Deriving the Distribution of Person Portmanteaux by Relativized Probing*

Doreen Georgi

University of Leipzig

1. Introduction

Person portmanteaux are unsegmentable morphemes which encode person features of both arguments of a transitive verb simultaneously, i.e. the person of the subject and object of a transitive verb. 'Unsegmentable' means that such a morpheme cannot in any obvious way be separated into two independent morphemes each of which expresses the person feature of only a single argument. An example for a language with person portmanteaux is Umatilla Sahaptin (Rigsby and Rude 1996, 676). A part of the agreement paradigm is provided in (1). The abbreviation 'X > Y' means that the subject X acts upon the object Y.

(1) *Person encoding enclitics in Umatilla Sahaptin*:

A					B	
1sg	1pl excl	1pl incl	2sg	2pl	1sg > 2sg	1 > 2 (elsewhere)
naš	nataš	na	nam	pam	maš	mataš

In Umatilla Sahaptin, second-position enclitics encode 1st and 2nd person agreement. If the single argument of an intransitive is 1st or 2nd person, then the corresponding enclitic from the marker set A in (1) is found in second position. In transitive contexts, the enclitics in set A can encode either the person of the subject or the object, depending on which is 1st or 2nd person. If both arguments of a transitive verb are 1st or 2nd person, we find the forms *maš* and *mataš* from the marker set B in (1). These are person portmanteaux in the sense defined above because they are not obviously composed of the forms for 1st and 2nd person from set A that we find if only a single argument is 1st or 2nd person.

Portmanteaux are a problem for approaches to inflectional morphology that assume that affixes are the realization of discrete slots which are independent of each other, as

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in Distributed Morphology (Halle and Marantz 1993, 1994, Harley and Noyer 1999) and Paradigm Function Morphology (Stump 2001). The reason is that features of the subject and the object are usually believed to be located in different slots each of which is realized by a morpheme. Portmanteaux seem to require the possibility of realizing two slots by a single morpheme, a mechanism which these approaches usually exclude. Although several suggestions for how to solve this problem have been put forward, a satisfying solution which does not call into question the basic assumptions of the frameworks is still missing.

The goal of this paper is twofold. First, it aims to provide an account of person portmanteaux which - contrary to previous analyses - solely relies on vocabulary insertion into a single slot, although portmanteaux intrinsically seem to realize features of two slots. Second, the analysis will account for two empirical generalizations made about the distribution of person portmanteaux in transitive paradigms which have not been derived before: (i) the prominent occurrence of portmanteaux in local scenarios, i.e. combinations where both the subject and the object of a transitive verb are 1st or 2nd person, and (ii) an asymmetry in the number of arguments encoded on the verb between local and non-local scenarios. I claim that if syntactic agreement is relativized to certain values of the person feature on a goal (cf. Nevins (2007b, 2011), Béjar and Řezáč (2009), Preminger (2011)) the empirical generalizations about the distribution of person portmanteaux follow automatically. Predictions that arise about syncretism patterns are also shown to be borne out.

I will proceed as follows: In section 2, I present the empirical generalizations and puzzling observations that have been made on the distribution of person portmanteaux. Section 3 summarizes why portmanteaux are problematic for inflectional theories relying on discrete slots and discusses the shortcomings of various solutions that have been proposed to handle portmanteaux in these theories. Afterwards, I present my own analysis and show in which respects it is superior to the other approaches discussed in section 3 and how it can derive the empirical generalizations. Further predictions of the analysis are shown to be borne out. Section 4 concludes.

2. Generalizations

The analysis that will be presented in section 3 does not only aim at giving an account of portmanteaux that is compatible with the idea that morphemes are realizations of a single morphological slot, but it also aims at accounting for the following empirical observations: First, it has often been observed in the literature that person portmanteaux are particularly frequent in local scenarios (Heath 1991, 1998, Cysouw 2003, Wunderlich 2006, Nevins 2007a, Handschuh 2011), i.e. they are found almost exclusively in these contexts. Local scenarios are the combinations of two local person arguments, i.e. of 1st and 2nd person arguments as in 'I see you' and 'You see me'. Person portmanteaux occurring in these scenarios are therefore called *local person portmanteaux* (LPPM) in what follows, all other possible person combinations of the two arguments of a transitive verb are called *non-local scenarios*. The fundamental question is what differentiates local from non-local scenarios that makes person portmanteaux show up virtually only in the former.

The second observation is based on a typological survey by Heath (1991, 1998). Heath describes four realization strategies of person in local scenarios in Australian and native

American languages, portmanteau morphemes being one of them. What is striking is that the majority of languages Heath has looked at and that exhibits portmanteaux in local scenarios shows person hierarchy effects in non-local scenarios. The abstract pattern of such a language with the marker inventory in (2) is shown in (3). The portmanteau morpheme /d/ is informally represented as *loc* → *loc*, which means that the morpheme occurs if a local person subject acts on a local person object. The final representation of person portmanteaux will be different in my analysis.

(2) *Marker inventory*:

a. /a/ ↔ [1]
b. /b/ ↔ [2]
c. /c/ ↔ [3]
d. /d/ ↔ [loc → loc]

(3) *Abstract paradigm*:

sub \ obj	1	2	3	intrans.
1		**d**	a	a
2	**d**		b	b
3	a	b	c	c

In these languages, there is an asymmetry between local and non-local scenarios in the number of arguments cross-referenced on the verb: In the latter, only a single argument is encoded on the verb. This is due to the cross-linguistically well-known person hierarchy effects where two arguments compete for realization of a single slot on the verb. The competition is resolved by a hierarchy on which local person outranks non-local person. In the local scenarios, however, two arguments are encoded. There is still only a single morpheme (a person portmanteau), but it expresses the person features of the subject and the object simultaneously because the morpheme is not identical to either the 1st person exponent or the 2nd person exponent found in the non-local scenarios and with intransitives. The question that arises here is how syntax and morphology interact to generate this asymmetry. A possibility would be to assume that there is always agreement with both arguments in the syntax, but the features of one of the arguments are deleted in the morphological component. What needs to be answered in this case is how exactly and why the deletion of features only applies in some scenarios. I will present a different solution in which the asymmetry arises in the syntax alone due to the properties of the agreement mechanism. It also predicts why the split separates local from non-local scenarios. Morphology spells out the information it gets from the syntax without additional operations that delete features.

3. Portmanteaux in Distributed Morphology

In this section I discuss why portmanteau morphemes are a challenge for morphological theories that rely on the realization of slots that are independent from one another. For concreteness, I concentrate on Distributed Morphology (DM) because recent approaches to portmanteaux and the discussion of how to solve the problems imposed by this phenomenon are couched in terms of this framework.[1]

[1]Cf. also Stump (2001) for another realizational theory of morphology that needs to invoke special concepts for portmanteaux because exponence rules can only apply to a single slot. Stump postulates a special position class for portmanteaux which can exceptionally block the morphemes of two otherwise independent position classes by a single morphological formative, which is otherwise impossible in his framework.

In Distributed Morphology, a postsyntactic realizational morphological framework, the relevant slots are terminal nodes in the syntactic representation. These contain morphosyntactic features that are realized by vocabulary items pairing phonological content with morphosyntactic features. Vocabulary items have to possess a subset of the features of a terminal node to be able to be inserted into a terminal node. What is important is that vocabulary items can target only a *single* terminal node (Halle and Marantz 1993, 1994). Portmanteau morphemes are a problem for this approach because they realize features of more than one slot with a single morpheme by definition. With respect to person portmanteaux, the challenge arises because it is usually assumed that the subject and the object of a transitive verb copy their phi-features onto different terminals in the syntax. In a minimalist syntactic framework, these are the functional heads T and v, respectively. Each of these terminals is then realized by a vocabulary item so that we expect two morphemes encoding person, one expressing the person of the subject on T and another expressing the person of the object on v. A person portmanteau would have to be inserted into the terminal nodes T and v at the same time, an operation the framework excludes. Several solutions to this problem have been proposed in the literature in recent years. In the remainder of this section, I present these approaches and discuss potential shortcomings with respect to person portmanteaux.[2]

SPELL-OUT OF NON-TERMINALS Caha (2008, 2009) and Radkevich (2010), developing an idea of Starke (2009), propose that vocabulary items (VI) cannot only target terminal nodes but also non-terminals. A VI inserted into a non-terminal spells out all the terminals it dominates. However, this solution is problematic when it comes to person portmanteaux. Remember that the person features of the subject and the object of a transitive verb are located on T and v, respectively. A person portmanteau must then spell out at least the TP which dominates both terminals. Since Starke (2009) and Caha (2009) assume that VIs always spell-out complete constituents, everything dominated by the TP node is realized by the portmanteau morpheme, including other functional heads the verb and the argument DPs. This is unlikely because the concrete verb and arguments may of course vary. Since this approach is not exclusively designed for person portmanteaux but for portmanteaux in general, it does not tell us anything about why person portmanteaux occur almost exclusively in local scenarios. It is, however, hard to see how such a restriction could be integrated in a non-stipulative way. VIs spelling out non-terminals can in principle encode any combination of person features on the terminals dominated by TP.

FUSION OF TERMINALS To handle portmanteaux, Noyer (1992) adopts the operation fusion proposed in Halle and Marantz (1993) which applies after syntax but before vocabulary insertion. It takes the features of two independent terminals and fuses them into a single terminal, hence it results in a reduction in the number of terminals and thus morphemes: one morpheme for originally two terminals. The features of the newly created terminal may contain features from more than one terminal in the syntax. This approach has two potential problems: First, an additional operation aside from the indispensable operation vocabulary insertion is needed in the morphological component just for portmanteau morphemes. Sec-

[2]None of the solutions I discuss has exclusively been proposed for person portmanteaux, but rather for portmanteaux in general. Some of the shortcomings I will put forward only arise in the context of person portmanteaux and may thus not apply to other kinds of portmanteaux.

ond, the context in which fusion applies must be stipulated. Portmanteaux occur in local scenarios but nothing in the definition of the operation constrains it to these contexts.

CONTEXT-SENSITIVITY Trommer (2006, 2007) maintains the basic idea of DM that vocabulary items can indeed only be inserted into a single terminal, but he adds that the insertion of a VI can be restricted by features on another terminal. The features of this second terminal are not realized by the VI, but they provide the context for the insertion in a different terminal. This approach avoids the problems of the two accounts presented above. The only operation necessary is vocabulary insertion into terminals. However, context-sensitivity also leaves open why person portmanteaux are so prominent in local scenarios because without further - probably stipulated - constraints any combination of person features could be encoded in a VI. For example we would expect to find a portmanteaux realizing a second person subject in the context of a third person object. Apart from this issue, there is a conceptual problem with this approach. Context-sensitivity presupposes that vocabulary insertion can scan the whole syntactic tree with all its terminals. Vocabulary insertion is thus a potentially non-local operation, which goes against current trends in Minimalist syntax. In the phase model (Chomsky 2001, 2008) only subparts of the derivation are sent to the morphological component. This implies that only a subset of the terminals of a structure are accessible for vocabulary insertion and this might cause a problem for portmanteaux if the realized terminal and the context-providing terminal are in different phases. This reasoning of course depends on the size of phases, which is still under debate.

To summarize, we have seen that all solutions proposed for the integration of portmanteau morphemes in DM suffer from empirical and conceptual problems. They do not address any of the observations presented in section 2. In my analysis, I will pursue the basic idea of the second approach, namely that information about more than one argument is present on a single terminal. However, I will not need an additional morphological operation to ensure this. Rather, it will be a direct outcome of the syntactic agreement mechanism.

4. Analysis

There are two tasks to fulfill in order to gain a coherent analysis of person portmanteaux: First, under the assumption of the postsyntactic realizational framework of Distributed Morphology, in which a morpheme can realize the features of only a single terminal, the person features of both arguments of a transitive verb must be present on a single head. Second, the analysis should derive the observations made on the distribution of person portmanteaux in transitive paradigms, namely that they occur prominently in local scenarios and that there is an asymmetry in the number of arguments encoded on the verb in languages with hierarchy effects in non-local scenarios.

My solution to the first problem lies in the nature of the syntactic agreement mechanism *Agree* (Chomsky 2000, 2001), which transfers person features of the arguments to functional heads (terminal nodes), where these features are spelled out postsyntactically. The presence of two feature sets on one head is a natural consequence of Agree if this head agrees with both arguments of the verb. In the terminology of Chomsky (2000), this means that if a head contains two person probes, it can potentially check each of these

probes against a different goal. This is possible since Agree targets the closest *matching* goal. Depending on the definition of matching, this is not necessarily the closest goal in the c-command domain of a probe but it can also be a goal further down in the structure if the closest goal does not match the probe. The idea that one head has more than one probe and checks them with different goals has been pursued in the literature before to derive e.g. PCC effects (cf. Anagnostopoulou (2005), Richards (2008), Heck and Richards (2010)) as well as case splits and inverse marking (Keine 2010, Georgi to appear).

The distribution of person portmanteaux is derived by restricting Agree to positive values of person features (Nevins 2007b, 2011). Since only 1st and 2nd person are represented by positive values, Agree can only target those, but not 3rd person arguments. In this way, syntactic agreement differentiates between local and non-local person.

4.1 Assumptions

In order to be able to refer to 1st and 2nd person - the natural class of local persons - on the one hand, and to 3rd person on the other hand, the privative person features are decomposed into two binary features [±1] and [±2] (Noyer 1992):

(4) *Decomposition of person features*:

1st excl	[+1 –2]
2nd	[–1 +2]
1st incl	[+1 +2]
3rd	[–1 –2]

Arguments and vocabulary items are specified for these binary features. But whereas arguments are fully specified for both, vocabulary items can be underspecified.

As for the syntactic derivation, I assume the Minimalist phrase structure in (5) for a transitive verb. The internal argument (DP_{int}, direct object) is introduced as the sister of V whereas the external argument (DP_{ext}, subject) is generated in the specifier of the functional head v. Above v, there are two other functional heads T and C. But since the C head will not play any role in the analysis, I leave it out in the structures that follow. In an intransitive context, the structure is identical except that one of the arguments is missing.

(5) $[_{CP}$ C $[_{TP}$ T $[_{vP}$ DP_{ext} $[_{v'}$ v $[_{VP}$ V $DP_{int}]]]]]$

The arguments enter into agreement with functional heads. This means that they copy their person features onto these heads where they are then realized postsyntactically. The syntactic operation responsible for agreement is Agree, triggered by uninterpretable person probe features [uπ] on T that have to be checked and valued by the person features on the arguments. Agree is defined as follows (cf. Chomsky (2000, 2001)):

(6) *Agree* between a probe P and a goal G applies if:

a. P c-commands G
b. P has an uninterpretable feature and G has a matching interpretable feature
c. G is the closest matching goal for P

Crucially, I assume that both arguments of a transitive verb Agree with the same functional head, namely T, in order to have information about person features of both arguments on a single head, which is necessary for person portmanteaux. Hence, there are two ordered person probes on T: T [u$\pi \succ$ uπ].

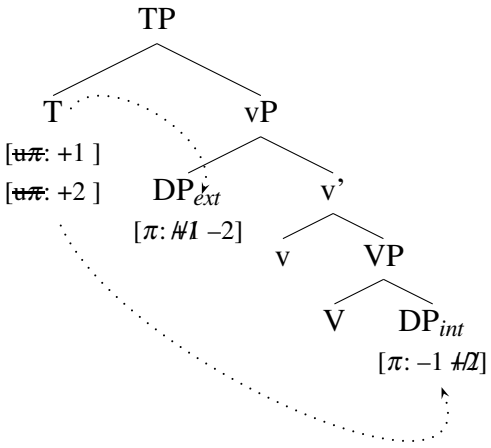
What still needs to be defined is what matching between the features of the probe and the goal means. I follow Nevins (2007b), building on Calabrese (1995), in that a probe can be relativized to target only certain features on a goal (cf. also Nevins (2011), Preminger (2011)). For concreteness, I assume that the probe in languages with portmanteau morphemes is relativized to the positive values of the binary person features. This means that probe and goal are matching if the goal provides a positively valued person feature [+1] or [+2]. A consequence of this assumption is that the person probes on T can only Agree with local person arguments but not with 3rd person arguments because the latter are represented by negatively valued person features only, cf. (4). Since T contains two person probes that can only be valued by positively valued person features, one or two of the probes remain unchecked if one or both arguments are third person. Usually, unchecked probes lead to the crash of the derivation (Full Interpretation, (Chomsky 1995)). In order to avoid the crash in such a situation I assume that unchecked, unvalued probes are deleted by default at the end of the derivation (cf. Béjar 2003).

Furthermore, a feature on a goal is deactivated for Agree after having taken part in Agree before. This means that the feature is invisible for further Agree operations. This is necessary because if a goal feature could be targeted by Agree from the same head more than once, the two probes on T would always Agree with the same argument. To derive portmanteaux, agreement with both arguments must be an option.

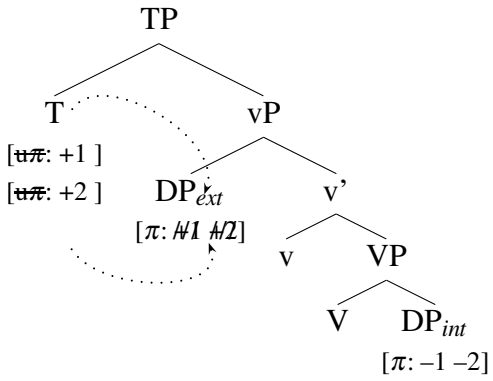
Finally, the person features on terminals are realized postsyntactically. I adopt the framework of Distributed Morphology. Vocabulary items are inserted into functional heads according to the *Subset Principle* and *Specificity*: The vocabulary item with the highest number of matching features is inserted into a terminal node (Halle and Marantz 1993, 1994).

The two following examples illustrate the system. Checking is indicated by a strike-through and deactivation by crossing out the values. In Example 1 in (7) the verb takes a 1st person exclusive subject and a 2nd person object. Once the vP is generated and T merges with the vP, T starts probing. The closest matching goal, i.e. a goal with a positive person value, is the subject. It values the probe on T with [+1]. Next, the second person probe searches for a matching goal. Since the matching feature [+1] on the closest subject DP is deactivated and no longer accessible for Agree and since the subject does not provide another positively valued person feature, T probes for the object. It supplies T with [+2]. The result on T is [+1 +2]. If the object was 3rd person, T would not have found a matching goal feature since 3rd person only consists of negatively valued features. In that case, the second person probe on T would have been checked and deleted per default. In the second example in (8), a 1st person inclusive subject acts upon a 3rd person object. After T merges with the vP, it starts probing. The first person probe is valued by one of the positive values on the closest goal, the subject, e.g. by [+1] which is then deactivated. Now, the second probe also finds a matching goal feature on the subject, namely [+2]. The result on T is again [+1 +2] (the order in which the two features agree with T does not matter).

(7) *Example 1:*
1excl. DP_{ext} > 2 DP_{int}



(8) *Example 2:*
1incl. DP_{ext} > 3 DP_{int}



The system runs parallel in an intransitive context. If the single argument is 3rd person, T cannot agree with this argument and the probe is deleted by default. If it is 1st person exclusive or 2nd person, only one of the two probes on T will be valued by [+1] or [+2], the other probe is deleted per default. Only if the single argument is 1st person inclusive, can both probes on T agree with this argument, resulting again in [+1 +2] on T.

4.2 Results

The result of Agree for all possible person combinations of subject and object, except for the reflexive contexts, is shown in (9):

(9) *Subject-object combinations*:

scenario	person on DP_{ext}	person on DP_{int}	person on T after Agree
1excl>2	[+1 –2]	[–1 +2]	[+1 +2]
1excl>3	[+1 –2]	[–1 –2]	[+1]
2>1excl	[–1 +2]	[+1 –2]	[+1 +2]
2>3	[–1 +2]	[–1 –2]	[+2]
1incl>3	[+1 +2]	[–1 –2]	[+1 +2]
3>1excl	[–1 –2]	[+1 –2]	[+1]
3>2	[–1 –2]	[+2 –1]	[+2]
3>1incl	[–1 –2]	[+1 +2]	[+1 +2]
3>3	[–1 –2]	[–1 –2]	[ ]

The consequences of this approach are the following: First of all, it derives the asymmetry in the number of arguments encoded on the verb. In the non-local scenarios, i.e. when at least one of the arguments is 3rd person, T agrees with only a single argument, whereas it agrees with both arguments in the local scenarios. Hence, the asymmetry follows from the syntactic agreement operation. Furthermore, the hierarchy effect in languages with this

asymmetry is derived. In the non-local scenarios it is only the local person argument that enters into Agree with T and hence the hierarchy 1/2 $\succ$ 3 is derived. With respect to person portmanteaux, it is important to note that the local scenarios (1excl > 2, 2 > 1excl) are the only scenarios in which a representation of person arises on T which was not present on any of the two arguments of its own. T ends up with [+1 +2], but this is not a subset of the person features on any of the DPs. In the non-local scenarios, however, the person feature on T *is* a subset of the person features on the DP with which T agreed. Hence, in local scenarios a derived inclusive context arises on T: none of the arguments is 1st person inclusive, but the person combination on T encodes inclusive person. Since the representation on T differs from the one on the DPs, it is expected that we find an exponent which is also completely different from the exponent for 1st and 2nd person. If the inventory of vocabulary items in a language is as in (10), with a VI α encoding [+1 +2] and two underspecified VIs β and γ encoding [+1] and [+2], respectively, then α is inserted into T in local scenarios because it is more specific than β and γ.

(10) a. $\alpha \leftrightarrow$ [+1 +2] *person portmanteau*
b. $\beta \leftrightarrow$ [+1]
c. $\gamma \leftrightarrow$ [+2]

The two latter are inserted in intransitive context, where the single argument is 1st or 2nd person, and in non-local scenarios, where only one of the two arguments is local person.[3] Since α is neither identical to the 1st nor to the 2nd person exponent, we may then call α a portmanteaux morpheme. But in my analysis, person portmanteaux are simply inclusive markers that arise in a derived inclusive context. And since a derived inclusive context can only emerge if both arguments of the verb are local person, it follows automatically why person portmanteaux occur only in local scenarios. Hence, the empirical generalizations discussed in section 2 are derived. Notice that in the morphological component, vocabulary insertion targets only a single terminal node, even if a marker is inserted that we call a portmanteau. This is the case because in local scenarios both arguments agree with the same syntactic head. Hence, none of the additional assumptions that have been proposed to integrate portmanteaux into DM is needed, neither spell-out of non-terminals, nor an additional operation like fusion nor context-sensitive markers. The only operation needed is vocabulary insertion. This is of course the result of the assumptions about how Agree works, but as argued for above, these assumptions also derive the generalizations on the distribution of portmanteaux (cf. section 2). Furthermore, these assumption make a strong prediction about syncretism patterns which I will show to be borne out in the following subsection.

[3]One might ask what happens in languages that have an overt 3rd person exponent, since 3rd person arguments do not agree with T. A possible solution is the following: The negative values of a person feature could be added to the T head as a default in the morphological component but before vocabulary insertion. Any time T does not have a value for both [$\pm$1] and [$\pm$2], the missing feature is added with the value '-'. For example, if T ends up with [+1] after Agree in the syntax, [–2] is added per default. If both arguments were 3rd person, T does not have any person feature after Agree and [–1] and [–2] are added. Then, VIs specified for negative values can be inserted, referring to [–1 –2].

4.3 A Prediction

The present account of person portmanteaux entails that five scenarios altogether end up having the same representation on T, namely [+1 +2]. These are the four shaded cells in (9), including the local scenarios and the two non-local scenarios in which one argument is 3rd person and the other one 1st person inclusive. Furthermore, it includes the context where the single argument of an intransitive verb is 1st person inclusive. The analysis thus predicts that there are languages where these five contexts or at least a subset of these are encoded by the same exponent. A language that actually shows a syncretism in exactly these five contexts is the Carib language Surinam Carib (Gildea 1998, 16):

(11) *Surinam Carib, verbal inflection*:

Intransitives:

	DP_{ext}	DP_{int}
1	Ø-	j-
2	m-	aj-
12	**k**-it-	**k**-
3	n-	

Transitives:

DP_{ext} \ DP_{int}	1	2	12	3
1		**k**-		s-
2	**k**-			m-
12				**k**-iʃ-
3	j-	aj-	**k**-	n-

Surinam Carib exhibits an active alignment system: The prefixes attached to an intransitive verb reflect whether the single argument is an internal argument (unaccusative verb) or an external argument (unergative verb). In the transitive paradigm, the same exponents are used. However, only a single argument can agree with the verb in non-local scenarios, namely the one which is higher on the hierarchy 1/2 $\succ$ 3. Depending on whether the local argument is the internal or the external argument of the transitive verb, the set for the unergative or unaccusative verbs is chosen. The marker *k*- occurs in all of the five contexts where the present account predicts the representation [+1 +2] on T. What is remarkable is that *k*- seems to play a double role. When looking at the intransitive paradigm and the non-local scenarios of the transitive paradigm, it does not seem to be a portmanteau but rather a simplex marker, i.e. it encodes only the features of a single argument, namely [+1 +2]. In the local scenarios, however, *k*- must be called a portmanteau because none of the two arguments alone is [+1 +2], only the combination of the two arguments can potentially lead to this feature matrix. Hence, if we take the syncretism seriously, that means if we assume that having the same phonological form in different contexts implies having the same function, then we are led to what at first sight seems to be a paradox: one and the same marker is a simplex marker in some, but a portmanteau morpheme in other scenarios. Trommer (2006), who first described this pattern, calls such markers *ambiguous exponents* due to their apparent double role. The current analysis predicts the existence of such exponents since the contexts in which they occur are all represented by the same feature matrix at the point where vocabulary insertion takes place. The pattern is found in a number of other Carib languages such as Wayana (Tavares 2005), Tiriyó (Meira 1999) and Ikpeng (Pachêco 2001). On the whole these languages work like Surinam Carib with an active split and hierarchy effects in the transitive paradigm. In all of them we find a syncretism

between the verbal affixes encoding a 1st person inclusive argument of an intransitive and one or both local scenarios (*k-* in Wayana and Tiriyó and *ugw-* in Ikpeng). Importantly, ambiguous exponents are not restricted to Carib languages but are found in languages all over the world. Trommer (2006) describes the pattern for the Kiranti languages Belhare (Bickel 2003) and Dumi (van Driem 2003) as well as for the Mixe Zoque language Sierra Popoluca (Elson 1960). Furthermore is is found in the Australian languages Jawony, Nunggubuyu, Anindilyakwa and Alawa (Heath 1991) as well as in the Algonquian language Arapaho (Cowell and Moss 2008), to name just a few examples. Trommer (2007, 52) notes that "Ambiguous Exponence is pervasive in portmanteaus [...]." and this is what is expected under my analysis. In some of these languages, the ambiguous exponent is not found in all of the five context that it could occur according to the analysis, and where it indeed occurs in Surinam Carib. Instead, it shows up in a subset of these five context, including at least one local scenario and one non-local scenario. The next subsection deals with how to integrate this divergence into the present account.

4.4 Extensions

In many languages with person portmanteaux, not all of the five contexts that are represented by [+1 +2] on T in the present account are encoded by the same exponent. The Carib language Ikpeng, for example, uses the same exponent *ugw* for the 1st person inclusive internal argument of an intransitive and the scenario 2 > 1, but a different exponent *k* for 1 > 2 and *kut* for the 1st person inclusive external argument of an intransitive verb. Under my account this means that a language can have more than one inclusive exponent. To integrate these languages, I propose that person agreement goes hand in hand with Case agreement. This means that T does not only probe for person, but it also copies the case value of the argument with which it agrees in person - which presupposes that case is assigned early in the derivation, within vP (for case agreement see Rackowski (2002), Richards (2011), Hamann (2011)). T has thus two sets of probes:

(12) $$\text{T}\begin{bmatrix} u\pi : \_ \\ uCase : \_ \end{bmatrix} \succ \begin{bmatrix} u\pi : \_ \\ uCase : \_ \end{bmatrix}$$

Case agreement makes it possible to distinguish which argument the person value comes from. VIs realizing person features can then be sensitive to case features. Inclusive markers underspecified for case are the default markers that can be inserted in every context represented by [+1 +2] on T. Inclusive markers with case specifications are more specific and block the default inclusive marker in some contexts. In Ikpeng, a language with an active split, an external argument receives ergative case and an internal argument receives absolutive case. This value is copied under person Agree to T. The inclusive VIs in Ikpeng are shown in (13). /ugw/ is the default marker that is realized in all [+1 +2] contexts on T. It is, however, blocked by the more specific /k/ in the scenario 1 > 2 and by /kut/ for a 1st person inclusive external argument of an intransitive.

(13) *Inclusive markers in Ikpeng*:

a. /ugw/ ↔ [+1 +2]
b. /k/ ↔ { [+1 Erg] [+2 Abs] }
c. /kut/ ↔ { [+1 Erg] [+2 Erg] }

5. Conclusion

In this paper I have presented an analysis of person portmanteaux that assumes that both arguments of a transitive verb enter into agreement with the same syntactic head. In this way, the only operation necessary to account for portmanteaux in the morphological component is the indispensable operation of vocabulary insertion into terminal nodes. Additional mechanisms that have been put forward in the literature in order to integrate portmanteau morphemes in DM (spell-out of non-terminals, fusion, context-sensitivity) can thus be dispensed with. Furthermore, I have argued that if Agree is relativized to target only positively valued person features on a goal, two empirical observations on the distribution of person portmanteaux can be derived: the fact that (i) LPPM are particularly prominent in local scenarios and (ii) that there is an asymmetry in the number of arguments encoded on the verb in the numerous languages with LPPM that exhibit hierarchy effects in non-local scenarios. These effects follow from relativized Agree because agreement is only possible with local person arguments. Portmanteau morphemes are analyzed as inclusive markers that arise in a derived inclusive environment. And since they are inclusive markers, one expects to find a syncretism between local scenarios and non-local scenarios where one argument is 1st person inclusive. This prediction is confirmed by the existence of ambiguous exponents.

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Institut für Linguistik
Universität Leipzig
Beethovenstraße 15
04107 Leipzig
Germany

georgi@uni-leipzig.de