, individually articulated base

- This kind of intermediate position involves proposing that a highly articulated featural-base is not a part of UG, i.e. innate to language as a whole.
- At the same time, there are grammatical principles which can derive the featural articulation required to capture robust empirical patterns (like *ABA) across languages.

> "We adopt (as working hypothesis) the Minimalist conjecture that a fine-grained hierarchy of functional heads cannot be part of UG; that is, it cannot be innate and specific to language. We are persuaded that Cartographic work shows that there are fine-grained hierarchies of functional heads in each language, and that they are similar to each other . . . " (p. 3).

- A conceptually ordered tripartion of sortal primitives *Proposition* > *Situation* > *Event* in UG yields, for the majority of cases, the structural hierarchy of domains headed by C > T > V.

> (i) Language-specific categories (c) are constructed from a small set of universal categories κ and language-specific UoLs [Units of Language]; [$c = \kappa$ + UoL].
>
> (ii) The set of universal categories κ is hierarchically organized where each layer of κ is defined by a unique function. (p. 24)

- Such an intermediate position has the advantage of being able to balance the universality of categories (κ) with crosslinguistic variation in language-specific categories (c):

4.1.2 II. Solution to variation relativized to phenomenon

- **RUB** might be more appropriate for empirical phenomena with an uncontroversially syntactic footprint.
- But a more **PUB**-oriented approach might be better suited for contrasts which are primarily or exclusively supported by interpretive evidence, with (semantico-pragmatic) entailment relations holding between the meanings underlying forms A, B and C.

- The relevance of morphological evidence is tricky, and depends a bit on framework-specific assumptions.

A relevant comparison is between case and pronouns/anaphora:

- The distinction between pronouns, diaphors and anaphors is largely defined in terms of interpretation, and this is what makes it reasonably straightforward to articulate a version of **PUB** to model the relevant patterns.
- The distinctions among case categories, however, have often been observed to have at best a tenuous relationship with semantics.
- This makes it difficult to imagine how a neo-Gricean story could account for the syncretism facts in Caha (2009), favoring **RUB**.

4.2 The wheel-spinning problem (or why we need empirical grounding)

- Ultimately, the correct choice of intermediate solution (and there may well be other variants of these) must be grounded in *independent* empirical diagnostics.
- Given the absence of an *independently motivated* metric of featural richness or parsimony, such a choice otherwise regresses into an idle, *aesthetic* exercise in speculation and pontification.

Let us now look at what such empirical diagnostics might look like for our *ABA cases wrt. anaphors vs. pronouns.

4.3 Empirical diagnostics for anaphor vs. pronoun

- Per **RUB**, different types of anaphor and pronoun differ wrt. their respective syntactic structures.
- As such, regardless of the syncretism patterns wrt. their morphological forms (AAA, AAB, ABB or ABC), these elements should vary in their syntactic and semantic behaviors.
- But under **PUB**, in a language with an AAA pattern (like Mechelen Dutch), there is a single underspecified form which can be used anaphorically or pronominally depending on the intended reading.
- As such, there should be no syntactic or semantic differences between the anaphoric and pronominal uses in Mechelen Dutch.

Syntactic difference between anaphor & pronoun:

- Anaphor Agreement Effect (Rizzi, 1990, et seq.) – the observation that anaphors cannot trigger ϕ-covarying agreement.
- Pronouns are exempt from this.

Semantic difference between anaphor & pronoun:

- An anaphor is an obligatorily bound variable: as such, it yields only sloppy readings under ellipsis;
- A pronoun is an optionally free variable: as such, it can yield strict or sloppy readings under ellipsis.

4.4 Testing the predictions

- Of the 80 languages surveyed in Middleton (2020), only 5 are reported to have uncontroversial AAA patterns: Bislama (Polynesian), Fijian (Austronesian), Georgian (Kartvelian), Kinyarwanda (Niger-Congo), Madurese (Austronesian), Samoan (Austronesian), and Tongan (Polynesian).
- To this, we can add Mechelen Dutch and potentially Old English.
- Wrt. testing for the AAE, most of these languages are non-contenders, either because they lack overt agreement or because they only involve subject agreement (while the anaphor is typically in object position).
- Kinyarwanda emerges as a potential candidate (we ignore Georgian, another potential candidate, for now, since the agreement facts turn out to be more complicated, p.c. Svetlana Berik).
- Kinyarwanda is an AAA language which also has object marking on the verb.
- If the anaphoric and pronominal forms correspond to syntactically distinct structures (Side A), we predict that the pronominal use alone should yield object agreeement, while the anaphoric use should not.
- But if the anaphoric and pronominal forms correspond to a single underspecified structure (Side B), we predict (caveat: all else being equal, which it may not be) no such differences in object agreement.

From Middleton (2020, Ex. 232, p. 119):

(14) Kanga y-i-bwi-ra ko Piglet ari we wenyine
Kanga 3SG-PRES-think-ASP that Piglet only WE WENYINE
w-i-kunda.
3SG-PRES-love-ASP
ANAPHORIC: K λx (x thinks that only P λy (y loves y)

(15) Piglet ni we wenyine w-i-bwi-ra ko Kanga
Piglet only WE WENYINE 3SG-PRES-think-ASP that Kanga
a-mu-kund-a.
3SG-OBJ-love-ASP
DIAPHORIC: Only P λx (x thinks that K λy (y loves x)) PRONOMINAL: Only P λx (x thinks that K λy (y loves z))

- The local anaphoric use of *we wenyiwe* in (14) does not bear object marking on the verb.
- The non-local anaphoric (i.e. diaphoric) and pronominal uses, however, do involve such object marking (the verbal infix *-mu*).
- This in turn could be taken to be confirmation of the AAE: which in turn would support **RUB** in Side A.
- However, for such a conclusion to go through, we still need to show that the object marking *-mu* does indeed instantiate object agreement, as opposed to clitic doubling or e.g. reflexive voice: we have an AAE violation only if the former is true.
- Thankfully, this is an empirically testable prediction.
- The semantic strict vs. sloppy distinction can and should also be tested for the 5-7 languages with AAA patterns – this is a matter for future research.

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