

# You Will Always Have Me: A Compositional Theory of Person

PUBLIC DISSERTATION DEFENSE  $\diamond$  UMASS AMHERST

Kaden Holladay

August 8<sup>th</sup>, 2023

## 1 Introduction to the puzzle

Today's goal is to show how (a part of) the typology of person contrasts in natural languages follows from a particular hypothesis about the content of utterance contexts (Kaplan 1989).

Contexts are standardly taken to include both an author coordinate and a hearer coordinate.

### The standard view of contexts

(1)  $c = \langle a, h, \dots \rangle$

$a$  = author (speaker),  
 $h$  = hearer (addressee)

One reason (1) is so ubiquitous is that author and hearer inclusion is what allows different person categories to be semantically distinguished.

The maximal number of person categories that can be found in a natural language is four, here illustrated by the pronouns of Imonda (Waris; Seiler 1985) below. (Imonda pronouns do not contrast for number.)

(2)	IMONDA PRONOUN	REFERENT CONTAINS		TRADITIONAL CATEGORY
	ka	$a$ , but not $h$	'exclusive meaning'	1EX
	pəl	both $a$ and $h$	'inclusive meaning'	1IN
	ne	$h$ , but not $a$	'second-person meaning'	2ND
	ehe	neither $a$ nor $h$	'third-person meaning'	3RD

These categories are distinguished by whether the author and hearer are included in the referent, and a context like (1) includes the variables needed to

make these cuts.

I have de-emphasized the traditional category designations in (2), since calling inclusives a kind of first person is misleading.

Semantically, exactly one thing distinguishes 1EX and 1IN as a natural class – the author's inclusion in the referent.

But 1IN and 2ND also form a natural class with respect to hearer inclusion. So there's nothing that makes Imonda *pəl* more like *ka* than it is like *ne*.

**Upshot** → Author and hearer coordinates in the context provide a natural way to model the meanings of maximally four kinds of person category.

### 1.1 Zwicky's puzzle

Not all grammars contrast four persons. In the most common type of person system, inclusive and exclusive meanings are conflated morphosyntactically. The resulting category is sometimes called GENERALIZED first person. I illustrate this kind of system with Jarawa (Ongan; Kumar 2012).

(3)	JARAWA PRONOUN	REFERENT CONTAINS	TRADITIONAL CATEGORY
	mi	{ $a$ , but not $h$ both $a$ and $h$ }	1ST (generalized)
	ŋi	$h$ , but not $a$	2ND
	əhi	neither $a$ nor $h$	3RD

Zwicky (1977) pointed out the puzzling fact that while there are plenty of person systems that resemble (3), there are no person systems like (4).

(4)	MADE-UP PRONOUN	REFERENT CONTAINS	UNATTESTED CATEGORIZATION
	rup	$a$ , but not $h$	1 <sup>ST</sup>
	ki	{ both $a$ and $h$ $h$ , but not $a$ }	2 <sup>ND</sup> (generalized)
	tep	neither $a$ nor $h$	3 <sup>RD</sup>

In (4), it is the form used to communicate second-person meanings (rather than the form used to communicate exclusive meanings) which is generalized to cover inclusive meanings.

#### Key observation (Zwicky 1977, Harbour 2016)

- (5) When an inclusive meaning is not encoded with a dedicated person category, it always is expressed akin to how exclusive meanings are, never to how second-person meanings are.

The asymmetry in attestedness between systems like (3) and those like (4) is shocking from a semantic perspective, since the two are alphabetic variants of one another (replace  $a$  with  $h$  and vice versa, and you'll get the other kind of system).

## 1.2 A hint of the solution

I will derive the key observation in (5) from an alternative conception of utterance contexts.

#### A different schema for contexts

- (6)  $c = \langle a, \dots \rangle$  no hearer coordinate!

The crucial thing is that contexts do not record the identity of utterance hearers.

Since I assume a relatively strict isomorphism at syntax-semantics interface, the hypothesis in (6) has consequences for the kinds of morpho-syntactic features that are definable.

For example, while (1) allows us to easily define AUTHOR and HEARER features

that bring variables over author and hearers directly into our semantic derivations, as shown in (7) ...

- (7) a.  $\llbracket \text{AUTHOR} \rrbracket^{\langle a, h, \dots \rangle} = a$   
 b.  $\llbracket \text{HEARER} \rrbracket^{\langle a, h, \dots \rangle} = h$

... the hypothesis in (6) leaves us in the lurch if we try to introduce a hearer variable into the derivation in a comparably direct fashion.

- (8) a.  $\llbracket \text{AUTHOR} \rrbracket^{\langle a, \dots \rangle} = a$   
 b.  $\llbracket \text{HEARER} \rrbracket^{\langle a, \dots \rangle} = \boxed{?}$

That consequence, I'll argue, is a welcome one. The effects that (6) has on the morphosyntax, in conjunction with an independently-motivated pragmatic principle, will be shown to derive a solution Zwicky's puzzle.

#### Roadmap for the rest of the talk

**Section 2:** More background on person and pronouns

**Section 3:** Contexts and their effects on the morphosyntax

**Section 4:** First- and second-person pronouns pragmatically compete

**Section 5:** Appendix: Inclusives

## 2 More background on person and pronouns

I've already shown you the central empirical puzzle. That puzzle does not involve third person at all, so it'll be set aside going forward.

The remaining persons, which are at the crux of Zwicky's puzzle and which we'll focus on today, are termed LOCAL persons.

In this section, I introduce a qualification about (5), and present a few other important facts about the semantics of person.

## 2.1 Partitions, not paradigms

The observation in (5) is a fact about grammars, not about any particular pronominal or agreement paradigm.

Studying person by looking at individual paradigms is not the most productive way of getting robust generalizations (Zwicky 1977, McGinnis 2005, Sauerland & Bobaljik 2013, Harbour 2016) – principally because every logically possible conflation of persons is attested.

In Kiowa, for instance, one finds a subject agreement paradigm (9) in which inclusive and second-person meanings are encoded with the same form – which is what (5) claims to be impossible.

But there are other paradigms in the language – *e.g.*, (10) – which demonstrate that the grammar of Kiowa differentiates all three local persons.

(9)	<i>Kiowa</i> (Harbour 2016: 14)	(10)	<i>Kiowa</i> (Harbour 2016: 14)
	Subject agreement (NSG)		Object agreement (PL)
	e-            exclusive		gyát-    {    exclusive
	ba-    {    inclusive		{    inclusive
	second		bát-            second

Each of the three local persons can be distinguished from every other local person in at least some paradigm.

To see this more transparently, we can superimpose the paradigms, as in (11). The resulting series of contrasts is known as a PERSON PARTITION.

(11)	Paradigms		Partition	TRAD. CATEGORY
	(9)	(10)		
	exclusive	e- gyát-	→ e-/gyát-	1EX
	inclusive	ba- gyát-	→ ba-/gyát-	1IN
	second	ba- bát-	→ ba-/bát-	2ND

*e-/gyát-* is not the same as *ba-/gyát-*, and neither are the same as *ba-/bát-*. So Kiowa grammar distinguishes three local persons, just as the grammar of Imonda does.

Superposition doesn't yield a three way contrast among the local persons in all languages. You'll find no paradigm of English, for instance, which distinguishes exclusive and inclusive meanings.

**Upshot** → The fact that in some languages inclusive and exclusive meanings can be conflated (such that they are not differentiated morphosyntactically), but that in no language inclusive and second-person meanings are conflated, is a fact about grammars, not individual paradigms.

## 2.2 Person is number-indifferent

Person provides a way to distinguish between different kinds of referents as a function of author or hearer inclusion.

It does so, however, in a way that semantic number is totally opaque to.

We've already seen two paradigms from Jarawa and Imonda in which pronouns do not contrast as a function of the semantic number of the referent.

Jarawa, for instance, has only one generalized first-person pronoun, *mi*, which means 'I' or 'we'.

So in the absence of the confounding influence of grammatical number, we see that person is NUMBER-INDIFFERENT (Daniel's 2013 term; Corbett 2000; Harbour 2016: Ch. 4.).

Even when there are multiple forms of one person category as a function of semantic number, morphological number signals the contrast – not person.

You can see this transparently in a number of languages, for example in Turkish.

(12)	<i>Turkish</i>				
		SG	PL	TRAD. CATEGORY	
	exclusive	}	b-en	b-iz	1ST (generalized)
	inclusive				
	second				

Generalized first person is marked by *b-*, and second person by *s-*. These morphs themselves do not serve to distinguish semantic number.

## 2.3 Plural reference via person is associative, not additive

Consider the contrast between an ordinary additive plural like *cats* on the one hand, and a plural pronoun like *we* on the other.

Every atom in the extension of *cats* is a cat, but not every atom in the extension of *we* is an utterance author.

This is to say that local pronouns have an ASSOCIATIVE semantics (Corbett 2000, Moravcsik 2003, Wechsler 2010, Hucklebridge 2023).

## 2.4 Every atom in the referent of a local pronoun is ‘animate’

Consider the range of interpretations that (13) has.

(13) We use gasoline in various ways.

(13) might well be spoken by someone at an arsonist’s convention; in that event *we* might pick out the arsonists at the convention, or arsonists generally.

But *we* in (13) can’t refer to the plurality consisting of an arsonist and their car unless the car is personified (Nunberg 1993, Wechsler 2010).

This effect is a kind of semantic animacy (but it should not be conflated with the morphological animacy contrasts one finds in gender systems).

I will avoid the term ‘animacy’ and refer to the atomic parts of the referent of a local pronoun as COGNITIVE AGENTS. Cognitive agents are coextensive with entities that hold a *de se* belief (Castañeda 1966, Lewis 1979).

(14)  $\lambda x_e . \text{COGNITIVE.AGENT}(x) = \lambda x_e . x$  holds a *de se* belief

## 3 Contexts and their effects on the morphosyntax

The schema for contexts given in (6) is incomplete. (The crucial part, recall, is that there’s an author coordinate, but no hearer coordinate.) What else do utterance contexts consist of?

I will take utterance contexts to be a particular kind of centered situation (Lewis 1979, Kratzer 1989). I stipulate their definition in (15).

### (15) Centered situations

- a. The tuple  $\langle x, s \rangle$  is a centered situation iff  $x \lesssim s$  and  $x$ , its center, is a cognitive agent (*i.e.*, an atom with a *de se* belief).
- b. ‘ $\lesssim$ ’ denotes the parthood relation that an entity bears to a situation.

Centered situations *per se* are not a necessary ingredient in my proposal, but they have independent utility (*e.g.*, in the analysis of attitude predicates).

### Contexts are centered situations

(16)  $c = \langle a, s^* \rangle$

In addition to the general constraints that (15) puts on (16), utterance contexts are special in the following ways:

- (17) a.  $s^*$  is the smallest situation which contains all participants of an utterance (the author and any hearers).
- b. A participant’s inclusion in  $s^*$  is determined solely by author intentions.

### 3.1 Second person contains first

As mentioned in the introduction, the lack of a hearer coordinate will have consequences for our inventory of morphosyntactic features.

I will adopt AUTH(OR) as the feature responsible for introducing context authors into semantic derivations.

### First person

(18)  $\llbracket \text{AUTH} \rrbracket^{\langle a, s^* \rangle} = a$

We can’t define a single feature responsible for directly picking out a hearer, since our context doesn’t record any hearer variable.

Second person has a very real semantic and morpho-syntactic life, however, so it needs to be resurrected in a way consistent with (16).

In the dissertation, I argue that the best way to conceive of an addressee, ontologically speaking, is as a potential center distinct from  $a$ .

Principally, this is because (15) already requires centers to be cognitive agents – and addressees indeed are cognitive agents. (Try referring to a rock with *you*; you’ll personify it.)

(This way of thinking also sheds light on why second-person pronouns are used impersonally in various unrelated languages.)

As a technical point, it’s the RE-CENTERING relation defined below that does part of the work of finding other potential centers.

(19) **Re-centering**

For all  $x, y$ , and  $s$ ,  $re-center(\langle x, s \rangle, \langle y, s \rangle)$  holds whenever  $\langle x, s \rangle$  and  $\langle y, s \rangle$  are well-defined centered situations and  $\langle x, s \rangle \neq \langle y, s \rangle$ .

On the morphosyntactic side, re-centering is introduced by a feature I term  $ADDR(ESSEE)$ , whose denotation contains a variable  $f$  over choice functions.

$$(20) \quad \llbracket ADDR \rrbracket^c = \lambda x_e . f(\{y_e : re-center(\langle x, s^* \rangle, \langle y, s^* \rangle)\})$$

$\{y_e : re-center(\langle x, s^* \rangle, \langle y, s^* \rangle)\}$  is just the set  $S$  of individuals that are  $x$ ’s atomic co-participants, so once a value for  $f$  is fixed,  $f(S)$  will identify some non- $x$  atom in  $s^*$ .

Second person can be constructed compositionally, then, by applying the  $\langle e, e \rangle$  denotation of  $ADDR$  to the denotation of  $AUTH$ .

**Second person**

(21)  $\llbracket \begin{array}{c} \diagup \\ ADDR \quad AUTH \\ \diagdown \end{array} \rrbracket^c =$  by Function Application

$\llbracket ADDR \rrbracket^c(\llbracket AUTH \rrbracket^c) =$  by (18), (20)

$[\lambda x_e . f(\{y_e : re-center(\langle x, s^* \rangle, \langle y, s^* \rangle)\})](a) =$   $\beta$ -reduction

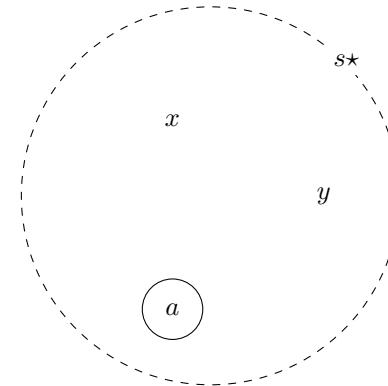
$f(\{y_e : re-center(\langle a, s^* \rangle, \langle y, s^* \rangle)\})$

So the  $ADDR$  feature serves to map the author  $a$  to an addressee of the utterance (*à la* Rebuschi 1994; Charnavel 2015, 2019).

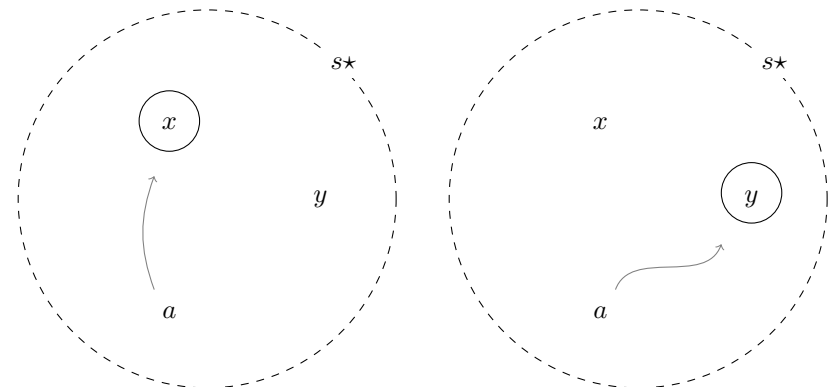
The denotation for  $ADDR$  looks intimidating when written out in lambda calculus, but its effect is straightforward.

Here are some illustrations that show the values of (18) and (21) at an utterance context with two addressees. The work that  $ADDR$  is doing is shown with arrows.

(22) Possible value (circled) for  $\llbracket AUTH \rrbracket^c$  at a three-participant utterance situation



(23) Possible values (circled) for  $\llbracket \begin{array}{c} \diagup \\ ADDR \quad AUTH \\ \diagdown \end{array} \rrbracket^c$  at a three-participant utterance situation



**Upshot** → There’s no hearer coordinate in the context, but second person can be derived compositionally by applying an  $\langle e, e \rangle$  relation to  $a$  (the denotation of  $AUTH$ ).

### 3.2 From indices to referents

(18) and (21), which I termed first and second person, respectively, are not pronouns: they are INDICES which can anchor the referent of personal pronouns (Kaplan 1989, Nunberg 1993).

To illustrate the difference between indices and referents: if I alone (=k) utter the pronoun *we* to mean the sum of me and my sister Zoë, then **k** is the index, and **k⊕z** is the referent.

Recall from Section 2 the three things I introduced about the local persons:

- (24) a. Free from the confounding influence of grammatical number, personful expressions are semantically number-indifferent. (Note that (18) and (21) denote atoms.)
- b. Personful expressions have an associative semantics: *we* doesn't mean 'the plurality of speakers'.
- c. Each atom that is a part of the referent of a personful expression is a cognitive agent.

To get a handle of the last of these in formal terms, I define a 'property of cognitive agency' ( $P_{CA}$ ) which can be true of plural entities.

$$(25) \quad P_{CA} = \lambda x_e . \forall y_e : [ATOM(y) \wedge y \leq x] \rightarrow COGNITIVE.AGENT(y)$$

Now, because the three signatures in (24) do not vary independently within the world of local pronouns, I define a single feature which is responsible for carrying all of them (along the lines of Elbourne 2005, 2008).

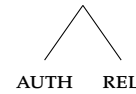
It is termed REL (for 'relational') since it relates the index of a personal pronoun to its referent.

$$(26) \quad \llbracket REL \rrbracket^c = \lambda x_e . f(\{ y_e : [ x \leq y ] \wedge [ P_{CA}(x) \wedge P_{CA}(y) ] \})$$

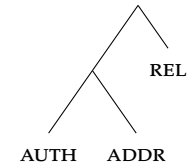
REL can take either the first- or the second-person index as its argument, and returns a (potentially plural) entity (i) which contains the index and (ii) whose atoms are all cognitively agentive.

The pronouns that result from the composition of REL with the indices are given in (27-28).

(27) A first-person pronoun



(28) A second-person pronoun



These have the meanings given in (29) and (30) respectively.

$$(29) \quad \llbracket (27) \rrbracket^c = f(\{ y_e : [ a \leq y ] \wedge [ P_{CA}(a) \wedge P_{CA}(y) ] \})$$

*(i.e., an entity which reflexively contains a and whose atoms are cognitive agents)*

$$(30) \quad \llbracket (28) \rrbracket^c = f(\{ y_e : [ f'(\{ z_e : re-center(\langle a, s^* \rangle, \langle z, s^* \rangle) \}) \leq y ] \wedge [ P_{CA}( f'(\{ z_e : re-center(\langle a, s^* \rangle, \langle z, s^* \rangle) \}) ) \wedge P_{CA}(y) ] \})$$

*(i.e., an entity which reflexively contains some addressee and whose atoms are cognitive agents)*

We've now built two local pronouns from just a few morphosyntactic features. Which languages have two local pronouns? Languages like Jarawa!

The Jarawa local pronoun series, recall, works like this:

(31) JARAWA PRONOUN	REFERENT CONTAINS	TRADITIONAL CATEGORY
mi	{ a, but not h both a and h }	1ST (generalized)
ɲi	h, but not a	2ND

My claim is that the two pronouns in (27) and (28) are what syntactically underlie the Jarawa forms *mi* and *ɲi* respectively.

## 4 First- and second-person pronouns pragmatically compete

The two pronouns in (27) and (28) share an interesting property – in terms of their literal meanings, either could be used to refer to an entity that contains both the author and an addressee.

### Key result

First- and second-person pronouns share the ability to convey inclusive meanings in terms of their truth-conditional denotations.

One of them, however, is more syntactically complex than the other.

There is independent reason to think that the more syntactically parsimonious of two expressions is preferred when both have the same value, as the following example from Marty (2017: 157) illustrates.

- (32) Context: *It is presupposed that the person named ‘Mary’ married her childhood sweetheart. The speaker wants to express the thought that she is about to leave.*
- # [ The wife of Mary’s childhood sweetheart ] is about to leave.
  - [ Mary ] is about to leave.

The *wife of Mary’s childhood sweetheart* in (32a) can’t felicitously refer to Mary, even though the context provided biases us toward this interpretation.

Likewise, relative to the context provided, *your brown dog* in (33) is not a good way of referring to Dorothy’s only dog if *brown* is being interpreted intersectively.

- (33) Context: *Scarecrow and Dorothy are sitting with Dorothy’s only dog, whose coat happens to be brown. Scarecrow wants to tell Dorothy that the dog is well-behaved. He says:*
- # [ Your brown dog ] is so well-behaved!
  - [ Your dog ] is so well-behaved!

There are several extant proposals which glean acceptability contrasts like those given above from a principle which evaluates the relative complexity of competing expressions (Schlenker 2005, Katzir 2007, Marty 2017).

My version (based mostly on Schlenker and Katzir) is given in (34).

### (34) *Minimize Definite Descriptions!*

Let  $\alpha$  and  $\beta$  be any syntactic constituents.  $\beta$  is a deviant way of referring to what  $\alpha$  refers to at  $c$  if all three of the following hold:

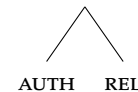
- $\alpha$  and  $\beta$  can both be spelled out morpho-phonologically, and the morpho-phonological reflexes of these expressions are non-identical
- $\alpha$  can be derived from  $\beta$  by a finite number of deletions within  $\beta$  of referentially relevant expressions
- The set of possible referents for  $\llbracket\beta\rrbracket^c$  is not a proper subset of the set of possible referents for  $\llbracket\alpha\rrbracket^c$  when both are well-defined

In simpler terms, this condition militates against deploying a complex syntax if that complexity doesn’t do anything to restrict reference.

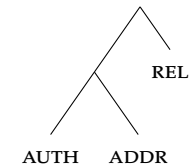
(34) renders *your brown dog* in (33a) deviant, for instance, since the competing definite descriptions have non-identical exponents, *your dog* can be derived from *your brown dog* via deletion of the Adjective node, and that adjective isn’t doing anything to restrict the range of referents the definite description could take.

The syntaxes I gave for first- and second-person pronouns are predicted to compete along similar lines. Suppose you are a Jarawa speaker and want to communicate an inclusive meaning. You only have the pronouns in (27) and (28), repeated below as (35-36).

### (35) A first-person pronoun



### (36) A second-person pronoun



In terms of literal meanings, either pronoun could do the trick.

But by (34), the first-person pronoun is the more syntactically parsimonious way of communicating an inclusive meaning, and therefore a second-person pronoun cannot be used to convey that meaning.

**Summary**

The lack of a hearer coordinate in *c* results in second-person indices being constructed in a more morpho-syntactically complicated fashion than first-person indices.

The first- and second-person pronouns which contain those indices overlap in their truth-conditional ability to encode inclusive meanings.

Second-person pronouns provide a syntactically unparsimonious way of doing so, however, so only first-person pronouns can be used for this kind of meaning.

## 5 Appendix: Inclusives

The preceding section illustrates why, in a language with two local pronouns, only one of them can be used for inclusive meanings.

Not yet addressed are languages like Imonda, with three local pronouns.

(37)	IMONDA PRONOUN	REFERENT CONTAINS	TRADITIONAL CATEGORY
	ka	<i>a</i> , but not <i>h</i>	1EX
	pəl	both <i>a</i> and <i>h</i>	1IN
	ne	<i>h</i> , but not <i>a</i>	2ND

Imonda *ka* (1EX) is analyzed as the syntactic correlate of Jarawa *mi* (generalized 1ST), and *mutatis mutandis* for *ne* (2ND) and *ŋi* (2ND).

What does the inclusive pronoun consist of?

I argue that inclusive indices are a composite of the first- and second-person indices (*à la* Kratzer 2009).

There is straightforward morphological evidence for this conception of inclusives (Harbour 2016: 103-106).

Tok Pisin (Creole; Foley 1986), for example, has the pronominal stems *yumi-* for 1IN, *yu-* for 2ND, and *mi-* for 1EX.

(38)	TOK PISIN STEM	REFERENT CONTAINS	TRADITIONAL CATEGORY
	mi-	<i>a</i> , but not <i>h</i>	1EX
	yu-mi-	both <i>a</i> and <i>h</i>	1IN
	yu-	<i>h</i> , but not <i>a</i>	2ND

A variety of other languages show the same kind of pattern in at least some paradigm: Bislama (Crowley 2004, Harbour 2016: 104), Kiowa (Watkins 1984, Harbour 2007), Nishnaabemwin (Valentine 2001), and !Ora (Meinhof 1930, Güldeman 2002).

Moreover, we already have almost all the ingredients needed to create inclusive indices. The final ingredient is a feature which sums two entities of type *e*. I call it *SUM*.

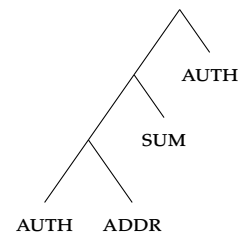
$$(39) \quad \llbracket \text{SUM} \rrbracket^c = \lambda x_e . \lambda y_e . x \oplus y$$

This feature is independently utilized in one kind of analysis of conjunction, as shown in (40), where it is exponed as *and*.

- (40) a. Nadia and Paolo met.
- b.  $\llbracket (40a) \rrbracket = \text{MEET}(\mathbf{n} \oplus \mathbf{p})$

When the first- and second-person indices are coordinated via *SUM*, as in (41), an inclusive index is born.

(41) **Inclusive person**

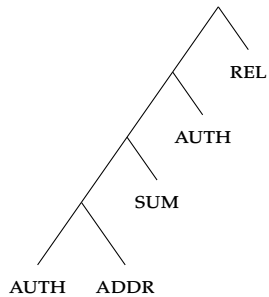


(41) denotes a plural individual formed from the sum of the author and some addressee.



All that's needed to create a (number-indifferent) inclusive pronoun is to compose this index with REL, the feature responsible for mapping indices to referents.

(42) **An inclusive pronoun**



(42) denotes a plural individual which reflexively contains the author and some addressee, and whose atoms are cognitive agents. (This is derived from the composition of the denotations in (18), (21), (26), and (39).)

**Key result**

First-person, second-person, and inclusive pronouns all share the ability to convey inclusive meanings in terms of their truth-conditional denotations.

We've already seen why the second-person pronoun can't be used to for inclusive meanings: there is a more syntactically parsimonious alternative available, namely the first-person pronoun.

But why can inclusive pronouns be used to communicate inclusive meanings, given that it is the most syntactically complex of the three?

The first thing to note is that *Minimize Definite Descriptions!* actually does not bear on inclusive pronouns at all.

The third condition (34c) of this principle maintains that  $\beta$  is deviant with respect to  $\alpha$  only when the set of possible referents for  $\llbracket \beta \rrbracket^c$  is not a proper subset of the set of possible referents for  $\llbracket \alpha \rrbracket^c$ .

This is not met in the case of inclusives, since they have a strictly stronger meaning (in terms of the range of things they can refer to) than both first- and second-person pronouns.

A first-person pronoun can refer to everything an inclusive pronoun can, for instance, but not vice versa (since only the first-person pronoun could refer to an author atom).

Since *Minimize Definite Descriptions!* is not at play, speakers are free to use inclusive pronouns to communicate inclusive meanings.

But why must they use inclusive pronouns (rather than first-person pronouns) to communicate inclusive meanings? There's a second pragmatic principle at play (again, which is independently motivated).

(43) ***Be Specific!***

Don't use a definite description  $\alpha$  if there's a grammatical alternative  $\beta$  such that the set of potential referents given by  $\llbracket \beta \rrbracket^c$  is a proper subset of the potential referents given by  $\llbracket \alpha \rrbracket^c$ .

This is a version of what is known more generally as BLOCKING (Kiparsky 1983, *i.a.*).

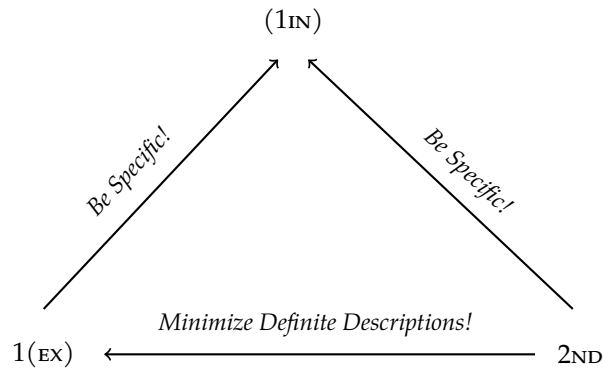
The idea (which goes back to Pāṇini) is that in contexts where a generally-applicable form and a less-generally-applicable form are both otherwise licensed, the specific one blocks the general one from being used.

The corollary is that the more general form is used only when the specific form isn't licensed.

Inclusive meanings are specific, while first- and second-person meanings are more general. (First- and second-person pronouns can refer to everything that inclusive pronouns can, but not vice versa.) So while *Minimize Definite Descriptions!* has no bearing on inclusive pronouns, *Be Specific!* enforces the use of the more specified form.

The work that *Minimize Definite Descriptions!* and *Be Specific!* conjunctively do is represented in (44). The three nodes are identified with three kinds of pronoun: the bottom left node with a first-person pronoun (27), the bottom right with a second-person pronoun (28), and the top node with an inclusive pronoun (42). The arrows point to the winners of the pairwise competitions between two pronouns which can, in terms of their truth-conditional meanings, refer to the same referent.

## (44) Competitions between pronominal definite descriptions



1IN is in parentheses because not all languages make use of this pronoun, while EX is in parentheses because this first-person pronoun only gets restricted (by *Be Specific!*) to exclusive meanings when there's an inclusive pronoun in the same language.

## Acknowledgements

Special thanks to Kyle Johnson, Rajesh Bhatt, James Cathey, Jonathan Pesetsky, Vincent Homer, Shay Hucklebridge, and Amy Rose Deal for comments and discussion about the work presented here.

## Works cited

- Castañeda, Hector-Neri. (1966). 'He': A Study in the Logic of Self-Consciousness. *Ratio* 8: 130–157.
- Charnavel, Isabelle. 2015. Let *You* Be Bound to *Me* (and *Me* to *You*). In *Proceedings of 33rd West Coast Conference on Formal Linguistics (WCCFL 33)*.
- Charnavel, Isabelle. 2019. Supersloppy Readings: Indexicals as Bound Descriptions. *Journal of Semantics* 36: 453–530.
- Corbett, Greville. 2000. *Number*. Cambridge: Cambridge University Press.
- Crowley, Terry. 2004. *Bislama Reference Grammar*. Honolulu: University of Hawai'i Press.
- Cysouw, Michael. 2003. *The Paradigmatic Structure of Person Marking*. Oxford: Oxford University Press.
- Daniel, Michael. 2013. Plurality in Independent Personal Pronouns. In: Dryer, Matthew S. & Haspelmath, Martin, eds., *WALS Online* (v2020.3). Zenodo.

- Elbourne, Paul. 2005. *Situations and individuals*. Cambridge: MIT Press.
- Elbourne, Paul. 2008. Demonstratives as Individual Concepts. *Linguistics and Philosophy* 31: 409–466.
- Foley, William. 1986. *The Papuan Languages of New Guinea*. Cambridge: Cambridge University Press.
- Güldemann, Tom. 2002. Die Entlehnung pronominaler Elemente des Khoekhoe aus dem !Ui-Taa. In Theda Schumann, Mechthild Reh, Roland Kießling, and Ludwig Gerhardt, eds., *Aktuelle Forschungen zu afrikanischen Sprachen: Sprachwissenschaftliche Beiträge zum 14. Afrikanistentag, Hamburg, 11–14. Oktober 2000*, pp. 43–61.
- Harbour, Daniel. 2007. *Morphosemantic Number: From Kiowa Noun Classes to UG Number Features*. Dordrecht: Springer.
- Harbour, Daniel. 2016. *Impossible Persons*. MIT Press.
- Hucklebridge, Shay. 2023. *Associative Plurals*. Doctoral dissertation, UMass Amherst.
- Katzir, Roni. 2007. Structurally-defined alternatives. *Linguistics and Philosophy* 30: 669–690.
- Kaplan, David. 1989. Demonstratives. In Almog, Perry, and Wettstein, eds., *Themes From Kaplan*, 481–563. Oxford University Press.
- Kiparsky, Paul. 1983. Word formation and the lexicon. In *Proceedings of the 1982 Mid-America Linguistics Conference*, pp. 3–29. Kratzer, Angelika. 1989. An Investigation of the Lumps of Thought. *Linguistics and Philosophy* 12: 607–53.
- Kratzer, Angelika. 2009. Making a Pronoun: Fake Indexicals as Windows into the Properties of Pronouns. *Linguistic Inquiry* 40 (2): 187–237.
- Kumar, Pramod. 2012. *Descriptive and typological study of Jarawa*. Doctoral dissertation, Jawaharlal Nehru University.
- Lewis, David. 1979. Attitudes De Dicto and De Se. *The Philosophical Review* 88: 513–543.
- Marty, Paul. 2017. *Implicatures in the DP Domain*. Doctoral dissertation, MIT.
- McGinnis, Martha. 2005. On markedness asymmetries in person and number. *Language* 81: 699–718.
- Meinhof, Carl. 1930. *Die Koranadialekt des Hottentottischen*. Zeitschrift für Eingeborenen-Sprachen: Beiheft 12. Hamburg: Eckhart & Messtorff.
- Moravcsik, E. A. 2003. A semantic analysis of associative plurals. *Studies in Language* 27(3): 469–503.
- Nunberg, Geoffrey. 1993. Indexicality and Deixis. *Linguistics and Philosophy*, pp. 1–43.
- Rebuschi, G. 1994. When *tu* is my *alter ego* (and *vice versa*). In N. Catala and M. Bargallo, eds., *Proceedings of the IV Colloquium of Generative Grammar*. Università Rovira i Virgili, Tarragona.
- Sauerland, Uli & Jonathan Bobaljik. 2013. Syncretism distribution modeling: Accidental homophony as a random event. *Proceedings of GLOW in Asia IX*: 31–53.
- Schlenker, Philippe. 2005. Minimize Restrictors! (Notes on Definite Descriptions, Condition C and Epithets). In Bary, Huitink and Maier, eds., *Proceedings of Sinn und Bedeutung 2004*, 385–416.
- Seiler, Walter. 1985. *Imonda, a Papuan Language*. Canberra: Australian National University, Research School of Pacific Studies.
- Valentine, J. Randolph. 2001. *Nishnaabemwin Reference Grammar*. Toronto: University of Toronto Press.
- Watkins, Laurel J. 1984. *A Grammar of Kiowa*. With the assistance of Parker McKenzie. Lincoln: University of Nebraska Press.
- Wechsler, Stephen. 2010. What 'You' and 'I' Mean to Each Other: Person Marking, Self-Ascription, and Theory of Mind. *Language* 86(2): 332–365.
- Zwicky, Arnold. 1977. Hierarchies of person. In Woodford A. Beach and Samuel E. Fox, eds., *Papers from the Thirteenth Regional Meeting of the Chicago Linguistic Society*, 714–733. Chicago: University of Chicago, Chicago Linguistic Society.