Choosing between Persons: Articulated Probes and The Ultra-Strong PCC

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Two Kinds of Person Case Constraint. Many languages show a restriction on combinations of local person direct object (DO) clitics or agreement markers in the presence of indirect object (IO) clitics or agreement markers known as the *Person Case Constraint* (PCC, [5, 6]). Languages differ on the granularity of the restriction. The *ultrastrong* PCC (U-PCC, [12]) distinguishes between first ('1'), second ('2') and third ('3') person and only allows combinations of DO and IO clitics when IO is 'more local' than DO indicated by ✓ in Table 1. Banned combinations in Tab. 1 are marked by ◯. The U-PCC is discussed for Classical Arabic ($\mathcal{A}$, [10, 12]) and Barceloní Catalan ($\mathcal{C}$, [5]). U-PCC languages ban combinations of 3-IO+1-DO, (1), and 2-IO+1-DO, (2), but allow 1-IO+2-DO, (3), shown here for $\mathcal{A}$. Often there are speakers with different kinds of PCC within one population. $\mathcal{C}$ and $\mathcal{A}$ are also reported to have speakers of the less granular *strong* PCC (S-PCC, $\mathcal{C}$: [5], $\mathcal{A}$: [11]). S-PCC distinguishes only between local person- and 3-clitics, banning local person DOs in the presence of any kind of indirect object. S-PCC rules out all of (1)–(3). In addition, both S-PCC and U-PCC varieties of $\mathcal{C}$ and $\mathcal{A}$ restrict combinations of 3-clitics, see Tab. 1. This is expected as their person restrictions require IO to be more local than DO. While $\mathcal{C}$ and $\mathcal{A}$ allow and ban the same clitic combinations, they differ in two points. Like many languages, $\mathcal{C}$ and $\mathcal{A}$ have alternate strategies for realizing banned clitic combinations, but they use different ones. While $\mathcal{C}$ mostly realizes IO with impoverished morphology, $\mathcal{A}$ systematically realizes DO as a non-clitic pronoun. Both $\mathcal{C}$ and $\mathcal{A}$ use the same alternate strategies in 3-3 combinations and PCC. Second, PCC arises in different syntactic configurations in the two languages, applicatives in $\mathcal{C}$, but causatives in $\mathcal{A}$. **The Proposal.** PCC is derived from the need of both DO and IO to agree with one person probe ([2, 3, 12, 1]). The difference between S-PCC and U-PCC follows from how finely the probe distinguishes between person categories. Person categories are represented on goals by sets of privative features ([4]): [π], [PART(ICIPANT)] and [SPEA(KER)], where 3=[π], 2=[π,PART] and 1=[π,PART,SPEA]. Person category X is 'more local' than Y when X's person specification is a superset of Y's. S-PCC arises in $\mathcal{C}$ and $\mathcal{A}$ when the probe is specified as [π,PART] and thus only distinguishes between 3 and local person. U-PCC arises when it is specified as [π,PART,SPEA] distinguishing between all three person categories. The person probe in $\mathcal{C}$ and $\mathcal{A}$ agrees first with DO and then with IO (also [1]). Agreement with IO is only possible if the probe has active features left that IO can value. This is the case when IO's features are a superset of DO's, i.e. when IO is more local than DO. Successful agreement leads to cliticization of both arguments, failure of agreement leads to ungrammaticality or alternate realization. The different alternate realizations of banned clitic combinations follow from how the failure of agreement with IO is dealt with. Following [3, 2], local person features need syntactic licensing, possibly as part of the case filter. Third person features on the other hand can fail to be licensed syntactically, without causing a crash ([14]). Following the idea that licensing makes features visible to the interfaces [9], failure to license 3 syntactically leads to failure of morphological realization. $\mathcal{C}$ has the morphological resources to spell out 3-IOs even when they have failed to license their person features. $\mathcal{A}$ on the other hand has an additional probe as part of the causative structure which licenses IOs that have failed to agree. **Barceloní Catalan.** [14] proposes that restrictions on 3-clitics in $\mathcal{C}$ arise in a configuration where DO has moved above IO to receive case, (4), visible in DO-IO order between 3-clitics and non-pronominal DOs and IOs. Agreement of v with both DO and IO is only possible when IO's person features are a superset of DO's, i.e. when IO is more local than DO. For illustration, in 1-IO+2-DO combinations v agrees with DO in [π,PART], leaving its [SPEA]-feature to agree with IO. When DO and IO have the same features (3-3) or when DO's features are a superset of IO's, agreement between v and IO is impossible because v has no features left that IO could value after it has agreed with DO. The effect of this agreement failure depends on the features of IO. I assume that [PART] and [SPEA] on goals need syntactic licensing, but that a goal that has both of these features is licensed if at least one of them agrees. For example in 2-DO+1-IO combinations, licensing [SPEA] on IO is sufficient. Failure to license any of IO's local person features as in 1-DO+2-IO leads to a syntactic crash, and IO has to be realized as a PP rather than a dative. [π] on the other hand can fail to be licensed without causing a crash, but will not be expressed morphologically if it does (5)–(6). When IO is 3, the 3-IO clitic *l-i* (3-DAT) surfaces without the 3-marker *l-* as a bare dative case marker /i/ [5, 7, 14], shown in (5) for PCC and in (6) for 3-3-combinations. This follows from the assumptions about person licensing and visibility. The 3-features on IO can fail to be licensed without causing a syntactic crash, but then end up not being realized morphologically. The difference between S-PCC and U-PCC lies in the person specification of the probe, following [4] for other person effects. S-PCC in $\mathcal{C}$ follows from a specification of the probe as [π,PART], where 1 and 2 are no longer distinguished. Relative to DO, IO no longer has a superset of the probe's features in 1-IO+2-DO. Accordingly, 1-IOs fail to agree here and have to be realized as PPs. All other combinations remain the same. **Classical Arabic.** Double object constructions in $\mathcal{A}$ are causatives (e.g. [8]:139). The *give*-verb in (1)–(3) for example is correctly glossed as a causative of *receive* as in (8), and IO is more accurately called a *causee*. Their structure is $[v^{caus}_{[\mathrm{u}\phi]}$ [IO $v^{ag}_{[\mathrm{u}\phi]}$ [V DO]]]] with person probes on both $\mathcal{V}$s. Cliticization expresses the features of the highest valued probe in the v-domain and clitic combinations arise when one probe agrees with both DO and IO in that order. Together with verb movement, this allows v^{ag} to agree with both arguments as in (7). v^{ag} agrees with DO from its base position. Verb movement raises it above IO, from where it can probe again ([4]) and agree with IO. Like in $\mathcal{C}$, agreement with both arguments is only possible when IO's person features are a superset of DO's. When the second agreement in (7) is successful, the probe on v^{caus} fails to agree making v^{ag} the highest valued probe and leading to clitcization of both pronouns. Following [13], I take v^{caus}'s failure to agree to be without consequences. When DO's person specification is equal to or more complex than IOs, v^{ag} fails to agree with IO. In such configurations, IO is licensed by agreement with v^{caus} making v^{caus} the highest valued probe and allowing only cliticization of IO. In such contexts, DO is realized as an independent object pronoun with the accusative marker *ʔɪjːaː-*, (8)–(9). Since both arguments license their ϕ-features even in PCC contexts both arguments surface in their normal case, and it is only cliticization of DO that fails. Again, a probe with the specification [π,PART] will lead to S-PCC rather than U-PCC. **Conclusion.** The only extant analysis of both S-PCC and U-PCC ,[12], locates the variation between them in the nature of the agree operation, proposing that grammatical operations aren't crosslinguistically uniform. The proposal here conservatively locates the variation in a lexical property, the granularity of person specifications on probes. The proposal here also derives restrictions on 3-clitics and the specifics of the repair strategies.
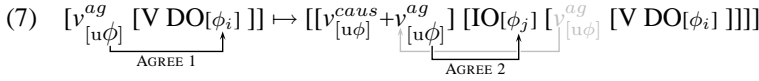
	DO:		
IO↓	1:	2:	3:
1:	✗	✓	✓
2:	○	✗	✓
3:	○	○	○

Table 1

(1) *ʔaʕtˤaː **-hu: -ni:**
gave.3SG -3SG.M -1SG
'He gave me to him' ([10]:335)

(2) *ʔaʕtˤaː **-ka -ni:**
gave.3SG -2SG.M -1SG
'He gave me to you' ([10]:335)

(3) ʔaʕtˤaː **-ni: -ka**
gave.3SG -1SG -2SG.M
'He gave you to me' ([10]:335)

(4) $[v_{[u\phi]}$ $[DO_{[\phi_i]}$ $[IO_{[\phi_j]}$ $[APPL$ DO$]]]]$
AGREE 1
AGREE 2
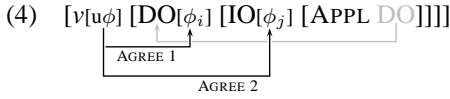
(5) **Me** {*li, **i**} ha recomanat [...]
me.ACC {3.DAT, DAT} has recommended
'(S)he has recommended me to him/her.' ([6])

(6) [əlz - {*li, **i**}] donaré
3.PL - {3DAT, DAT} will.give(1.st)
'I will give him them.' ([7]:639)

(7) $[v_{[u\phi]}^{ag}$ $[V\ DO_{[\phi_i]}]] \mapsto [[v_{[u\phi]}^{caus}+v_{[u\phi]}^{ag}]$ $[IO_{[\phi_j]}$ $[v_{[u\phi]}^{ag}$ $[V\ DO_{[\phi_i]}]]]]$
AGREE 1
AGREE 2

(8) ʔa-ʕtˤaː **-ka ʔɪjːaː-ja**
CAUS-receive.3SG.M -CL.2SG.M ACC-1SG.M
'He gave me to you' ([10]:336)

(9) zaʊw<ː>adʒa **-hʊ ʔɪjːaː-haː**
marry<CAUS>.3SG.M -3SG.M ACC-CL.3SG.F
'He made him marry her.' ([8]:59)

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