

Multiple agreeing persons is not that special: restrictions on person portmanteaux

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In person portmanteaux agreement (PPA), one unsegmentable morpheme expresses features of more than one argument. Recent accounts (Georgi 2013[G.], Woolford 2014 [W.]) have argued that PPA requires special mechanisms like one probe agreeing with multiple goals or alignment-based restrictions. With data from 4 different families (Algonquian (Alg.), Carib (Ca.), Chukotko-Kamtchatkan (CK.), Penutian (Pe.)) I show that none of their central predictions hold up to scrutiny. I further argue that PPA languages consistently show evidence for two underlying agreement probes which optionally interact with each other: one for subject and one for object. PPA arises through local interactions of the probes and PPA languages are not syntactically exceptional. Treating all PPA as morphologically derived from underlying transitive agreement configurations allows an account of PPA using only independently motivated mechanisms, thus affording an overall simplification of the theory of agreement.

(i) **1,2 and 3 PPA** G. shows that in Surinam Carib (SC, Gildea 1998), the PPA for $1\pi > 2\pi$ ($k-$) is the same as the marker for 1π inclusive, intransitive subject ($k-$). G. argues that these data motivate a single probe registering [+1,+2] in both contexts, thus features can come from one or more arguments. G. develops a theory that restricts PPA to 1π and 2π arguments (cf. Heath 1998). While intriguing, the SC pattern is far from universal. First of all, languages from each of the 4 families surveyed exhibit PPA's with 3π , providing evidence that G.'s claims are not universal. Hixkaryana (Derbyshire 1985) has a PPA for $3\pi > 2\pi$ (1a), which is not formed from $ni+mi$ (1c,d).

(1) a. **o**-momoki-yaha b. **mi**-ka-no c. **mi**-omoki-no d. **ni**-ahyehi-yaha
 3>2-wait.for-NPST **2**-say-IMM.PST **2**-come-IMM.PST **3**-be.hungry- NPST
 'He is waiting for you' 'You said it' 'You have come' 'He is hungry'

(ii) **No systematic feature combinations.** However, even though there are 3π PPAs, looking at PPA across the 7 languages, there are no systematic features that form portmanteaux. Some languages only have [1,2] (SC, De'Kwana and independent order in Maniwaki); some only [3, 3] (Nez Perce) and some a combination of [$\{1/2\}$, 3] (Chukchi, Itelmen, Hixkaryana, conjunct order in Maniwaki). However, it is not the case that if a language has a PPA in one direction ($1\pi > 3\pi$), it will also have it in reverse: this is shown in (1a) vs. (1b).

(iii) **Grammatical role is important.** even in SC, not all combinations of 1π and 2π (including 1π inclusive) are expressed with a single morpheme, suggesting distinct probes. G. claims that PPA arises since the [1,2] probe ignores the source of those features, but no language surveyed shows the pattern her theory predicts, where $1\pi > 2\pi$, $2\pi > 1\pi$ and 1 inclusive are all expressed by identical morphemes. Thus, for all languages surveyed, not only are π -features important, but grammatical function is as well, as we see for Hixkaryana in (1a-b).

(iv) **Case and agreement are not 1:1.** Fourthly, for both G. and W. case plays an important role. W. posits a correlation between ergative alignment and the presence of 3π PPA. However, Hixkaryana, Itelmen and Maniwaki exhibit 3π PPA's, but do not exhibit ergativity. An example is given for Itelmen (Bobaljik & Wurmbrand 2001) in (2a).

(2) a. itχ tχe-ank n-zəl- **nen** βač b. t'-il-ał-č**en** c. n-əlčqu-z-**um**
 they them-DAT 3PL-give-3>3SG knife 1-drink-FUT-1>3SG 3PL-see-PRES-1SG.OBJ
 'They₁ gave them₂ the knife' 'I drink the water' 'They see me'

(v) **Agreement occurs at the edge of V.** All languages with PPA markers also have separate subject and/or object agreement in most parts of the verbal paradigm; PPA shows up only in a small part of the paradigm. One case is Itelmen, where the suffix can form a portmanteaux (2a); in general the prefix shows subject agreement and the suffix object agreement (2b, c).

(In general, person marking shows up outside of TAM morphology and never below Aspect. This is in line with Julien 2002, who notes most agreement shows up at the edge of the verb).

Analysis. I argue for a two probe analysis, where the probes (Chomsky 1995, Bobaljik 2000) are located high in the structure (Bobaljik & Branigan 2006, Georgi 2013, Oxford 2015). The higher probe finds the highest argument, the second the lower one. I argue, following Béjar (2003) that probes can be decomposed; how many π -features a probe has, varies by language.

During spell-out these probes can, but need not interact with each other via contextual allomorphy. These assumptions account for the fact that (i) there are differences in PPA: some languages only allow PPA with 1π , 2π , and thus have a probe specified for [participant], whereas other languages have probe structures that includes a more general π -feature, which allows for more PPA morphemes. (ii) Since both probes agree separately and therefore have separate person features, there is not a systematic way to only form PPA in one part of the verbal paradigm; it is expected that PPA's can occur in different parts of a verbal paradigm. (iii) PPA morphemes differ if the person features are from different arguments, since different probes agree with their person features. Moreover, (iv) this information does not have to correlate with case since the probes are distinct. Therefore, it is expected that there is no 1:1 correlation between case and agreement systems. Thus, we can have languages that have 3π PPA in non-ergative languages. Since the probes are high (v), they can be expressed outside of TAM morphology. Moreover, since there are two probes they can be spelled out separately, or as PPA under certain conditions; a language can exhibit PPA and non-PPA. Moreover, this means different interactions between subject and object agreement are expected: the agreement can be spelled out separately (2b), the agreement can go all the way together to form a portmanteaux (1a, 2a), or they can be spelled out showing some interactions between the markers, but leaving separate person markers identifiable. Finally, languages with only one agreement marker (Ca. languages) are accounted for. These languages have one verb-slot for agreement, but have different agreement based on verb type (3a vs 3b for De'Kwana, Hall 1984). Moreover, the same verb stem exhibits different agreement marking depending on transitivity, where if there is one verb and two arguments, [+1] is expressed (4a); crucially, if there are two verbs, both agreement markers are expressed, (4b).

(3)a. y -a'sewü-a	b. w -ədü –a	(4)a. w -eka-a	b. ən -eka 'da- w -ə-a
1-laugh-PRES	1-arrive-PRES	1-meet-PRES	3-meet NEG-w-BE-PRES
'I laugh'	'I arrive'	'I meet him'	'I don't meet him'

On a 1-probe/2-goal analysis (such as G.'s and partly W.'s approach), the data in (2-4) are not straightforwardly accounted for: both arguments agree with the same probe, but only in special cases the probe is spelled out as one marker; in all other cases (4a vs 4b, languages like (2)), we need operations to separate person features in order to express both subject and object agreement on different locations.

Conclusion Even though PPA seems cross-linguistically marked, and has therefore motivated special syntactic analyses, I argue that agreement systems with PPA are analyzable using conventionally assumed syntactic primes. I show that a general account of agreement can capture the PPA and non-PPA data with independent motivated mechanisms. The only difference between PPA and non-PPA languages is the possible local interactions between two agreement probes, which may lead to PPA, but does not require deeper syntactic parameters – PPA is not syntactically exceptional.

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