

Stable and unstable person features: A structural account *

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1. Introduction

Deictic paradigms show a hitherto unnoticed asymmetry in their diachronic development. While the deictic categories expressed by pronominal and possessive paradigms are overall stable, demonstrative paradigms can undergo a reorganisation that typically results, from a diachronic viewpoint, in a reduction in the number of deictic oppositions encoded in the system.¹ In other words, the resulting demonstrative paradigms display a different organisation of the original deictic content and crucially no comparable reorganisation is attested in personal pronouns and possessives.

In this paper, I provide an account for these different diachronic behaviours. I assume, with Harbour (2016) *i.a.*, that demonstrative systems are defined by person features, on a par with pronominal and possessive ones. I also posit that these three classes of deictics show structural differences as to how person features are encoded in their internal structure. Thus, revisiting Polinsky's (2018), intuition that stability is linked to structural salience, I relate the attested diachronic asymmetry to structural differences across deictic classes: specifically, I argue that person features are only salient, and therefore stable, in personal pronouns and in the indexical part of possessives, but that they are not salient, and therefore unstable, in the indexical part of demonstratives.

The empirical domain is restricted to Romance languages (data from contributions in Ledgeway and Maiden 2016 and in Jungbluth and Da Milano 2015), and to the Romance-based creoles reported in the Atlas of Pidgin and Creole Structures ('APiCS'; Michaelis et al. 2013). However, their validity seems to be wider-ranging. In what follows, only forms with interpretable and valued person features will be considered. Instead, all pronominal

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¹When talking about (in)stability, I exclusively refer to the organisation of the indexical paradigms and not to morphological and lexical changes. Also, note that in this paper I only consider exophoric pronominal and adjectival demonstratives.

forms that can be related to person agreement phenomena, e.g. clitic pronouns, have been excluded.

This paper is structured as follows. Section 2 illustrates the asymmetry across deictic paradigms. Section 3 introduces the assumed featural system, while Section 4 puts forth structural analyses for the different indexical forms under investigation. Building on these, in Section 5 I provide an account for the stability *vs* instability of person partitions in deictic paradigms by establishing a link between (in)stability and structural considerations.

2. Exploring the asymmetry

In Romance languages and Romance-based creoles, pronominal and possessive paradigms typically encode a three-way opposition between (what belongs to) the speaker of a given utterance (1st person), (what belongs to) the hearer (2nd person), and (what belongs to) those not involved in a given utterance as discourse participants (3rd person). Demonstrative systems, instead, display either a three-way person-based opposition or a two-way one.² The former is akin to the one displayed by personal pronouns and possessives and contrastively denotes ‘this near me’, ‘that near you’, and ‘that far from us’. The latter can be centred on the participants (participant-based binary systems: ‘this near me and/or you’ and ‘that far from me and you’) or on the speaker (speaker-based binary systems: ‘this near me’ and ‘that far from me’). Importantly, binary systems can be shown to have evolved from ternary ones.

In this section, I review pronominal, possessive, and demonstrative data abstracting away from number-, gender-, and case-driven morphological variation, from lexical innovations, from politeness distinctions (in pronominal and possessive paradigms), and from DP-internal agreement (in possessive and demonstrative paradigms: all forms are reported in their (NOM).SG.M inflection).

2.1 Pronominal and possessive paradigms are stable

Romance languages consistently retain the ternary pronominal paradigm of Latin, as shown for instance by Galician:

(1) *Pronominal paradigms in diachrony*

	1SG	2SG	3SG.M	1PL	2PL	3PL.M
Latin	ego	tu	ille	nos	vos	illi
Galician	eu	ti	el	nós	vós	eles

Galician contrastively encodes three persons, i.e. it fully preserves the ternary deictic paradigm of Latin.³ The same is true for all 32 Romance languages reported in Ledgeway and Maiden (2016) and in Jungbluth and Da Milano (2015).

²Demonstrative systems can also be unary (i.e. one form, no deictic contrasts). This case is left aside here.

³Latin’s 3rd person semantics was expressed by demonstrative forms. For the present purpose, such categorial considerations are irrelevant: what is relevant, instead, is the availability of that semantic value.

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Similarly, pronominal paradigms in the 29 Romance-based varieties reported by the APiCS (28 Romance-based creoles, 1 mixed language: Media Lengua) retain the partitions attested in their lexifiers:

(2) *Pronominal paradigms in contact varieties*

a. Ternary

	1SG	2SG	3SG	1PL	2PL	3PL
French (strong series)	moi	toi	lui	nous	vous	eux
Louisiana Creole	mwa	twa	li	nou	vouzòt	ye

b. Quaternary (1EXCL vs 1INCL)

	1SG	2SG	3SG	1EXCL.PL	1INCL.PL	2PL	3PL
Spanish/Hiligaynon	yo	tú	él	kamí	kitá	kamó	silá
Zamboangueno	(i)yo	etu	éle/'le	kamé	kitá	kamó	silá

Thus, if the lexifier displays a ternary paradigm, the resulting contact variety shows a tripartition too (28 ternary varieties in the sample).⁴ Likewise, if the lexifier has a four-way deictic opposition, i.e. if it displays the clusivity distinction (1EXCL vs 1INCL), the resulting contact variety does so, too: this is the case for Zamboangueno (note the number split for the lexifier: Spanish in the singular, Hiligaynon in the plural).

Romance possessive paradigms display continuity with respect to the 3-way person distinction of Latin as well, as attested by Italian:

(3) *Possessive paradigms in diachrony*

	POSS.1SG	POSS.2SG	POSS.3SG	POSS.1PL	POSS.2PL	POSS.3PL
Latin	meus	tuus	suus	noster	vester	suus
Italian	mio	tuo	suo	nostro	vostro	loro

Jungbluth and Da Milano (2015) and Ledgeway and Maiden (2016) report possessive paradigms for 23 more Romance varieties: these, too, systematically continue Latin's ternary system.

Likewise, possessive paradigms reported for Romance-based creoles show the same deictic structure of those in the lexifiers: ternary ($n=28$) and quaternary ($n=1$) systems are equally preserved. Despite this semantic continuity, creole possessive paradigms can differ quite substantially in their morphology from those of their lexifiers:

⁴Batavia Creole (Portuguese-based) and Tayo (French-based) optionally display a seeming EXCL-INCL distinction, but I follow Haspelmath et al. 2013 in disregarding the genuineness of those contrasts.

(4) *Possessive paradigms in contact varieties*

	POSS.1SG	POSS.2SG	POSS.3SG	POSS.1PL	POSS.2PL	POSS.3PL
French	mon	ton	son	notre	votre	leur
A Reunion Creole	mon	ton	son	nout	zot	zot
B Haitian Creole	mwen	ou	li	nou	nou	yo
C Tayo	pur mwa	pur twa	pur lja	pur nu	pur usot	pur sola

Creoles mark pronominal possession synthetically, by a genitive pronoun ('Strategy A', Reunion Creole; and see the Romance lexifiers), by a bare personal pronoun ('Strategy B', Haitian Creole), or analytically, by embedding personal pronouns in PPs ('Strategy C', Tayo: *pur* 'for', and phonologically reduced variants thereof). All these strategies can be found in one and the same language: for instance, Cape Verdean Creoles (Portuguese-based) possessive paradigms optionally show at least one form for each strategy.

Overall, the deictic structure of pronominal and possessive paradigms does not undergo change in diachrony or in contact situations. Crucially, no Romance or Romance-based language only systematically distinguishes two persons, that is: no reduction alike to that attested by demonstrative systems is instantiated in pronominal and possessive paradigms.

2.2 Demonstrative paradigms are unstable

In contrast, ternary demonstrative paradigms can undergo a general reorganisation in conjunction with the loss of one term, which determines a shift in the meaning of (one of) the remaining forms. Diachronically, this development is attested both in the transition from Latin to Romance languages and within the diachrony of Romance languages themselves. Only the latter case will be exemplified here:

(5) *Demonstratives in diachrony: from ternary to binary systems*

- a. Participant-oriented: Catalan (Ledgeway and Smith 2016:886)

	near the speaker	near the hearer	far from both
Conservative	aquest	aquess	aquell
Innovative	aquest	aquest	aquell

- b. Speaker-oriented: Italian

	near the speaker	near the hearer	far from both
Tuscan varieties	questo	codesto	quello
Standard Italian	questo	quello	quello

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In both cases, the original demonstrative systems were ternary, i.e. had dedicated forms for the deictic domain of speaker and hearer, and for that of neither of them. In innovative Catalan varieties, the erstwhile ternary system was reduced to a participant-based binary one that encodes a two-way distinction between what is near (one of) the participants (*aquest*) and what is not (*aquell*). In Italian, the original ternary system resulted in a speaker-based binary one, where the new deictic opposition is between a referent near the speaker (*questo*) and a referent far from the speaker (*quello*).

In both cases, the hearer-related domain loses its contrastive encoding: in participant-based binary systems, it is subsumed into the new undifferentiated participant-related domain; in speaker-based binary systems, it is subsumed into the non-speaker related one.

Demonstrative systems in Ibero-Romance-based creoles show a similar development:

(6) *Demonstratives in contact: from ternary to binary systems*

	near the speaker	near the hearer	far from both
Portuguese	este	esse	aquele
Sri Lanka Portuguese	isti	aka	aka

Although the lexifiers' demonstrative forms are retained, their deictic oppositions can be reduced, as shown by Sri Lanka Portuguese. Only 4/20 Ibero-Romance creoles (partially) retain the ternary demonstrative system of their lexifier (Maurer and the APiCS Consortium 2013; however, Guinea-Bissau Kriyol and Angolar are regarded here as displaying binary systems, see Terenghi 2020 for discussion). Here, too, when the reduction of ternary systems to binary ones takes place, the domain that is systematically lost is the hearer-related one.

Thus, the development attested by demonstrative paradigms differs from that of pronominal and possessive ones: only the former, but not the latter, commonly undergo a change in the organisation of the deictic domain. This process, despite differences in the resulting semantic organisation (typically: speaker-oriented vs participant-oriented binary systems) has a constant feature: the affected domain is the hearer-related one.

3. Person features

As already stated, I assume that all three types of deictics are derived by person features (see Terenghi 2021 for a discussion of demonstratives). Specifically, I follow Harbour (2016) in taking person features to denote lattice-on-lattice actions. The three posited lattices are equivalent to the power sets of different subsets of the person ontology (i.e. speaker, *i*; hearer, *u*; and other(s), *o*) that the grammar uses to access it. The π lattice denotes the entire ontology and is a syntactic head; the author and participant lattices denote smaller subsets and are the person features proper.

- (7) a. $\llbracket \pi \rrbracket = \{i_o, iu_o, u_o, o_o\}$ ⁵ (Harbour 2016:73–74)
 b. $\llbracket \text{Author} \rrbracket = \{i\}$ (Harbour 2016:73–74)
 c. $\llbracket \text{Participant} \rrbracket = \{i, iu, u\}$ (Harbour 2016:73–74)

The author and participant lattices/features (henceforth: ‘A’ and ‘P’) interact with the π lattice/head, i.e. (successively) perform operations on it by means of their values: [+F] induces the (lattice-theoretic) operation of disjoint addition, whereas [–F] induces joint subtraction. Differences in the actions performed (‘+’ or ‘–’), in feature activity (how many features perform actions on π : none, one, or two), and in the ordering of compositions if both features are active (which feature composes with π first) yield different partitions of π . A comprehensive overview of the available partitions is presented in (8), while I refer the reader to Harbour (2016:ch.4) for details and step-by-step derivations. The two key points for the account to be developed here are: different partitions are derived by means of parametric variation (feature activity); and both the feature values and the ordering of compositions are meaningful and as such yield semantic contrasts.

(8) *Partitions of π*

	i_o	iu_o	u_o	o_o
Unary	$\pi = \{i_o, iu_o, u_o, o_o\}$			
Binary (P)	$+P(\pi) = \{i_o, iu_o, u_o\}$			$-P(\pi) = \{o_o\}$
Binary (A)	$+A(\pi) = \{i_o, iu_o\}$		$-A(\pi) = \{u_o, o_o\}$	
Ternary	$+P(+A(\pi)) = \{i_o, iu_o\}$		$+P(-A(\pi)) = \{u_o\}$	$-P(\pm A(\pi)) = \{o_o\}$
Quaternary	$+A(-P(\pi)) = \{i_o\}$	$+A(+P(\pi)) = \{iu_o\}$	$-A(+P(\pi)) = \{u_o\}$	$-P(-A(\pi)) = \{o_o\}$

Thus, featurally, ternary and quaternary paradigms (personal pronouns, possessives, and input demonstrative systems in Section 2) are derived by the successive function applications ($\pm P(\pm A(\pi))$) or ($\pm A(\pm P(\pi))$): that is, they parametrically differ in the ordering of operations, rather than in the extension of their feature inventories. Instead, binary systems are derived by either ($\pm P(\pi)$), as in innovative Catalan varieties (5a) or ($\pm A(\pi)$), as in Italian and Sri Lanka Portuguese (5b, 6): the feature inventory for bipartitions is thus smaller and the transition from ternary to binary systems implies a reduction in the feature inventory, i.e. the loss of one feature.

4. Structural differences

Personal pronouns, possessives, and demonstratives can all be derived by the same featural system. However, I contend, the position in which the person features are merged changes across these classes. In this section, I briefly discuss the internal structure of the deictic forms under analysis. Note that I do not follow Harbour (2016) in regarding the π head as

⁵The subscript o notation is a shorthand for elements that contain any number of others, including none (Harbour 2016:72).

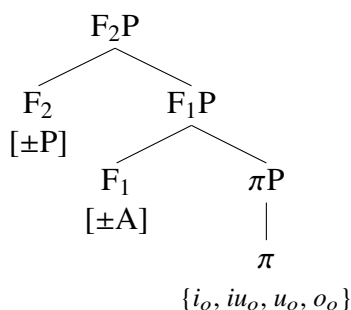
hosting the active person feature(s); rather, I take them to compose with π from dedicated functional phrases that mirror the (successive) semantic composition(s), under exoskeletal assumptions.⁶

4.1 Personal pronouns

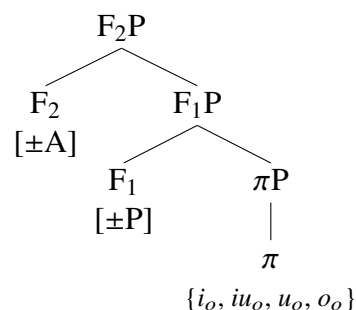
Personal pronouns are straightforwardly derived by the composition of person features with π , as defined in Section 3. Thus, taking the active person features to be distributed along the functional spine, the lower internal structure of personal pronouns can be represented as follows:

(9) *Personal pronouns: internal structure*

a. Ternary systems



b. Quaternary systems



These structures further compose with number (see Harbour 2016 and Vanden Wyngaerd 2018, *i.a.*, for number above person) and a DP layer at least, but this is not relevant for the present discussion.

Romance pronominal systems are stable, as seen in Section 2.1. The genetic stability of person partitions is confirmed by Nichols (1992) on the basis of a wide typological investigation. Nonetheless, some examples of instability are attested in contact situations: a list of such cases is provided by Siewierska (2004:7.3). Under the featural system adopted here, these cases can be derived as a parametric change in the ordering of compositions with π representable as a switch from the tree in (10a) to that in (10b), or *vice versa*. Importantly, both systems are derived by the activation of both person features. The difference in the number of paradigm cells is epiphenomenal and as such substantially different from binary and unary systems, which are instead derived by a reduced number of active features.

4.2 Possessives as inherently case-marked pronouns

I take possessives to minimally consist of an indexical base that refers to, and whose value covaries with, the possessor. Possessive forms possibly also show DP-internal agreement morphology, which instead typically covaries with the possessum: this is disregarded here as it exceeds the scope of the present study, focused exclusively on interpretable and valued person features.

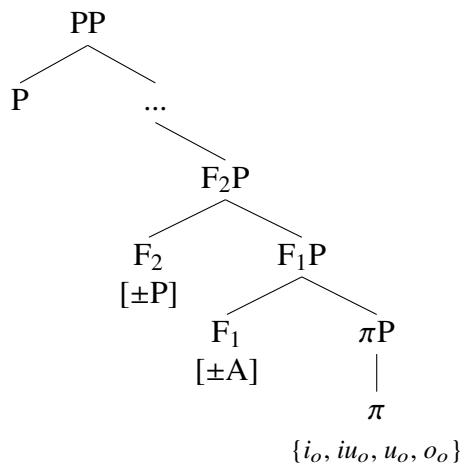
⁶This solution is fully compatible with Harbour's featural system, as per Harbour 2014:192.

From the discussion in Section 2.1 and from wider preliminary cross-linguistic evidence, it resulted that the indexical base of possessives is rather similar to personal pronouns: not only do the two classes of deictics always instantiate the same partitions, but possession can be expressed simply by means of personal pronouns, either bare, or preceded by a preposition.

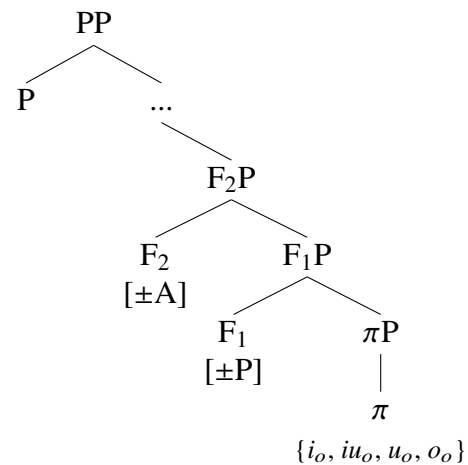
Here, I reconcile the diachronic symmetry across personal pronouns and possessives and the morphological variation across possessives paradigms by taking the indexical base of possessives to be an inherently Case-marked personal pronoun. That is, the indexical base of possessives is a personal pronoun that is assigned a theta-related case by the possessed NP (its selector). On the one hand, this ensures the same diachronic behaviour of possessives as personal pronouns: possessive forms are, after all, pronouns. On the other hand, I build on Řezáč (2008) in taking inherent/theta-related case to be underlyingly construed as a PP. This means that the indexical base of possessive forms is a personal pronoun embedded under a preposition, which can result in variation at Spell Out. The indexical part of possessive forms can therefore be derived as follows (again, abstracting away from number and D):

(10) *Indexical base of possessive forms: internal structure*

a. Ternary systems



b. Quaternary systems



Variation at Spell-Out is fully represented in creole languages (see Section 2.1, (4)). Firstly, the P+personal pronoun complex can be spelled out as such in analytic constructions (P + pronoun, Strategy 3), as seen in Tayo (e.g. *pur mwa* ‘my’, (4)):

- (11) [PP *pur* ... [_{F₂P} +Participant [_{F₁P} +Author [_{πP} π]]]]
mwa (personal pronoun, see 4.1)

Secondly, the pronoun can be overtly case marked. Building on the complementary distribution of prepositions and case suffixes noted for instance by Caha (2009), but reversing Caha’s logic that genitival forms in Latin and Germanic personal paradigms actually belong to possessive paradigms, I take the P + pronoun complex to be spelled out synthetically in the genitive adjectival form (strategy 1). This is the case for Romance varieties (e.g.

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Italian *mio* ‘my’, (3)) and for the possessive paradigms of some Romance-based creoles (e.g. Reunion Creole *mon* ‘my’, (4)):

$$(12) \quad \underbrace{[\text{PP } P_{\text{GEN/DAT}}^7 \dots [\text{F}_2\text{P } +\text{Participant } [\text{F}_1\text{P } +\text{Author } [\text{P} \pi]]]]]}_{\text{mio / mon}}$$

Finally, the P + pronoun complex can be headed by a null P, which derives syncretism between possessive forms and unmarked pronouns (Strategy 2: Haitian Creole *mwen* ‘I, my’, (4)):

$$(13) \quad \underbrace{[\text{PP } \emptyset \dots [\text{F}_2\text{P } +\text{Participant } [\text{F}_1\text{P } +\text{Author } [\text{P} \pi]]]]]}_{\text{mwen (personal pronoun, see 4.1)}}$$

Thus, while the indexical side of the derivations of possessive forms and personal pronouns are parallel, possessive forms present additional functional material that can result in morphological variation at Spell-Out. Evidence in favour of variation at Spell-Out, as opposed to structural differences between the different strategies, comes from the creole data discussed in 2.1, and specifically from the fact that multiple Spell-Out variants are equally well attested for one and the same creole. Besides cross-linguistic variation, this account makes sense of intra-linguistic variation without additional structures or assumptions.

Some preliminary evidence for this structure comes from agreement facts, and namely the exclusion of the inherent person features encoded in the indexical base of possessives from DP-external agreement:

$$(14) \quad [\text{My}_1 \text{ dog}]_3 \text{ is}_3/\text{*am}_1 \text{ brown.}$$

Taking the indexical part of possessives to be an inherently Case-marked personal pronoun, that is (following Źrezać), a PP, directly accounts for this fact, if the P head is construed as a phase head that makes its c-command domain opaque.

4.3 A prepositional approach to demonstratives

I assume that demonstrative forms minimally consist of an indexical base, too: again, additional inflectional morphology will not be discussed here. As I argue elsewhere (Terenghi 2021), the indexical part of demonstratives performs a similar function to locative prepositions, and in particular to *near*. Both locative prepositions and demonstratives are relational, i.e. they establish a spatial relation between two entities. Specifically, demonstratives locate their external world referent (the ‘figure’ of exophoric demonstratives) in relation to (one of) the discourse participants (the person-rooted ‘ground’); the spatial relation expressed is ‘vicinity’.

⁷Given the widespread syncretism between GEN and DAT, and that they can both express possession and instantiate a part-whole relation (see e.g. Manzini and Franco 2016), it is not crucial to make a specific proposal as regards the definition of the inherent Case for the purposes of this paper.

Against this background, I maintain that the internal structure of demonstratives is derived as a spatial/locative preposition modelled in vectorial terms, along the lines of the analysis proposed by Svenonius (2006, 2010):

(15) [... [LocP in [AxPartP front [KP of [DP the tree]]]]]

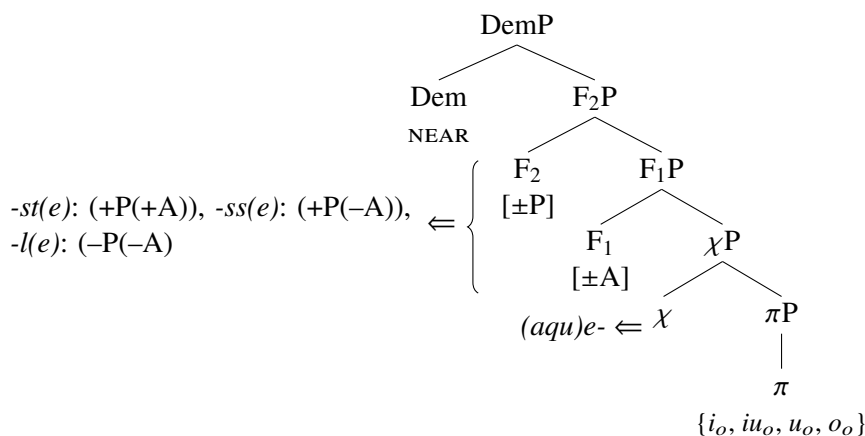
My proposal is that the internal structure of demonstratives can be mapped onto the section of the extended PP introduced in (15), i.e. its lowest part, as follows:

(16) [DemP NEAR [FP ±Author/±Participant [χ P χ [π P π]]]]

Thus, within DemP, a space function (χ , nominally inspired by Harbour 2016:179) applies to the ground, i.e. the set of the discourse atoms ($\pi = \{i_o, iu_o, u_o, o_o\}$), to yield the region that the ground occupies (see Svenonius' KP). This defines a set of locations rather than a set of individuals, as π otherwise does in personal pronouns and possessives. Subsequently, person features can (but need not) apply to the result of this first composition to identify a specific subregion of the wider region defined by $\chi(\pi)$, on a par with Svenonius' AxPartP. The availability of person features is subject to parametric variation, as per Section 3: this is how the whole (person-oriented) cross-linguistic variation displayed across demonstratives paradigms is generated. The location of (one of the) atoms of discourse is in turn the argument of a 'vicinity' NEAR function introduced by Dem: this function maps the region occupied by (one of the atoms of) π to a set of vectors that start at (that atom of) π and point to its vicinity. The vectors' length is shorter than a pragmatically determined number, in line with the treatment of *near* put forward by Zwarts (1997), and the figure will be located at the endpoint of one of these vectors. See Terenghi 2021 for a more detailed account and supporting evidence coming from morphological compositionality and from diachronic facts.

Thus, ternary systems (such as Portuguese: *este, esse, aquele*) are derived by the activation of both person features and can be represented as follows:⁸

(17) Ternary demonstrative systems (e.g. Portuguese)



⁸F₁ and F₂ constitute a span and are lexicalised as such (see Svenonius 2020).

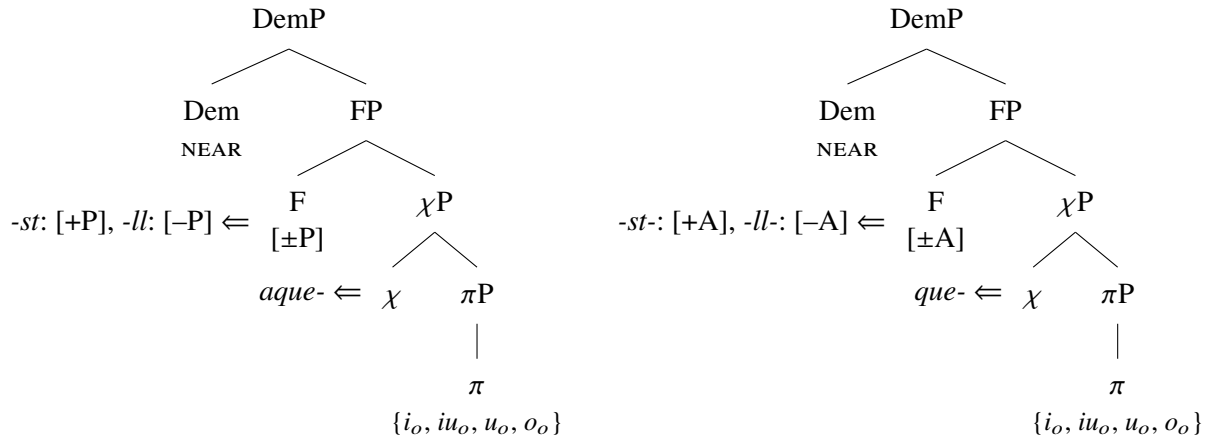
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Instead, binary systems are derived by one active feature only: $[\pm\text{Participant}]$ in participant-oriented binary systems (e.g. Catalan *aquest* vs *aquell*, (5a)), and $[\pm\text{Author}]$ in speaker-oriented binary systems (e.g. Italian *questo* vs *quello*, (5b)). Their derivations follow:

(18) *Binary demonstrative systems*

a. Participant-oriented: Catalan (5a)

b. Speaker-oriented: Italian (5b)



Thus, and differently from the deictic elements discussed in Section 4.1 and 4.2, the cross-linguistic variation attested across demonstrative systems can only be derived by a difference in feature inventories (how many and which features are active), rather than by considerations about the ordering of compositions with π . The cross-linguistic variation attested in the Romance domain resulted from a diachronic change from ternary (two active person features) to binary (one active person feature) systems (see Section 2.2). Therefore, it can be concluded that demonstrative paradigms, and the person features that derive them, are unstable, differently from pronominal and possessive paradigms and their person features. Only in the former case, but not in the latter, can person features be ‘lost’.

5. (In)stability: A structural account

The derivations presented in Section 4 highlight a difference in the merge position of person features in personal pronouns and possessives on the one hand and in demonstratives on the other. In fact, pronominal and possessive forms are derived by direct composition of $[\pm A]$ and $[\pm P]$ with π , whereas the indexical part of demonstratives is the result of a two-step functional application, with $[\pm A]$ and/or $[\pm P]$ composing with π indirectly, i.e. with the mediation of a spatial head χ . This divide, crucially, parallels the attested diachronic asymmetry. My proposal to account for the differences in diachronic behaviour in the deictic paradigms under discussion is that the (in)stability of deictic partitions, i.e., ultimately, the (in)stability of person features, is linked to structural salience, and specifically that “structurally salient” person features are stable.

The link between stability and structural salience is inspired by Polinsky (2018:63–65), who noted that elements which are “structurally salient”, i.e. encoded in the top layer of the relevant domains, are stable in the grammar of speakers of heritage languages,

whereas elements which are not “structurally salient”, i.e. encoded lower down in those same domains, tend to be unstable and as such to undergo change or loss. To support this claim, Polinsky collects evidence for stability differences between person (stable, high) and number (unstable, low) in the ϕ domain, and between tense (stable, high) and aspect (unstable, low) in the IP domain. This state of affairs is thus formalised as a matter of “sensitivity to the topmost projection of a domain” (Polinsky 2018:63) on the part of heritage speakers.

Here, I put forward a different implementation of the idea of sensitivity to structural salience, one that follows from the action-on-lattice feature system assumed in Section 3 and that is compatible with the word-internal context in which I am operating. My proposal is that the most salient (and as such: stable) feature is the first to combine with the root of its functional spine. In the case of person features, the most salient feature will be the first to compose with π . As such, structural salience amounts to compositional primacy with respect to the lowest head in a functional domain and therefore the most salient feature is the most deeply embedded one. This reverses Polinsky’s intuition about structural salience as a correlate of higher structural positions. Note, however, that this reversal matches the different domains of investigation and complies with the mirror principle (Polinsky refers to the word-level and beyond, while the present account is focused on the word-internal structure). Further, I take sensitivity to structural salience as compositional primacy to be generally valid, i.e. beyond heritage speakers.

The specific implementation proposed here hinges on the assumption that recursive compositions provoke an increase in computational complexity, where complexity is understood in terms of description length (Kolmogorov complexity): more complex descriptions contain more information, i.e., here, more functional applications. Assuming a higher level of complexity induced by recursive functional applications, I posit that one (or more) non-salient feature(s) can be delinked from their functional spine, to limit the overall level of complexity. This results in the most peripheral feature(s) being delinked from the functional spine.

Thus, if person features directly compose with π , they are salient, and as such not prone to change: this is the case in pronominal and possessive paradigms, that in fact are typically stable and only show inversions in the ordering of compositions, but no feature deactivation. If, however, the composition of person features with π is mediated by another feature, i.e. if $[\pm A]$ and $[\pm P]$ apply to the result of a precedent functional application with π , they are not structurally salient, and as such more prone to change: this is the case in the indexical base of demonstrative forms, where the composition of $[\pm A]$ and $[\pm P]$ with π is mediated by χ . Then, one (or more) person feature(s) can be delinked from the $[\chi[\pi]]$ functional spine, yielding binary (or even unary) demonstrative systems.⁹

This can be straightforwardly seen in the reduction of ternary systems into speaker-based binary ones (e.g. Italian: cf. 18b). Participant-based binary systems (e.g. Catalan: cf. 18a), instead, presuppose a preliminary parametric change in the ordering of feature applications:

⁹Note that, differently from person features, Dem is not delinked, despite being the most peripheral head in the derivation. It can be stipulated that Dem is always (and only) active whenever χ is present. A principled formalisation for this stipulation is left for further research.

Stable and unstable person features

- (19) a. Italian: [DemP NEAR [_{F₂P} ±Participant [_{F₁P} ±Author [_{χP} χ [_{πP} π]]]]]
b. Catalan: [DemP NEAR [_{F₂P} ±Author [_{F₁P} ±Participant [_{χP} χ [_{πP} π]]]]]

The availability of an inclusive reading for the erstwhile speaker-only-oriented term in some varieties, e.g. Old Neapolitan (Ledgeway 2009:195ff.), confirms that such parametric change must have indeed occurred.

6. Conclusions

In the foregoing, I presented a previously unnoticed diachronic asymmetry related to person features as encoded in pronominal and possessive paradigms vs demonstrative paradigms, and I illustrated it with Romance diachronic and contact data. On the basis of Harbour's (2016) person feature system, of the different structural derivations for the internal structure of the three person indexicals under investigation, and of a revised version of Polinsky's (2018) correlation between structural salience and stability, I argued that this diachronic asymmetry can be explained in structural terms.

Specifically, on computational grounds, I defined structural salience as a correlate of the first merge position of a feature with respect to the root of its functional spine. The most embedded feature, i.e. the first to apply to the root of the spine, is taken to be salient and, as such, stable. Person features as encoded in personal pronouns and possessive forms are structurally salient, as they directly compose with π . Instead, person features as encoded in demonstrative forms are not structurally salient, as they indirectly compose with π (in this case, the composition is mediated by a spatial function χ): they are therefore unstable.

As a consequence, to reduce the increased computational complexity due to the reiterated function applications, person features in demonstrative forms (but not in personal pronouns and possessives) may undergo delinking from the functional spine. This correctly captures the diachronic reduction attested exclusively for demonstrative paradigms.

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