

Morphosemantic features in Universal Grammar: What we can learn from Marshallese pronouns and demonstratives

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Abstract

This article analyzes Marshallese pronouns and demonstratives, arguing that both privative and binary morphosemantic features are necessary, and that the two types coexist in a single domain. Marshallese encodes number with ATOMIC, and person with [\pm author] and [\pm participant]. In the complex system of Marshallese demonstratives, ATOMIC and [\pm human] map to the same head, subject to a constraint that only one feature appears at a time. The element χ , which derives person orientation in demonstratives and pronouns, does not universally map to the same syntactic position. While in Heiltsuk χ is a dependent of the person head, in Marshallese it heads a projection above the person head. And while in Heiltsuk the person features occupy the same position in both pronouns and demonstratives, Marshallese pronouns have a different structure, with person and number features mapping to a single syntactic head. The contribution of UG is thus not a set of specific features or specific structures, but a set of more abstract principles.

Keywords: Marshallese, demonstratives, pronouns, phi-features, person

Résumé

Cet article analyse les pronoms et les démonstratifs marshallais; il soutient que les traits morphosémantiques privatifs et binaires sont tous deux nécessaires, et que les deux types de trait coexistent dans un seul domaine. Le marshallais représente le nombre avec ATOMIQUE, et la personne avec [\pm auteur] et [\pm participant]. Dans le système complexe des démonstratifs marshallais, ATOMIQUE et [\pm humain] occupent la même tête syntaxique, pourvu qu'un seul

trait apparaisse à la fois. L'élément χ , qui dérive l'orientation personnelle dans les démonstratifs et les pronoms, ne prend pas toujours la même position syntaxique. Alors qu'en heiltsuk χ dépend de la tête de personne, en marshallais il forme la tête d'une projection plus haute. Et tandis qu'en heiltsuk, les traits de personne occupent la même position dans les pronoms et les démonstratifs, les pronoms marshallais ont une structure différente, dans laquelle les traits de personne et de nombre partagent une seule tête syntaxique. L'apport de la grammaire universelle n'est donc pas un ensemble de traits ni de structures spécifiques, mais un ensemble de principes plus abstraits.

Mots-clés: Marshallais, pronoms, traits phi, personne

1. INTRODUCTION

In this article we present a featural account of Marshallese pronouns and demonstratives.¹ The analysis provides evidence that both privative and binary features are required, sometimes within the same subsystem in the same language. We argue that the number feature *ATOMIC* and the gender feature [\pm human] appear on the same head in demonstratives, subject to a constraint that any given instance of that head must bear exactly one feature. We also compare the complex person-orientation specification of Marshallese demonstratives with the slightly different but equally complex person-orientation system found in Heiltsuk (Bjorkman et al. 2019), arguing that the difference between the two systems arises from the fact that Harbour's (2016) orientation element χ occupies different structural positions in the two languages.

The article thus provides support for what Cowper and Hall (2017) term the "neoparametric" approach to contrastive morphosemantic features. In this view, in contrast to the strong cartographic approach of Cinque and Rizzi (2008), features do not occupy universally fixed positions in syntactic structure, nor are the features themselves necessarily universal. Rather, what Universal Grammar provides to the learner is a general mechanism for acquiring categorical featural representations, as argued by Cowper and Hall (2014),² and the ability to combine them productively in syntactic structures. The substantive content of the features, their formal status as binary or privative, and their mapping to syntactic projections are all subject to cross-linguistic and even intralinguistic variation.

2. BACKGROUND AND ASSUMPTIONS

In some languages, deictic elements like demonstratives are person-oriented, specifying location relative to a discourse participant, while in others, deictic elements make

¹The following abbreviations are used: #: number; #P: number phrase; 1st: first person; 2nd: second person, 3rd: third person; CV: consonant-vowel sequence; D: determiner; DP: determiner phrase; DEF: definite; DEM: demonstrative; DemP: demonstrative phrase; EMPH: emphatic; EXCL: exclusive; FEM: feminine; *loc*: focus; *hum*: human; INCL: inclusive; *loc*: locative; MASC: masculine; PL, PLUR: plural; P: preposition; PP: prepositional phrase; RED: reduplicated; REM: remote; S.O.: singling out; SG, SING: singular; VI: vocabulary item.

²See also Archangeli and Pulleyblank (2015) for a more radical version of this view.

distinctions along a more purely spatial dimension. As we will see, Marshallese belongs to the first of these groups.

2.1 Person-oriented deixis

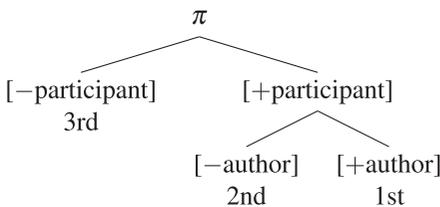
For person-oriented demonstratives, Harbour (2016: Section 7.3.1), proposes a head χ (after the Greek word $\chi\omega\rho\omicron\varsigma$, ‘space’), which takes the π (person) projection as its complement, and returns the vicinity, or characteristic space, associated with the person specified by π . Building on Harbour’s work, Bjorkman et al. (2019) argue that in the Wakashan language Heiltsuk, χ appears as a feature on the π head rather than as an independent syntactic head. This, along with a proposed difference in semantic type between first- and second-person pronouns on the one hand, and third-person pronouns on the other, allows a parsimonious account of the fact that in Heiltsuk, not only demonstratives but also the third-person pronouns are person-oriented.

If these accounts are correct, then languages may differ, not only in whether they have person-oriented deixis, but also in how they structure it syntactically if they do have it. We will show here that in Marshallese, person-oriented demonstratives include χ as a syntactic head as Harbour proposes, but they also provide evidence for yet another crosslinguistic difference in the way ϕ -features are structured; namely, that even in a single language, there can be both monovalent (privative) and binary ϕ -features.

2.2 Person features

We assume, with Harbour (2016), that person is represented crosslinguistically with two binary features, $[\pm\text{author}]$ and $[\pm\text{participant}]$. However, we differ from Harbour in analyzing the features themselves as first-order predicates arranged in a contrastive hierarchy (Cowper and Hall 2019) rather than as operations on lattices. A language that uses both features will have either a three-way or a four-way person system, depending on the order in which the features apply to the person lattice (Harbour 2016) or on the relative contrastive scope of the features (Cowper and Hall 2019). If the feature $[\pm\text{participant}]$ takes scope over $[\pm\text{author}]$, as in (1), the result is a three-way person system like that found in English, because $[\pm\text{author}]$ can meaningfully subdivide only the $[\text{+participant}]$ branch of the hierarchy.³

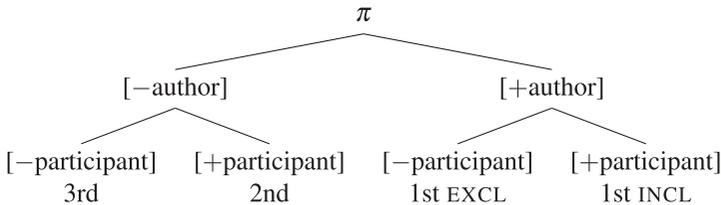
- (1) Tripartition: $[\pm\text{participant}] \gg [\pm\text{author}]$



³For Harbour (2016), the tripartition instead follows from the fact that applying $[-\text{participant}]$ to the output of either $[\text{+author}]$ or $[-\text{author}]$ yields the same result, namely a set containing only third persons. See Cowper and Hall (2019) for further discussion of the differences between these two approaches, the details of which are not crucial here.

If the contrastive scope is reversed, with [\pm author] taking scope over [\pm participant], the result is a four-way person system, distinguishing inclusive from exclusive first persons as in (2). As argued by Cowper and Hall (2019), in four-way person systems, the interpretation of [\pm participant] narrows in accordance with its contrastive scope, and means ‘{includes, does not include} a discourse participant *other than the speaker*’. This is the set of person contrasts found in Marshallese.

(2) Quadripartition: [\pm author] \gg [\pm participant]



3. MARSHALLESE: THE DATA

This section provides an overview of the pronoun and demonstrative paradigms, and a summary of the patterns to be accounted for. Our data come from Bender et al. (2016) and, to a lesser extent, Bender (1969). We have also consulted Rudiak-Gould (2004), who organizes the data somewhat differently, but whose description is nonetheless consistent with that given in the other two sources.

3.1 The pronominal pattern and the system of person and number contrasts

We begin with the non-demonstrative pronominal elements of Marshallese, of which there are four sets, given in (3)–(6). The absolute pronouns in (3) refer only to human beings, and can appear in all positions, as subjects and objects of verbs, and as objects of prepositions. We include the object pronouns in (4) for completeness, but will not analyze them separately from the absolute pronouns, to which they are mostly identical. According to Bender et al. (2016: 172), the object forms are preferred following transitive verbs, though the absolute pronouns can also be used, and younger speakers “show greater tendency to use the absolute forms as direct objects,” suggesting that the object pronouns may be falling out of use.

(3) Absolute pronouns
(human referents only)

	SING.	PLUR.
1st excl.	ñā	kōm
1st incl.	—	kōj
2nd	kwe	koṃ
3rd	e	er

(Bender et al. 2016: 172)

Object pronouns
(human referents only)

	SING.	PLUR.
1st excl.	eō	kōm
1st incl.	—	kōj
2nd	eok	koṃ
3rd	e	er

(Bender et al. 2016: 172)

The subject markers in (5) appear as verbal prefixes, and are not restricted to human referents. They may co-occur with overt subjects, either full DPs or absolute pronouns, and are treated by Bender et al. (2016) as agreement markers.

(5) Subject markers (prefixes/clitics)

	SINGULAR	PLURAL
1st excl.	i-	kōm-
1st incl.	—	je-
2nd	kwo-	koṃ-
3rd	e-	re-

(Bender et al. 2016: 151)

The suffixes in (6) are used to mark inalienable possession. While alienable possession in Marshallese is structurally complex and would take us far outside the focus of this article, the alienable possession relation is expressed by the same suffixes as those used to encode inalienable possession.

(6) Suffixes marking inalienable possession

	SINGULAR	PLURAL
1st excl.	-hi	-m
1st incl.	—	-d
2nd	-ṃ	-miy
3rd	-n	-yyer

(Bender et al. 2016: 124)

As can clearly be seen in (3)–(6), the core pronominal system of Marshallese has two numbers, singular and plural, and a four-way person distinction. It should be mentioned that Marshallese is sometimes described as having a significantly more complex number system (e.g., by Harbour 2014: 214). Such descriptions are based on the existence of what Bender et al. (2016: 173) call *compound pronouns*, which are formed from the plural pronouns in (3), and distinguish dual, trial, quadruple (or paucal), and multiple, as shown in (7). The second part of each compound is related to the corresponding numeral, except for the form *wōj*, which seems to be related to the word *emlapwōj* ‘large community house for extended family of chief and retinue’ (Bender et al. 2016: 173).

(7) Compound pronouns marking additional number distinctions

	PLURAL ABSOLUTE	DUAL	TRIAL	QUADRUPLE	MULTIPLE
1st excl.	kōm	kōmro	kōmjeel	kōm(je)eañ	kōmwōj
1st incl.	kōj	kōjro	kōjjeel	kōjeañ	kōjwōj
2nd	koṃ	koṃro	koṃjeel	koṃ(je)eañ	koṃwōj
3rd	er	erro	erjeel	er(je)eañ	erwōj
Numeral		ruo ‘2’	jilu ‘3’	emān ‘4’	

Corbett (2000: 46–48) characterizes this pattern as *facultative number*, in that it is not obligatory: a group of three, for example, can be referred to either with a specifically trial form or with the plural absolute. The absence of more specific number marking on

a plural form is not contrastive – indeed, it is hard to imagine what a non-singular form that was also contrastively not dual, not trial, not paucal, and not multiple could possibly mean.

We therefore conclude that the additional number distinctions in (7) are optional modifiers (in the sense of Wiltschko 2008), and not part of the grammatical number system of Marshallese. Marshallese grammatical number, then, makes only a two-way contrast between singular and non-singular, which we will represent with the privative feature *ATOMIC*: singulars have this feature, and non-singulars lack it.⁴

3.2 The demonstrative pattern

In contrast to its relatively simple pronoun paradigm, Marshallese has an extensive set of demonstratives, divided into four types: basic, focus, personal, and locative. The basic demonstratives are used adnominally, and also as predicates in verbless copular clauses. The focus demonstratives, according to Bender et al. (2016), are used as subjects of verbless copular clauses, while the personal demonstratives, like the absolute pronouns, refer only to human beings. The locative demonstratives are used to refer to locations, and may be prefixed with a locative preposition *i-*, meaning ‘in’ or ‘at’.

Each of these types can be further divided into two subsets, one of which is characterized by Bender et al. (2016) as ‘emphatic’, or, as Bender (1971) and Rudiak-Gould (2004) put it, ‘singling out’. This gives eight paradigms, each of which is further subdivided by number and by person orientation, and possibly animacy or gender. The eight paradigms each include from eight to twenty distinct forms, giving 108 forms in all.

We look first at the basic, non-emphatic paradigm shown in (8), because it seems to have the simplest structure. The forms in this paradigm are contained in the corresponding forms in the other types, and as we shall see, the structure underlying the basic demonstratives is contained in the structure of all of the other types. The other paradigms will be introduced as they become relevant.

(8) Marshallese ‘basic’ demonstratives (non-emphatic forms only)

	SINGULAR	PLURAL	
		NON-HUMAN	HUMAN
Near: 1st excl.	e	kā	rā
1st incl.	in	kein	rein
2nd	ne	kaŋe	raŋe
3rd	eŋ	kaŋ	raŋ
Remote	eo	ko	ro

(Bender et al. 2016: 179)

⁴Another feature capable of making a similar two-way distinction is *MINIMAL*. *MINIMAL*, however, indicates that the set referred to is as small as it can be given the other features specified, whereas *ATOMIC* specifies a singleton set. A two-way contrast based on *MINIMAL* thus allows for an inclusive dual form (the smallest possible set containing the both speaker and the addressee) parallel to the singulars of other persons; see Harbour (2014) for examples and discussion. As Marshallese makes no number distinction in the inclusive, we conclude that *ATOMIC* is the appropriate feature here.

As can be seen in (8), the singular–plural contrast and the four-way person partition found in pronouns are also found in demonstratives. Importantly, though, while both the person features and the number features in pronouns specify the referent of the pronoun itself, the two sets of features function differently in demonstratives. The number feature on the demonstrative specifies the referent of the nominal it modifies (as in ‘this book’ vs. ‘these books’), but the person features specify the entity with respect to which the referent is located; that is to say, the orientation of the demonstrative (‘this book near me’ vs. ‘that book near you’, etc.).⁵ We will assume, in the absence of evidence to the contrary, that the same features that specify person and number in the pronouns also specify person orientation and number in the demonstratives. Since the number features and the person features specify different entities in demonstratives, there is no incompatibility between inclusive and singular, as there is with the pronouns: the inclusive singular demonstrative *in* in (8) picks out a single item close to both the speaker and the addressee, as shown in (9), from Rudiak-Gould (2004: 121).

- (9) a. ni in
 coconut DEM.NEAR-INCL.SG
 ‘this coconut between us’
- b. wa in
 boat DEM.NEAR-INCL.SG
 ‘the boat that we are both riding on’

In addition to the person and number features also found in the pronoun system, demonstratives distinguish human from non-human referents, but interestingly, only in the plural. And along with the four possible person orientations, there is a fifth category that Bender et al. (2016) call *remote*, but which is frequently translated into English simply with *the*. (Rudiak-Gould 2004: 121 characterizes this category as meaning ‘at some unknown location, or no specific location’.) This suggests that the remote demonstratives may be less marked than the person-oriented ones.

With all this in mind, we turn in the next section to an analysis of the pronouns, and then the basic demonstratives, which will lay the groundwork for the analysis of the other types of demonstratives.

4. MARSHALLESE: THE ANALYSIS

There are several observations and questions that should be kept in mind as the analysis proceeds, and which should be explained once the story is complete. First, the basic demonstratives can be used both predicatively and adnominally, and so their syntactic and semantic treatment must account for both uses. Second, the existence of what looks like a human–non-human distinction only in the plural demonstratives is potentially troubling, as Bender (1998: 60–61) points out. Similar contrasts in animacy, gender, or noun class are often expressed in the singular and neutralized in the plural, as in

⁵This bifurcation is partly reminiscent of French possessive modifiers, which encode the number of the possessum, and separately the person and number of the possessor. Unlike French possessives, however, here only the number of the referent is specified, not the number of the orientation target.

such well-known paradigms as Russian personal pronouns or French determiners. If the term *gender* is understood in a broad sense, the Marshallese pattern appears to contradict two of Greenberg's (1963) descriptive universals:⁶

Universal 37. A language never has more gender categories in non-singular numbers than in the singular (Greenberg 1963: 75, 90).

Universal 45. If there are any gender distinctions in the plural of the pronoun, there are some gender distinctions in the singular also (Greenberg 1963: 76, 90).

Finally, while we have set facultative number aside for the purposes of this article, its representation on pronouns will ultimately need to be accounted for. Our claim that the singular is marked relative to the plural provides a first step towards an analysis, making it unsurprising that the facultative number markers are affixed to the plural form, rather than to the singular.

We begin with features of personal pronouns, so as to establish how the person and number features are structured when they both specify the referent.

4.1 Personal pronouns

Following Harbour (2016), as adapted by Cowper and Hall (2019) and Bjorkman et al. (2019), we assume that in Marshallese, the person features are organized into the contrastive hierarchy in (2), with [\pm author] taking scope over [\pm participant], giving quadripartition. Syntactically, we assume that the personal pronouns contain at least a π P, whose head π is specified with the two person features.

Because there is a plural inclusive pronoun *kōj* that has no singular or dual counterpart, we assume, following Harbour (2008, 2016), that the singular–plural contrast in Marshallese is encoded by the feature ATOMIC (and not by MINIMAL). We further provisionally assume, with Harbour (2016), that number occupies a syntactic head above π P, which we represent as #, heading a number phrase, #P. The absolute pronoun paradigm is repeated in (10), with the feature specifications added.⁷

(10) Absolute pronouns (human referents only)

	SINGULAR	PLURAL	Person features
1st excl.	ña	kōm	[+author, –participant]
1st incl.	—	kōj	[+author, +participant]
2nd	kwe	koṃ	[–author, +participant]
3rd	e	er	[–author, –participant]
Number features	<small>ATOMIC</small>	(<i>non-ATOMIC</i>)	

(Adapted from Bender et al. 2016: 172)

⁶Marshallese is not alone in this; see Plank and Schellinger (1997) for additional examples and discussion.

⁷We argue below that the number feature ATOMIC is privative in Marshallese.

We will refine our account of the syntactic structure of the personal pronouns in section 5, in light of the analysis of the demonstratives, to which we now turn.

4.2 The demonstratives: Overview

The table in (11) presents an overview of the semantic types and morphosyntactic structures we propose for each of the different kinds of demonstratives. All the demonstratives include a Dem head that takes a χ P as its complement. If specified as [+proximal], the spatial χ head takes a DP complement containing a π P whose features specify the person the demonstrative is proximal to. The Dem head itself hosts either a humanness feature or a number feature, in complementary distribution, as discussed below. The DemP is of semantic type $\langle e,t \rangle$; this is the type of the Basic demonstratives, which can be predicates or adnominal modifiers. The other demonstratives, which are arguments of type e , have an additional D head above Dem. The locative demonstratives, which denote places, can further compose with a P head (spelled out as *i-*), which turns them into adverbial modifiers. The following subsections describe the structures and their motivations in more detail; the Basic demonstratives are discussed in section 4.3, the Focus demonstratives in section 4.4, the Locative demonstratives in section 4.5, and the Personal demonstratives in section 4.6.

(11) Semantic types and morphosyntactic structure of the Marshallese demonstratives

	Type	Structure
Basic	$\langle e,t \rangle$	DemP > χ P (> DP > π P)
Focus	e	D_{foc} P > DemP > χ P (> DP > π P)
Locative	e	D_{loc} P > DemP > χ P (> DP > π P)
Locative (with <i>i-</i>)	$\langle e,t \rangle$	PP > D_{loc} P > DemP > χ P (> DP > π P)
Personal	e	D_{hum} P > DemP > χ P (> DP > π P)

4.3 Basic demonstratives

The full paradigm of basic demonstratives is given in (12). We have no explanation for the absence of emphatic forms for ‘near first person inclusive’, but this does appear to be a systematic gap and not a syncretism between inclusive and exclusive (see also Rudiak-Gould 2004: 173).

(12) Basic demonstratives
(predicates in verbless copular sentences, also used adnominally)

	NON-EMPHATIC			EMPHATIC		
	SING.	PLUR.		SING.	PLUR.	
		NON-HUM.	HUM.		NON-HUM.	HUM.
Near: 1st excl.	e	$k\bar{a}$	$r\bar{a}$	$ii\bar{o}$	$k\bar{a}k\bar{a}$	$r\bar{a}r\bar{a}$
1st incl.	in	$kein$	$rein$	—	—	—
2nd	ηe	$k\eta e$	$r\eta e$	$\eta e\eta e$	$k\bar{a}k\eta e$	$r\bar{a}r\eta e$
3rd	$e\eta$	$k\eta$	$r\eta$	$ii\eta$	$k\bar{a}k\eta$	$r\bar{a}r\eta$
Remote	eo	ko	ro	$iuweo$	$koko$	$roro$

(Bender et al. 2016: 179)

We propose that the basic demonstratives are syntactically DemPs and semantically predicates. Their two uses are illustrated in (13) with examples from Bender (1971: 455) (who uses a different orthography from Bender et al. 2016). In both (13a) and (13b), the remote demonstrative *kew* (= *ko* in (12)) is used adnominally, functioning as a demonstrative determiner to ‘books’. The near-inclusive demonstrative *kəyiń* (= *kein*) in (13b), on the other hand, is used predicatively in answer to the question asked in (13a).

- (13) a. yerkiy bək kew?
 where book DEM.REM.NON-HUM.PL
 ‘Where are the books?’
- b. bək kew kəyiń
 book REM.NON-HUM.PL DEM.near-1ST.INCL.NON-HUM.PL
 ‘The books (are) right here (between us).’

Although the subject of (13b) contains a ‘remote’ demonstrative, the property ‘near both the speaker and the addressee’ can be predicated of it, evidently without contradiction. This suggests that the ‘remote’ demonstratives are simply unmarked for proximity to any person, rather than being markedly distal.

The order of the Vocabulary Items (VIs) in the basic demonstratives follows the pattern in (14a), and their syntactic structure is at least what is shown in (14b).⁸

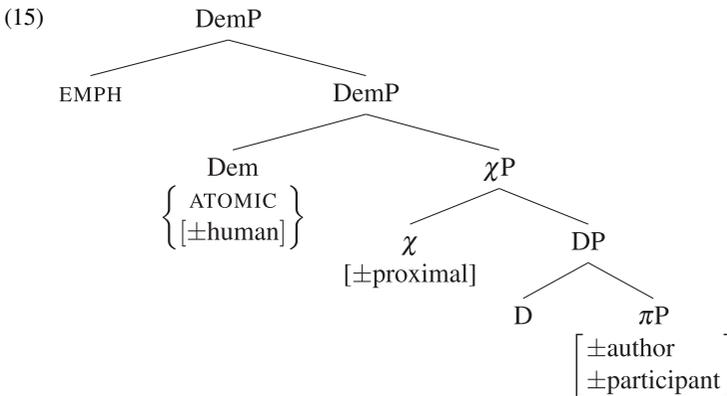
- (14) a. (EMPH) – ATOMIC/[±human] – χ + π
- b.
-

The spatial head χ may be either [+proximal], in which case it takes a complement specifying who it is proximal to, or [–proximal], in which case it does not. The [–proximal] χ gives the ‘remote’ demonstratives, which, as suggested above, are not necessarily distal from the speaker or the hearer, but whose position is simply not specified relative to any person. The [+proximal] χ , on the other hand, denotes a function that combines with a person specification, and returns the property of being near that person.⁹

⁸Since the spelled-out order matches that in the syntactic structure, we assume for convenience that the forms arise by postsyntactic morphological merger, not by syntactic head movement (Embick and Noyer 2001, Matushansky 2006). EMPH, as discussed below, is an adjunct to DemP, and is therefore optional.

⁹The proximity need not be literally spatial; Rudiak-Gould (2004: 121) gives the temporal example *wiik in*, meaning ‘the present week’. We set aside the question of whether this

Bjorkman et al. (2019) propose for Heiltsuk that the third-person specification [–author, –participant] denotes a property rather than an entity, and that this accounts for the absence of third-person-oriented demonstratives in that language. In their analysis, χ is a function from an individual to the property of being proximal to that individual. If χ requires an argument of type *e*, and third-person π features denote the property ‘does not include the speaker or the addressee’, then χ cannot take third-person arguments – a useful result in the case of Heiltsuk. In Marshallese, however, the presence of third-person-oriented demonstratives (the fourth row of forms in (12)) indicates that it must be possible for a [+proximal] χ head to combine with a [–author, –participant] π P. Either Bjorkman et al.’s (2019) proposal is simply wrong, in which case an alternative explanation is needed for the absence of such demonstratives in Heiltsuk, or Marshallese has a different structure that allows them. For the purposes of this article, we will pursue the second option, namely that π P in Marshallese is consistently of semantic type $\langle e, t \rangle$, and that there is an intervening head, with the semantics of a definite determiner, that converts π Ps to type *e* before they combine with χ , giving (15) as the structure of the Marshallese basic demonstratives.¹⁰ The availability of third-person-oriented demonstratives in Marshallese, versus their unavailability in Heiltsuk, thus follows from two differences between the languages: first, χ in Heiltsuk is a feature of the π head, while in Marshallese, χ heads its own projection above the pronominal DP. Second, participant π features in Heiltsuk are of type *e* and thus can compose directly with χ . This second property raises questions about Heiltsuk that go beyond the scope of this article.



No matter what the semantic type of π is, the difference between Marshallese and Heiltsuk shows that neither the presence nor the impossibility of third-person-oriented demonstratives follows automatically from any universal property of π , or of χ .

constitutes a metaphorical extension of a χ function whose core meaning is spatial, or whether it indicates that χ is unspecified as to what kind of proximity it marks.

¹⁰We will see in section 5 why π P alone cannot be analysed as being of semantic type *e* in Marshallese.

The head above χP in (15) is Dem. Its featural content can be either the privative number feature *ATOMIC* or either value of the binary feature $[\pm\text{human}]$, but, crucially, these two features cannot co-occur. The complementarity of *ATOMIC* and $[\pm\text{human}]$ generates, though it cannot explain, the Marshallese pattern of marking the human–non-human distinction only in the plural.

As noted above, this pattern is typologically unusual in that languages typically mark at least as many gender/animacy/noun class distinctions in the singular as they do in the plural. In a more abstract formal sense, though, this generalization falls into a larger pattern in which the presence of a marked value on one dimension of morphosemantic feature space causes contrasts on another dimension to be neutralized. If we are correct in positing *ATOMIC* as the marked value of number in Marshallese, then we can say that the human–non-human contrast is neutralized in the singular because the singular is more marked than the plural. Unlike many other such cases, however, this neutralization should not be attributed to the language’s inventory of vocabulary items; it is not just a syncretism in one set of forms, but a consistent pattern that holds across all the demonstrative paradigms.

Our account of the interaction between *ATOMIC* and $[\pm\text{human}]$ rests on two propositions. First, we claim that Universal Grammar allows privative and binary features to co-exist in a single system. As argued in Cowper and Hall (2014), what UG provides to the learner is not an inventory of ready-made features, but rather a general mechanism for constructing discrete featural representations by observing correlations between contrasts in different levels of linguistic structure. In Marshallese, number is encoded by privative *ATOMIC*, so that a nominal from which this feature is absent will be construed as plural. Humanness, on the other hand, is equipollent; $[\text{+human}]$ and $[\text{–human}]$ are both marked, and the absence of a value for $[\pm\text{human}]$ is simply underspecification.

The second component of our account is the stipulation that the Dem head in (15) must be specified for exactly one feature. It cannot have two features, nor can it be featureless (or absent). This means that there are three possible values Dem can bear, as listed in (16). Note that this approach also makes a non-accidental connection between the interaction of number and $[\pm\text{human}]$ marking on the one hand, and the fact that inclusive forms in Marshallese pattern with plurals in the pronoun system.¹¹

(16)	Feature	Interpretation
	a. <i>ATOMIC</i>	singular, humanness unspecified
	b. $[\text{+human}]$	plural, human
	c. $[\text{–human}]$	plural, non-human

¹¹As pointed out by a reviewer, another possible approach would be to add an impoverishment rule deleting $[\pm\text{human}]$ in the presence of *ATOMIC*. Such an approach would be compatible with a variety of featural accounts, including those using either of the binary features $[\pm\text{atomic}]$ and $[\pm\text{minimal}]$, *mutatis mutandis*. We therefore find the impoverishment approach less attractive.

The other feature in the structure in (15) is *EMPH*, which is present in the emphatic or ‘singling-out’ forms in the paradigm in (12). Bender and Rudiak-Gould both describe the meaning of the emphatic forms in terms that suggest contrastive focus. Rudiak-Gould (2004: 173) writes that “if you are saying ‘not that house, *this* house,’ then the emphatic ‘this’ would be expressed with a singling out form,” and Bender (1971: 455) reports that these forms “are used in *SINGLING OUT* specific items from among others, except for the ‘remote’ category, where ‘remote s.o.’ items are visible, while the simple remote forms are used for items physically out of sight or existing in the past, and also as relative pronouns.”

Semantically, *EMPH* appears to be a modifier, and it does not affect either the semantic type or the syntactic distribution of the demonstrative. We therefore assume that it is a syntactic adjunct to *DemP*, and represent it as monovalent in the absence of evidence to the contrary. Phonologically, it is realized by reduplication of the initial syllable of its host, with some complications when the host begins with a vowel.

The denotation of the *DemP* in (15) is a predicate that includes the properties contributed by its individual features:

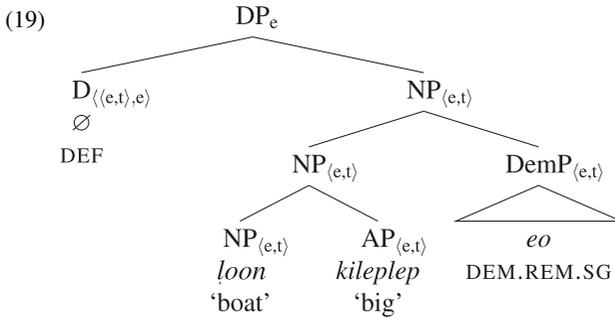
(17) Feature	Semantic contribution
a. [−proximal]	no particular spatial location
b. [+proximal]	near the person specified by πP
c. <i>ATOMIC</i>	singular
d. [+human] (<i>non-ATOMIC</i>)	plural; human
e. [−human] (<i>non-ATOMIC</i>)	plural; non-human
f. <i>EMPH</i>	emphatic / contrastively focused

Such a *DemP* can be used predicatively without further structure, as *kəyiń* is in (13b). For the adnominal use of the demonstratives, we propose that they compose intersectively with the head noun, as adjectives do, and that the result then combines with a (phonologically null) definite *D* to produce a constituent of type *e*.

This approach receives some support from the fact that, as Willson (2008) points out, demonstratives follow the noun, as do adjectives, while quantifiers and numerals precede it, including the numeral *juon* ‘one’, which also serves as an indefinite article. The examples in (18) are adapted from Willson (2008: 58–59).

- (18) a. *ʃoon kileplep eo*
 boat big DEM.REM.SG
 ‘the big boat’
- b. *juon kuuj kilmeej*
 one cat black
 ‘a black cat’
- c. *kajojo kuuj kilmeej*
 all cat black
 ‘all black cats’

Demonstratives follow any adjectives that modify the head noun, as in (18a). The tree in (19) shows the structure we posit for such a nominal, including both the syntactic categories and their semantic types.



Relative clauses, unlike adjectives, follow the demonstrative, as in (20), adapted from Willson (2008: 59).

- (20) *ɭaddik eo e-ar lijjidwaɭok ilo wōjke eo*
 boy DEM.REM.SG 3RD.SG-PAST swing in tree DEM.REM.SG
 'the boy that was swinging in the tree'

Since we take both relative clauses and adnominal demonstratives to be $\langle e,t \rangle$ predicates adjoined to NP and composed intersectively, their ordering has no semantic consequences. We speculate that this ordering may be prosodically motivated, in that it places lighter modifiers closer to the head noun and heavier ones at the end of the NP.

The vocabulary items that spell out the various basic demonstratives are given in (21)–(23).

- (21) VI realizing Emph

EMPH \Leftrightarrow CV_{RED}

- (22) VIs realizing Dem

Dem \Leftrightarrow \emptyset
 [ATOMIC]

Dem \Leftrightarrow *ra*
 [+human]

Dem \Leftrightarrow *ka*
 [–human]

(23) VIs realizing χ and π in χ P

Near 1ST.EXCL: χ π $\Leftrightarrow e$
 $[+proximal] \left[\begin{array}{l} +author \\ -participant \end{array} \right]$

Near 1ST.INCL: χ π $\Leftrightarrow in$
 $[+proximal] \left[\begin{array}{l} +author \\ +participant \end{array} \right]$

Near 2ND: χ π $\Leftrightarrow \eta e$
 $[+proximal] \left[\begin{array}{l} -author \\ +participant \end{array} \right]$

Near 3RD: χ π $\Leftrightarrow e\eta$
 $[+proximal] \left[\begin{array}{l} -author \\ -participant \end{array} \right]$

Remote: χ $\Leftrightarrow eo$
 $[-proximal]$

Note that the realization of a Dem head bearing *ATOMIC* is phonologically null, while Dem heads bearing [+human] or [-human] are overtly realized. Essentially, we claim that pure number is never overtly spelled out in Marshallese. It is the complementary distribution of [\pm human] marking and *ATOMIC* that makes number recoverable from the phonological form, and also gives the illusion of overt plural marking. Crucially for our account, the prefixes *ka-* and *ra-* are not number markers. It is also worth noting that the Vocabulary items are pronounced in the order in which they appear in the syntactic structure of the demonstrative, with the element realizing Dem preceding the element realizing the lower head, χ . This suggests that χ does not move to adjoin to the head of DemP, but that the two heads undergo postsyntactic morphological merger (Embick and Noyer 2001, Matushansky 2006).¹²

4.4 Focus demonstratives

We turn now to the Focus demonstratives, which are structurally the simplest of the remaining three types. The full paradigm is given in (24).¹³

¹²As noted by an anonymous reviewer, the same morpheme order could be derived via syntactic head movement if the morphemes themselves were lexically specified as prefixal rather than suffixal. We leave this question open.

¹³According to Bender et al. (2016), the second set of singular forms are variants that tend to be used by older speakers of the Ratak dialect of Marshallese. We include them for completeness, but will ignore them in our analysis.

(24) Focus demonstratives

a. Non-emphatic

	SINGULAR	PLURAL	
		NON-HUMAN	HUMAN
Near: 1st excl.	eñe / iōōe	erkā	errā
1st incl.	eñin / iin	erkein	errein
2nd	eñņe / ieņe	erkaņe	erraņe
3rd	eñeņ / ieeņ	erkaņ	erraņ
Remote	eñeo / ieo	erko	erro

b. Emphatic

	SINGULAR	PLURAL	
		NON-HUMAN	HUMAN
Near: 1st excl.	eñō / iiō	erkākā	errārā
1st incl.	—	—	—
2nd	eñņeņe / ieņene	erkākāņe	errārāņe
3rd	eñieņ	erkākāņ	errārāņ
Remote	eñuweo / euwoo	erkoko	erroro

(Bender et al. 2016: 179)

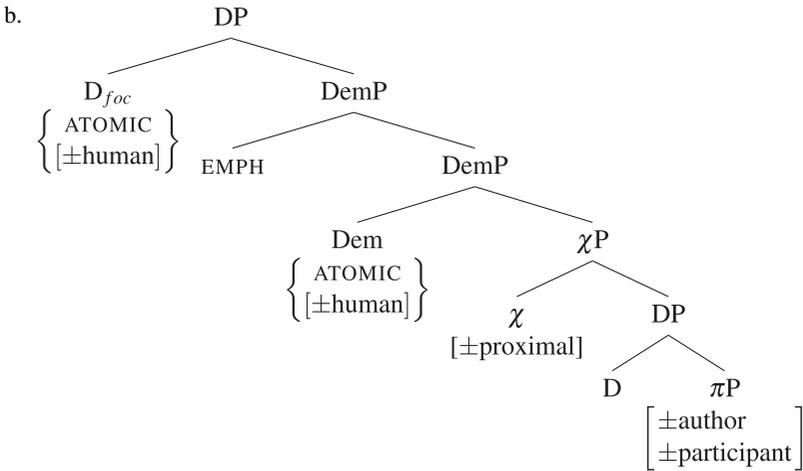
Focus demonstratives occur as subjects of non-verbal copular clauses, as in (25), as sentence-fragment answers to questions, as in (26), and as the subjects of certain resultative clauses. As Bender et al. (2016: 181) put it, '[w]hy they are not found in the main clauses of verbal sentences is not clear.'

- (25) a. **Eñin** bok eo.
 FOC.SG.NEAR-1ST.INCL book DEM.REM.SG
 'This is the book.'
- b. **Errāraņ** armej in kōle ro
 FOC.EMPH.HUM.NEAR-3RD person from Kili REM.HUM
 'These are the people from Kili.'
- (26) a. Ewi pinjeļ eo am?
 Where pencil DEM.REM.SG your
 'Where is your pencil?'
- b. **Eñe.**
 FOC.SG.NEAR-1ST.EXCL
 'Here.'

Focus demonstratives, like the other two types, are built on the structure of Basic demonstratives. While the Basic demonstratives are semantically predicates and syntactically DemPs, the others all function as referential nominals, characterized by Bender et al. (2016) as demonstrative pronouns. We therefore assume that they

are all of semantic type *e*, and that syntactically, they are DPs.¹⁴ Each of the three types of demonstrative pronouns has a specific D head; the D that appears in focus demonstratives is diacritically labelled *D_{loc}*.¹⁵ It takes the Basic DemP as its complement, and thus surfaces before the reduplicative *EMPH* marker. As can be seen in (24), *D_{loc}* has two surface forms, *er* and *eñ*, sensitive to the presence or absence of *ATOMIC* on the Dem head.¹⁶ We implement this by positing an uninterpretable [*uDem*] feature on *D_{loc}*, which copies the featural content of Dem to *D_{loc}*. The phonological form of the focus demonstrative thus follows the template in (27a), and has the structure in (27b). The vocabulary items are given in (28).

(27) a. *D_{loc}* – (*EMPH*) – *ATOMIC*/[±human] – χ + π



¹⁴The sentence fragment *Eñe* in (26) seems, on first examination, to be of a higher type than *e*. However, we speculate that this sentence fragment is the subject of an elided copular predicate, along the lines of “This thing near me (is my pencil),” and that the translation in our source may not be completely literal. Such an account would bring the sentence-fragment use of these demonstratives into line with their other uses, which are all clearly DP-like. We are grateful to the reviewer who raised this point.

¹⁵While we cannot discern from our sources the specific meaning associated with the *D_{loc}* head, we assume that it can be identified. From the data we have, one possibility is that focus demonstratives occupy a focussed subject position in a (possibly elided) copular or cleft construction. As will be shown below, the D heads associated with human and locative demonstratives have specific semantic content.

¹⁶As noted above, the second set of singular forms are variants used by older speakers of one of the two main dialects of Marshallese.

(28) Vocabulary items specific to focus demonstratives

$$D_{\text{foc}} \quad \Leftrightarrow \quad e\tilde{n}$$

[ATOMIC]

$$D_{\text{foc}} \quad \Leftrightarrow \quad er$$

The other two types of demonstratives have a structure essentially the same as what we have proposed for the focus demonstratives, differing only in the specific D head above DemP, and in the case of the locatives, a possible preposition above DP.

4.5 Locative demonstratives

The full paradigm of locative demonstratives is given in (29). This is the smallest of the four demonstrative paradigms, since it denotes a place and thus cannot refer to a human being. It therefore lacks the human–nonhuman distinction found in the plural forms of the other paradigms.

(29)

	NON-EMPHATIC		EMPHATIC	
	SINGULAR	PLURAL	SINGULAR	PLURAL
Near: 1st excl.	(i)je	(i)jekā	(i)jiiō	(i)jekākā
1st incl.	(i)jin	(i)jekein	—	—
2nd	(i)jeŋe	(i)jekəŋe	(i)jeŋe	(i)jekəŋe
3rd	(i)jeŋ	(i)jekəŋ	(i)jieŋ	(i)jekākəŋ
Remote	(i)jo	(i)jeko	(i)juweo	(i)jekoko

(Bender et al. 2016: 179)

We assume, following Bender et al. (2016), that the optional initial element *i-* is a form of the preposition meaning ‘in’ or ‘at’. This assumption is consistent with all of the examples in that work: when *i-* is absent, the demonstrative refers to a location, as can be seen in (30). In these two examples, the demonstrative is the object of either a preposition, as in (30a), or a verb, as in (30b). When the preposition *i-* appears, the demonstrative behaves adverbially, denoting the property of being in or at a location, as in (31).

(30) Locative demonstratives used pronominally to refer to places

- a. imaroŋ ke pāk waj **ñan jeŋe**?
‘Can I back up **to there**?’ (the place near you)
- b. Joŋan an to aŋ pād ānin, kiiō kwe mōmō in **jin**.
‘You’ve been here so long that now you know **the place** inside out.’
(the place near us-inclusive)

(Bender et al. 2016: 180)

(31) Locative demonstratives with *i-* used adverbially

- a. Jen kakkije **i-jin**.
‘Let’s rest **here**.’ (at the place near us-inclusive)

b. Ij katōte joor e i-je.

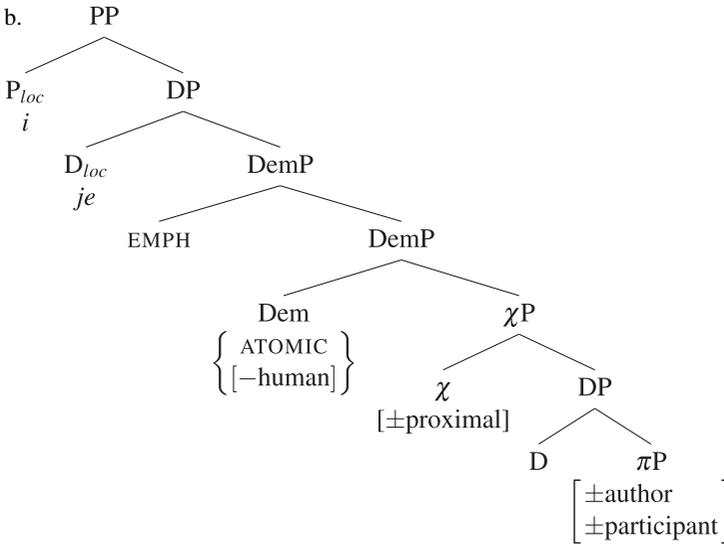
‘I’m fixing the post (in the ground) **here**.’ (at the place near me)

(Bender et al. 2016: 180)

We propose that non-prepositional locative demonstratives, like focus demonstratives, are DPs headed by a specific D head, which we call D_{loc} . D_{loc} is a function of type $\langle\langle e,t \rangle, e \rangle$, which takes a predicative DemP as its argument and returns the unique location x that has the properties specified by the features of that DemP. These features cannot include [+human], which would be incompatible with the presupposition introduced by D_{loc} that the referent x is a location. Morphologically, D_{loc} has a single realization, *je-*.

A locative demonstrative can also be a PP, consisting of the locative preposition *i-*, an allomorph of the full preposition *ilo* ‘in, at’, with a locative DP as its complement. The structure of the locative demonstrative is shown in (32), and the relevant Vocabulary Items are given in (33).

(32) a. (P) – D_{loc} – (EMPH) – ATOMIC/[–human] – $\chi + \pi$



(33) Vocabulary items specific to locative demonstratives

$D_{loc} \Leftrightarrow je$

$P_{loc} \Leftrightarrow i / D_{loc}$

$\Leftrightarrow ilo / \text{elsewhere}$

We now turn to the personal demonstratives, the largest of all the demonstrative paradigms.

4.6 Personal demonstratives

The personal demonstratives, like the absolute and object pronouns, can only refer to human beings. Unlike those pronouns, however, they encode a binary gender

distinction, as can be seen from the paradigm in (34). Unlike the [\pm human] contrast, this gender distinction holds for both singulars and plurals.

(34) Personal demonstratives

a. Non-emphatic

	SINGULAR		PLURAL	
	MASC.	FEM.	MASC.	FEM.
Near: 1st excl.	l̥ōe	lie	l̥ōmarā	liṃarā
1st incl.	l̥ein	liin	l̥ōmarein	liṃarein
2 nd	l̥ōṇe	liṇe	l̥ōmarāṇe	liṃarane
3 rd	l̥eṇ	liṇ	l̥ōmarāṇ	liṃarāṇ
Remote	l̥eo	lio	l̥ōmaro	liṃaro

b. Emphatic

	SINGULAR		PLURAL	
	MASC.	FEM.	MASC.	FEM.
Near: 1st excl.	leiō	liiō	l̥ōmarārā	liṃarārā
1st incl.	—	—	—	—
2 nd	l̥ōṇeṇe	liṇeṇe	l̥ōmarārāṇe	liṃarārāṇe
3 rd	l̥eieṇ	liieṇ	l̥ōmarārāṇ	liṃarārāṇ
Remote	l̥ouweo	luweo	l̥ōmaroro	liṃaroro

(Bender et al. 2016: 179)

As with the focus and locative demonstratives, we propose that personal demonstratives are of semantic type *e*, and are headed by a specific *D*, which we call *D_{hum}*. *D_{hum}* takes a DemP as its complement and returns the unique (but possibly plural) human individual *x* that has the properties specified by the features of DemP. Whereas *D_{loc}* presupposes that *x* is a location and is thus incompatible with [+human] DemPs, *D_{hum}* presupposes that *x* is human, and is incompatible with [−human] DemPs. (Both *D_{loc}* and *D_{hum}* are compatible with ATOMIC DemPs, which are unspecified for humanness.)

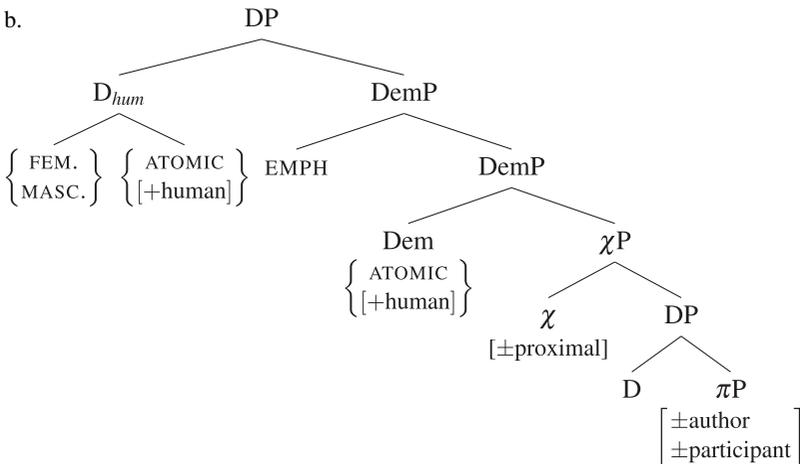
Among the pronoun and demonstrative paradigms, only the personal demonstratives mark binary gender, and so we assume that their gender features are located on *D_{hum}*, rather than lower in the structure.¹⁷ This is consistent with the idea that ‘semantic’ gender (i.e., gender marking that reflects what Ackerman 2019 calls the conceptual gender of the referent, rather than the potentially arbitrary noun class features of a root) is relatively high in the nominal structure, as argued by Armoskaite and Wiltschko (2012), Kučerová (2018), and Sigurðsson (2019), among others. (See

¹⁷There is also a pair of binary gender prefixes *li-* and *la-*, which appear in proper names and in descriptive nicknames such as *Ḷakkadudu* ‘Shorty (MASC.)’ < *kadu* ‘be short’ (Bender et al. 2016: 120–121). While these are intriguingly similar to the gender marking on personal demonstratives, we set them aside for the purposes of this article.

also Kramer 2015, 2016 and Conrod 2019 for overviews of the syntactic positions attributed to different kinds of gender features.)

Notice also that in this paradigm, the plural forms all have the marker *-ma-* between the gender-specific D and the reduplication that encodes EMPH. We propose to analyse this marker, not as a plural marker specific to the personal demonstratives, but rather as a marker of agreement with the feature [+human] in the Dem head. Specifically, we propose that like D_{loc} , D_{hum} carries an uninterpretable Dem feature, [*u*Dem], which probes, matches with the Dem head, and copies the features from Dem to D_{hum} . Since personal demonstratives are always human, this means that in the singular, the feature ATOMIC will be copied to D_{hum} , and in the plural, [+human] will be copied. The order of elements spelled out is shown in (35a), and the structure, after Agree, is shown in (35b).

(35) a. MASC./FEM. – *ma/∅* – (EMPH) – ATOMIC/[+human] – $\chi+\pi$



The vocabulary items specific to personal demonstratives are given in (36). Note that the realization of [+human] in D is different from its realization in Dem, as given in (22) above. It should also be kept in mind that although all D_{hum} heads contain a semantic presupposition of humanness, the morphological feature [+human] is present on D_{hum} only when it agrees with a Dem head that is [+human] (and thus non-atomic).

(36) Vocabulary items specific to personal demonstratives, spelling out D_{hum}

D_{hum} [+human] ⇔ *ma*

D_{hum} [FEMININE] ⇔ *li*

D_{hum} [MASCULINE] ⇔ *!o*

Since both *-ma-* and the gender markers appear in the plural personal demonstratives, we propose that this head undergoes morphological fission, with [+human] being spelled out first, followed by the fission of the gender feature and its subsequent realization to the left of *-ma-*. In the singular, since there is no [+human] feature on D_{hum} , no fission is required and the gender feature is spelled out alone.

While the fission approach requires an extra mechanism not otherwise needed here, we believe that it is preferable to the two other obvious possibilities. One alternative would be to propose an Agr head of some sort below D_{hum} , which would copy the features from Dem and spell out [+human] as *-ma-*. The other possibility would be to have D_{hum} carry only the [*u*Dem] feature, with the gender markers realizing a Gender head above D. We are reluctant to resort to an Agr projection, since we take agreement to be parasitic on other categories, and no obvious explanatory value would be added here by attributing it to a separate syntactic head. The second approach would raise new problems. For example, what makes the Gender projection obligatory with personal demonstratives? In other words, why is there not a gender-unspecified personal demonstrative that simply lacks the Gender projection? And second, why is the Gender projection impossible with other demonstratives, in particular those in which the Dem head is specified as [+human]? The fission account we propose captures the fact that the gender markers, and the possibility of *-ma*, arise always and only when D_{hum} appears in the structure.

5. PRONOUNS AGAIN

Having developed an account of the complex system of demonstratives in Marshallese, it is worth looking again at the pronouns, to ensure that the features and structures proposed for demonstratives do not make bad predictions about the pronouns. The absolute pronoun paradigm in (10) is repeated here as (37).¹⁸

(37) Absolute pronouns (human referents only)

	SINGULAR	PLURAL	Person features
1st excl.	ña	kōm	[+author, -participant]
1st incl.	—	kōj	[+author, +participant]
2nd	kwe	koṃ	[-author, +participant]
3rd	e	er	[-author, -participant]
Number features	ATOMIC	(non-ATOMIC)	

(Adapted from Bender et al. 2016: 172)

We assume that the structure of the pronouns, like that of the demonstratives, includes the features [\pm author] and [\pm participant], as well as ATOMIC, which

¹⁸We restrict our discussion to the absolute pronouns, since the point here is to determine whether the account we have proposed for demonstratives is compatible with the person and number distinctions made in the pronoun system. The question of whether the pronouns – or, for that matter, the demonstratives – could be further decomposed is left for future work.

distinguishes singular from plural. However, there are reasons to think that the features are organized somewhat differently in the pronouns than in the demonstratives. First, recall that with the demonstratives, the person features are contained within a DP below the head that hosts *ATOMIC*, specifying a different entity from the one specified by *ATOMIC*. With pronouns, the distinction encoded by *ATOMIC* holds of the same entity as that specified by the person features. Second, notice that unlike the demonstratives, the pronouns are not morphologically transparent; there are no identifiable exponents corresponding to number alone, or to person alone. Finally, while *DemP* denotes an $\langle e,t \rangle$ predicate, we assume that the pronouns should be of type.

We therefore propose that, while the contrasts in pronouns are due to the same person and number features as are found in demonstratives, they are structured differently. Specifically, we propose that the Marshallese pronouns consist of a single head, which we will call ϕ , specified for the person features $[\pm\text{author}]$ and $[\pm\text{participant}]$ and, when singular, for *ATOMIC*. In addition, since the pronouns can refer only to human beings, we assume that the ϕ head, like D_{hum} , presupposes a human referent.¹⁹ ϕ denotes the unique, possibly plural, human individual x who has the properties specified by its features. The pronouns thus have the very simple syntactic structure in (38), and the vocabulary items in (39).

$$(38) \quad \begin{array}{c} \phi \\ \left[\begin{array}{c} \pm\text{author} \\ \pm\text{participant} \\ \text{(ATOMIC)} \end{array} \right] \end{array}$$

(39) a.	ϕ	$\Leftrightarrow \tilde{n}a$	d.	ϕ	$\Leftrightarrow k\ddot{o}m$
	$\left[\begin{array}{c} +\text{author} \\ -\text{participant} \\ \text{ATOMIC} \end{array} \right]$			$\left[\begin{array}{c} +\text{author} \\ -\text{participant} \end{array} \right]$	
b.	ϕ	$\Leftrightarrow kwe$	e.	ϕ	$\Leftrightarrow k\ddot{o}j$
	$\left[\begin{array}{c} -\text{author} \\ +\text{participant} \\ \text{ATOMIC} \end{array} \right]$			$\left[\begin{array}{c} +\text{author} \\ +\text{participant} \end{array} \right]$	
c.	ϕ	$\Leftrightarrow e$	f.	ϕ	$\Leftrightarrow ko\ddot{m}$
	$\left[\begin{array}{c} -\text{author} \\ -\text{participant} \\ \text{ATOMIC} \end{array} \right]$			$\left[\begin{array}{c} -\text{author} \\ +\text{participant} \end{array} \right]$	
			g.	ϕ	$\Leftrightarrow er$
				$\left[\begin{array}{c} -\text{author} \\ -\text{participant} \end{array} \right]$	

¹⁹The restriction to human referents raises the question of how Marshallese fits into the universal pronoun typology proposed by Cardinaletti and Starke (1999), where only so-called *strong pronouns* are restricted to human referents. We have not found any evidence in Marshallese of their category of *deficient pronouns*, and thus set the question aside.

6. CONSEQUENCES

We have argued that, as in Heiltsuk, the person-oriented demonstratives of Marshallese are formed using the same set of person features that underlie the pronoun system. In both languages, the features [\pm author] and [\pm participant] define a person quadripartition. And in both languages, the locative element χ , adapted from Harbour (2016), is at the heart of the person-oriented demonstratives. However, the syntactic organization of these features is quite different in the two languages. While in Heiltsuk, both the demonstratives and the third-person pronouns are person-oriented, in Marshallese only the demonstratives are. In addition, in Heiltsuk only inclusive, exclusive and second persons can serve as targets of orientation, while in Marshallese all four persons can. This follows from the fact that in Marshallese, χ is an independent syntactic head taking any person complex as its complement, while in Heiltsuk, χ is a feature of the person complex itself and is thus sensitive to differences between the persons. Nonetheless, χ itself has the same semantics, and takes the same type of semantic argument, in both languages.

We have also argued that some of the features of nominals in Marshallese are binary, while at least one is privative. It is empirically crucial that ATOMIC be a privative feature and that [\pm human] be binary; this is what generates the superficially unusual interaction between number and the human–non-human distinction. And crucially, singular must be the marked number in this language. The adicity of morphosemantic features in general is thus not determined by Universal Grammar, but can be specified feature by feature. It remains to be seen how many languages make as full use of the possibilities as Marshallese does.

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