

### A person-rooted spatial analysis of demonstratives

**Background.** Since Anderson & Keenan 1985, two types of (exophoric) demonstrative systems have been described: person-oriented demonstrative systems refer to the speech act participants (speaker ‘*i*’, hearer ‘*u*’) and locate an object/an area in the vicinity of one or neither of them; distance-oriented demonstrative systems, instead, make reference to the relative distance of the referent w.r.t. *i*, by defining (typically: three) degrees of distance: near *i*, at a medial distance from *i*, and far from *i*. The distinction between these systems is only visible in the middle term of ternary demonstrative systems (i.e. systems with three contrastive forms): that term is interpreted as *u*-related in person-oriented systems and as conveying a medial distance from *i* in distance-oriented ones. In this paper, I propose a unified analysis of these systems: I argue that the indexical base of demonstratives (i.e. leaving aside the inflectional material that results from DP-internal agreement, when available) is to be construed as person-oriented and that distance contrasts are encoded on top of person oppositions, i.e. derived as modifiers of the person core.

**Person-oriented.** The clearest piece of evidence in favour of a person core modified by distance contrasts comes from varieties whose demonstratives encode degrees of distance from *u*, besides *i*. Such is the case for Satawal (Micronesian; Yoshida 1981, through Imai 2003: 22):

(1) *minna* ‘in *u*’s hand’ — *minimu* ‘close to *u*’

Weaker evidence comes from a) interactions between person and distance described as cases of distance oppositions acting on a pre-existing person contrast (Harbour 2016: 177 ff.) and b) varieties that non-consistently encode only some distance degrees for only some deictic centres. An example of the former case is Slave (Athapaskan; Rice 1989: 321): here, the underlying binary distinction (‘here’, i.e. near *i*, vs ‘there’, i.e. far from *i*) is further specified as near or far:

(2) *dih* ‘here, near’ — *dúh* ‘here, far’ — *pekúh* ‘there, near’ — *yah* ‘there, far’

An example of the latter is Iraqw (Cushitic; Mous 1993: 90), with an *i*-related form, a *u*-related form, and two forms not related to either but contributing two degrees of distance (‘far from *i* & *u*’, ‘further from *i* & *u*’). The absence of a full set of distance contrasts w.r.t. a consistent deictic centre (here: participants, thus the absence of a form for ‘proximal to both *i* & *u*’), suggests that distance is not a primitive, but rather that it acts on a subpart of an already established person distinction (participants vs non-participants: distance specified for non-participants):

(3) *ká* ‘near *i*’ — *síng* ‘near *u*’ — *qáʔ* ‘far from *i* & *u*’ — *dáʔ* ‘further away from *i* & *u*’

On these bases, I take all demonstrative systems to be person-oriented, distance distinctions being only optional extensions of the person core of demonstrative forms. In this, I echo Lander & Haegeman (2016). However, I depart from their analysis w.r.t. 1) the actual features that characterise demonstrative systems (person features, rather than locative ones) and 2) the derivation of demonstrative forms (a prepositional-like approach with degree modifiers acting on vector denotations to encode distance contrasts, rather than a nanosyntactic deictic functional sequence possibly interrupted by degree modifiers).

**Person features.** I argue that, given their person-oriented nature, demonstrative systems are to be defined in terms of person features: this approach is superior to one that employs locative features for two main empirical reasons. Firstly, Lander & Haegeman’s locative analysis (features: [proximal] ‘close to *i*’, [medial] ‘close to *u*’, [distal] ‘far from *i* and *u*’) admittedly only accounts for up to three contrastive forms. However, some varieties display a four-way deictic contrast (Imai 2003: 22-23, Harbour 2016), e.g. Paamese (Crowley 1982: 62):

(4) *kele* ‘near *i*’, *ekok* ‘near *i* & *u*’, *kaisom* ‘near *u*’, *akēk* ‘not near *i* & *u*’

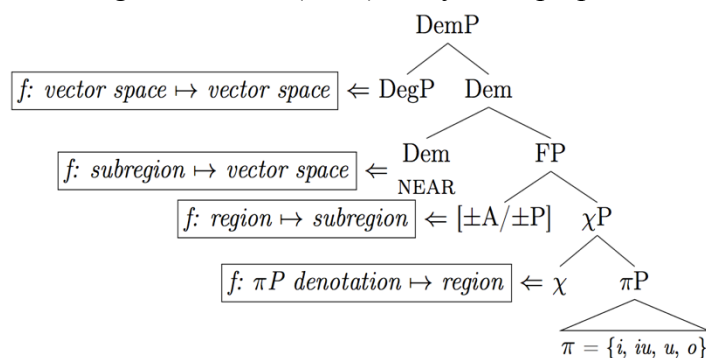
Secondly, the locative-based analysis admittedly predicts that demonstrative paradigms lack information about the number and gender of the deictic centre. However, systems encoding such information are attested, albeit extremely rare: in Siwi Berber (Souag 2014), *u*-related demonstratives (enclitic forms) also agree in gender and number with the hearer:

(5) *-ók* ‘near *u*.SG.M’ — *-óm* ‘near *u*.SG.F’ — *-érwān* ‘near *u*.PL’

To account for person oppositions in demonstrative systems, I assume the featural system put forward by Harbour (2016): two person features (Author, A, and Participant, P) that must each have one value (either + or –) in order to compose with  $\pi$ , the set of discourse-related atoms (speaker, hearer, others) and partition it. Unary systems (no contrast, e.g. French *ce*) are derived if person features do not functionally apply to  $\pi$ . Binary systems (two-way contrast) are derived by the functional application of only one person feature to  $\pi$ :  $\pm A(\pi)$  for speaker-based systems (English: *this* ‘near *i*’ – *that* ‘far from *i*’),  $\pm P(\pi)$  for participant-based ones (Catalan: *aquest* ‘near *i* & *u*’ – *aquell* ‘far from *i* & *u*’). Ternary systems are derived by the application of  $[\pm A]$  to  $\pi$ , subsequently composed with  $[\pm P]$ :  $\pm P(\pm A(\pi))$  (Japanese: *kore* ‘near *i*’ – *sore* ‘near *u*’ – *are* ‘far from *i* & *u*’). Quaternary systems are derived by the application of  $[\pm P]$  to  $\pi$ , subsequently composed with  $[\pm A]$ :  $\pm A(\pm P(\pi))$  (cf. Paamese, (4) above).

Reference to the number of (one of) the deictic centre(s) is naturally derived by further compositions of number features with  $\pi$  (Harbour 2016), reference to their gender is either encoded on  $\pi$  directly or together with number (left here for further research; but see Ritter 1993 for gender located on N vs on Num). I maintain that all systems that seemingly display any additional opposition can be derived by further modification of this person core.

**Derivation.** Person oppositions in demonstrative forms are arguably combined with a spatial head (roughly expressing the meaning: NEAR), as demonstratives locate their referent (‘figure’) in the vicinity of a person (‘ground’, i.e. the (relevant) speech act participants): in this, they are reminiscent of locative prepositions. Thus, I derive the indexical base of demonstratives following Svenonius’ (2006) analysis of prepositions. The ground for demonstrative forms is



$\pi$ , i.e. the atoms of discourse (speaker, hearer, other).  $\pi$  is mapped to the region it occupies by the spatial function  $\chi$  (nominally inspired by Harbour 2016). An optional FP can introduce the person features ( $[\pm A]$ ,  $[\pm P]$ , or their combination), to map the region occupied by  $\pi$  as a whole to the subregion occupied by a subset of its atoms only (the specific deictic

centre); if FP is absent, we get unary systems (no contrasts encoded:  $\chi(\pi)$ ), otherwise, according to the active features, we get one of the other systems ( $\pm A/\pm P(\chi(\pi))$ ). Finally, DEM introduces a ‘NEAR’ function that maps the region occupied by (one of the atoms of)  $\pi$  to a vectorial space, defined by the set of vectors that start at (the atom of)  $\pi$  and point to its vicinity: the vectors’ length is shorter than a pragmatically determined number (cf. the treatment of *near* by Zwarts 1997). Spec,Dem can host a degree phrase (DegP) that denotes a subset of the vectorial space by reducing the vectors’ length: varieties that encode a distance contrast on demonstratives use this function to restrict the vectorial space relative to one of the deictic centres defined by the person features (deriving, for instance, the ‘near’ spaces in (2) and the ‘in X’s hand’/[contact] spaces in (1)). Whether additional contrasts, most notably the visibility one (visible vs invisible referent), are encoded in the same projection is left for further research.

The figure (i.e. the demonstrative’s referent) is located within this vectorial space: pursuing the parallel with prepositions, where the figure is inserted in the specifier of a functional pP above DegP, this analysis would make a case in favour of low demonstratives. However, a full exploration of this approach’s consequences w.r.t. the DP-internal syntax of demonstratives exceeds the scope of this paper.

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