Feature gluttony for Algonquian: agreement in Passamaquoddy*

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Generals Paper

1 Introduction

In their recent work Coon & Keine's (2020) propose that hierarchy effects such as PCC can arise due to the consequences of **feature gluttony (FG):** a configuration when a probe agrees with several goals. In this paper I explore whether hierarchy effects in a different domain — in the domain of direct/inverse marking in Algonquian languages — can be analyzed by appealing to the same tool (i.e. creation of feature gluttony).

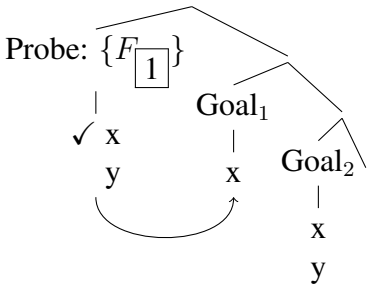
The motivation for this exploration is simple: it would be nice if all hierarchy effects we see in languages arise due to the same cause. Given that feature gluttony seems to be a promising explanation of PCC effects and also some other cases of agreement hierarchy effects (copula agreement effects in German, agreement in the dative-nominative construction in Icelandic), it seems desirable to try it on a material that is famous for its hierarchy effects.

In this paper I will mainly draw my conclusions based on data from Passamaquoddy (Eastern Algonquian). According to (Oxford 2014), Passamaquoddy retains the Proto-Algonquian agreement pattern in the agreement slot that will be central to our discussion. This means that many other Algonquian languages, though not all, would lead us to the same conclusions as Passamaquoddy will.

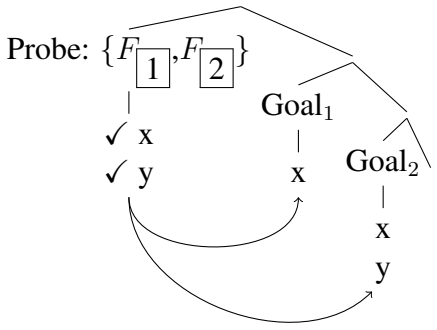
1.1 Introduction to Feature gluttony (FG)

Feature gluttony arises when a probe agrees with more than one goal, as in (1)-(2).

(1) **Step#1:** agreement with Goal_1



(2) **Step#2:** agreement with Goal_2



In (1)-(2) a probe has two featural segments that it is interested in finding and checking off: x and y. On step#1, this probe agrees with the first goal in its c-commanding domain. Goal_1 has the

*Many thanks to Adam Albright, Jessica Coon, Sabine Iatridou, Stefan Keine, Will Oxford, David Pesetsky, Conor Quinn, Norvin Richards, Stanislao Zompì, and participants of Syntax Square at MIT and ECO-5 at Harvard. All errors are my own.

segment x, so the probe checks off that it found x (as indicated by ✓), and copies the whole set of relevant features[1] from this goal onto itself (abbreviated as $\{F_{\boxed{1}}\}$).

Segment y of the probe is not yet satisfied, so it keeps probing (step#2): it finds Goal_2, which has the segment y, checks off its own y segment, and copies the relevant features of Goal_2 onto itself (abbreviated as $\{F_{\boxed{2}}\}$). Now the probe has found itself in a situation where it has copied two different sets of features: $\{F_{\boxed{1}}, F_{\boxed{2}}\}$. This is **feature gluttony.**

It's important to note that nothing is wrong with feature gluttony itself: it does not lead to an ill-formed syntax. However, Coon & Keine claim that it can lead to problems further down the road, such as difficulties for movement that is parasitic on agreement (clitic-doubling leading to ungrammaticality in constructions with PCC effects) and difficulties at the morphology interface (resolving how to pronounce the two sets of features that the probe gathered).

1.2 Introduction to Algonquian Theme Sign agreement (based on Passamaquoddy)

My goal in this paper is to investigate whether the Algonquian **inverse marker** could be viewed as a spell-out saving device: a tool which allows to avoid ungrammaticality due to feature gluttony. In doing so, I will focus my attention on Passamaquoddy, as mentioned earlier.

Algonquian languages have verbal forms with several slots for agreement. Table 1 presents a simplified verbal template of Passamaquoddy, illustrated by the form 'We (excl.) hit them.'.

Prefix	**Verb Stem**	**Theme sign**	**Neg**	**Central**	**Mode/Tense**	**Peripheral**
n	tokom	**a**	w	inu	pon	ik
1	hit.TA.Ind	**3**	NEG	1PL	PST	3PL
?	V	**Voice**	Neg	T	T	C
π		π		# (+π)		# (+π)

Table 1: 1PL.EX Subject, 3PL Object: 'We (excl.) didn't hit them.' (Independent, past tense)

The table 1 contains 4 rows: an actual morpheme of the illustrating example, its gloss, my assumptions about what syntactic head this slot corresponds to[2], and, for slots containing agreement, what agreement features we find in that slot: π stands for person, # (+π) stands for 'number agreement conditioned by person features'. My assumptions that Theme sign agreement corresponds to Voice, Central agreement corresponds to T and Peripheral agreement corresponds to C are common to the literature on Algonquian agreement (for example, see (Oxford 2018)).

Like many other Algonquian languages, Passamaquoddy has so-called Independent and Conjunct orders — two types of verbal forms which correlate with the syntactic distribution of the clause containing them (see Brittain 2001, Richards 2004, Bogomolets et al. 2019, a.o., for discussion of the syntactic differences between them).[3] In table 1 I have presented an example of the Independent form, table 2 shows the Conjunct form of the same verb.

[1]This will be made more precise in section 2.

[2]Question mark in the prefix column indicates that I am in doubt as to what head this slot corresponds to.

[3]There are actually two Conjunct orders — so-called Unchanged Conjunct and Changed Conjunct, which differ (for some stems) in whether a vowel alternation at the beginning of the stem occurs. Since these two orders do not differ with respect to their suffixal agreement, I will be treating them as one in the present paper. Also, I note that another order — Subordinative — has direct/inverse system identical to the Independent. So in prinicple, our

Prefix	Verb Stem	Theme sign	Neg	Central	Mode/Tense	Peripheral
	tekom	**a**	w	ehko	pon	
	hit.TA.CConj	**3**	NEG	1PL	PST	
	V	**Voice**	Neg	T	T	
		π		# & π		

Table 2: 1PL.EX Subject, 3PL Object: 'We (excl.) didn't hit them.' (Changed Conjunct, past tense)

In table 2 # & π stands for 'both number and person'. As we see, Conjunct differs from Independent in lacking prefixal and peripheral agreement.[4] It also differs in the agreement of the Central slot: in Independent there is Central agreement only if there is at least one plural noun phrase in the clause.[5] This suggests that agreement in the Central slot in Independent is a plural agreement conditioned by person. In Conjunct, on the other hand, Central slot always exhibits some agreement — when there is no plural noun phrase, Central still agrees in person. For example, compare (3a) and (3b), which show configuration with two singular participants. In both Independent and Conjunct we see Theme Sign (= Voice) agreement with the object (suffix *-i*), but only in Conjunct we see Central agreement in this case — suffix *yin* agreeing with the 2SG subject.

(3) a. k-tokom-i
2-hit.TA.Ind-1
'You hit me.'

b. tokom-i-**yin**
hit.TA.UConj-1-**2**
'You hit me.'

The topic of this paper is direct/inverse agreement = Theme sign agreement = Voice agreement (bolded in tables 1-2). This instance of agreement is restricted to person features, and can be descriptively characterized in the following way. Direct is object agreement on Voice, inverse is a default form which we see in the absence of such agreement. Whether the object agreement will occur or not depends on the relative ranking of the two arguments with respect to the person hierarchy. This hierarchy is different for Independent and Conjunct, as shown in (4)-(5).

(4) **Person hierarchy in Independent**
SAP (speech act participants: 1,2) >3 (animate proximate) >4 (animate obviative)

(5) **Person hierarchy in Conjunct**
SAP (speech act participants: 1,2) and 3 (animate proximate) >4 (animate obviative)

If the subject outranks the object or is equal to object on the relevant hierarchy, we see agreement with the object in person in the Theme sign slot. If the object outranks the subject, the default "inverse" marker *oku/oq* is inserted.[6] Here's an illustration from the configuration with a proximate and an obviative argument in the Independent: as we see from (6a), {3,4}, where subject outranks

discussion could be taken as looking at the differences in agreement between Independent and Subordinative on the one hand, and Unchanged and Changed Conjunct on the other hand.

[4]While Conjunct is generally known to lack peripheral agreement, the online version of the Passamaquoddy-Maliseet Dictionary (2008) notes that some speakers accept forms like *tekom-a-w-ehko-pon-ik*, which show peripheral agreement (3PL suffix *ik*).

[5]Having a plural DP is, however, not a sufficient condition for Central agreement.

[6]There is one exception to this rule: in 4(4)>3Sg forms in Conjunct we get *-iht* instead, which is a portmanteau. We will discuss this form in more detail later.

the object, has object agreement in the Theme sign; {4,3}, where the object outranks the subject on the hierarchy, has the inverse marker in the Theme sign.

(6) a. '-tokom-**a**-l
3-hit.TA.Ind-**3**-OBV
'(S)he (PROX) hits him/her (OBV).'

b. '-tokom-**oku**-l
3-hit.TA.Ind-**INV**-OBV
'(S)he (OBV) hits him/her (PROX)."

Theme Sign markers are the same for Independent and Conjunct, and presented in (7).

(7) **Markers of Theme Sign:**
a. 1 ⇒ *-i*
b. 2 ⇒ *-ol*
c. 3/4 ⇒ *-a*
d. *oku/oq* ⇒ default / elsewhere form

However, as one can see from the hierarchies in (4)-(5), Independent and Conjunct differ in whether they regard participants and proximate non-participants as "equally high" on the person hierarchy or not. While in Independent speech acts participants outrank non-participant proximate arguments, in Conjunct they are on the same level of the hierarchy.

1.3 Goals & the outline

The main goal of this paper is to argue that the person hierarchies in Independent and Conjunct, (4)-(5), can be analyzed by appealing to feature gluttony, (1)-(2), (Coon & Keine): the inverse marker is the morphological output that occurs when a feature gluttony is created; it is the Algonquian way of resolving the issue of how to pronounce two sets of features gathered by a single probe.

In section 2 I introduce the mechanics of feature gluttony: the agreement theory proposed by Coon and Keine (2020), its crucial features and assumptions. In section 3 I will show that with minimal assumptions, their theory can be quite directly extended to account for when we see inverse forms in Passamaquoddy. There is one important shift in the perspective that will come with this though. While it is common to think of hierarchy effects as arising due to a special status of participants (either in terms of the needs of participial DPs, or in terms of probes looking for participants), a feature-gluttonous approach to inverse in Algonquian imposes a perspective where hierarchy effects can arise due to a special status of *non-participants* (it is non-participants that the probe is searching for).

In section 4 I zoom out of the Algonquian agreement and reflect a little bit on the formal properties of FG-creation. In particular, I will explore the question of which kind of hierarchy effects can receive a feature-gluttonous explanation, and which cannot (under the assumptions outlined in section 2). This will lead to a discussion of how the system that we have been using can be potentially enriched if we need to account for more complicated cases.

In section 5 I show that within Conjunct forms of Passamaquoddy one can observe another hierarchy effect which has to do with distribution and properties of portmanteaus. I address the question of whether this hierarchy effect can receive a FG-explanation, and argue that it can, if we

adopt some complications discussed in section 4. My proposal for the Passamaquoddy's portmanteaus provides an alternative explanation for the complementary distribution of inverse markers and portmanteaus to the one found in (Oxford 2018).

2 The mechanics of feature gluttony (FG, Coon & Keine 2020)

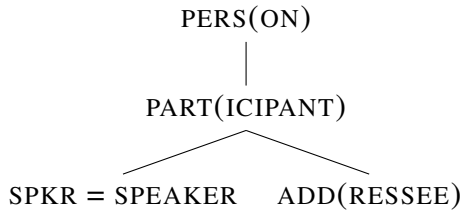
In subsection 2.1 I outline the main assumptions of the FG-approach to hierarchy effects. In subsection 2.2 I show the mechanism of creating (non)-feature-gluttonous configurations.

2.1 Assumptions: Feature geometries & Agree

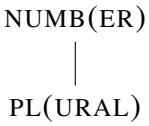
Coon and Keine assume that person and number features are arranged in feature geometries (Harley & Ritter 2002, Béjar 2003, a.o.), (8), which encode entailment relations among features.

(8) The π and # geometries used in (Coon & Keine 2020)

a.



b.



It is a property of geometries that features on lower nodes entail the features on higher nodes. In (8) we see particular geometries that Coon & Keine (2020) use for PCC effects and specific agreement constructions in German and Icelandic.[7] In these two geometries, SPKR entails PART, ADD entails PART, PART entails PERS, PL entails SG. The idea is that noun phrases are specified for subparts of feature geometries. The featural segments we find on DPs are arranged with respect to entailment too, and, since the features under consideration on DPs are interpreted, having a feature F which is lower in the geometry than a feature F', such that F entails F', implies having F' on the noun phrase as well. I.e., if a given DP has a SPKR feature, it also inevitably has PART and PERS features; if a DP has a PL feature, it inevitably has NUMB feature. The reverse, of course, is not true: singular DPs only have NUMB features, non-participants only have PERS features.

Probes also have hierarchically organized segments from feature geometries present on them, and these segments reflect probes' requirements. One difference from features on DPs though is that features on probes are not interpreted, and hence having a feature F which is lower in the geometry than a feature F', such that F entails F', does not necessarily imply having F' on the probe. I.e., the probe could have SPKR feature but lack the PART feature.[8] Some examples of possible probes under the current approach are presented in (9).

[7] Coon & Keine note that feature structures have to be syntactically represented, because they determine the application of Agree. They do not argue that the particular feature geometries they are using are universal, but they note that feature geometries are universally constrained by semantic entailments (Coon & Keine 2020: p. 10, footnote 7): "We assume that these structures are universally constrained in that they represent semantic entailments, though cross-linguistic variation may exist in the number of contrasts present in a given system, discussed in detail in Harley & Ritter (2002). They could either be part of UG or assembled in a pre-syntactic generative lexicon."

[8] Coon and Keine need to use a probe with a missing intermediate segment of this kind (missing PART) in order to account for Me-First PCC; but see also their footnote 17 on page 23 for the discussion of probes missing intermediate segments. Whether or not missing intermediate segments on probes are needed for an account of the inverse in

(9) Examples of probes (Coon & Keine 2020: ex. (13), p. 11)[9]:

a. [uPERS] — fully satisfied by any person-bearing DP

b. [uPERS] — fully satisfied by any participant-bearing DP

[uPERS]
|
[uPART]

c. [uPERS] — fully satisfied by a speaker-bearing DP

[uPERS]
|
[uPART]
|
[uSPKR]

The hierarchal organization of the featural segments on the probe directly determines the probing behavior of the probe. A probe will interact with any DP which has at least one featural segment that the probe is searching for (= which is active on the probe = which is unchecked). In other words, **the disjunction of the unchecked featural segments** of the probe represents **the interaction condition**: the probe will interact with DPs which have any of these segments. **The lowest segment** within the hierarchy represents **the satisfaction condition**: once a probe interacts with a DP that has this segment, it will be satisfied and will stop the search.

The probe starts out with all of its segments being active (= unchecked). It will agree with the closest accessible DP which matches at least some of its segments. Agreeing with a DP involves two steps: (i) the matching features on the probe are "checked off" and disactivated; (ii) the relevant hierarchically structured bundle of featural segments of the DP is copied onto the probe. If there are remaining segments on the probe that have not been matched and thus remain active, the probe is not satisfied (Deal 2015), and **the remaining segments** continue probing. The search of the probe stops when either it checked off all of its featural segments or there are some segments remaining, but there are no more DPs to consider (in the latter case agreement results in failure (Preminger 2014)). Below in (10) there is a more precise formulation of the Agree operation.

(10) **Agree** (Coon & Keine 2020: p. 11, ex. 14)
Given a probe P with a hierarchy of unchecked feature segments [uF],

a. P searches the closest accessible DP in its domain such that this DP contains feature set [G], with [G] $\bigcap$ [F] $\neq \emptyset$;

b. the feature hierarchy [G] is copied to P;

c. [G] is removed from [uF];

d. iterate over steps a.-c. until [uF] = $\emptyset$ or search fails.

There are several important things to note about (10). First, note that it only requires that there is some overlap between the unchecked segments on the probe and the segments of the goal; either can in principle be a superset of the other. Second, note that the feature copying step in (10b) is coarse in the sense that the entire hierarchically organized structure of features is copied from

Passamaquoddy is dependent on the analysis of portmanteaus in Conjunct forms. In section 3.2 I sketch an analysis that makes use of a missing intermediate segment on the probe, but if my refinement in section 5 is right, then there might not be a need for probes with a missing intermediate segment from an Algonquian-internal perspective.

[9]Later on, I will simplify the representation of probes; for example, I will omit the un(interpretive) specification.

the DP, not only the segment(s) that have been matched with the segments on the probe. Finally, steps (a)-(d) constitute a single Agree operation under this approach; this means no other syntactic operation can intervene between them.[10].

At this point one might wonder how the agreement system of Coon & Keine is different from the theory of interaction & satisfaction proposed by Deal (2015) or from other versions of Multiple Agree (Hiraiwa 2001, 2005, Anagnostopoulou 2005, Nevins 2007). This issue is addressed in footnotes 8 (p. 13) of the 2019 version of Coon & Keine's paper and 28 (p. 54) of the 2018 version of Coon & Keine's paper. In short, the answer is the following: a FG-approach is more restrictive than those theories. Unlike Multiple Agree approaches, it does not allow a single segment of a complex probe to agree with more than one DP. Unlike Deal's theory, it does not allow insatiable probes or adding to the interaction condition (Deal 2019). Moreover, a bigger difference from these approaches is that Agree with multiple DPs by a single probe is not something accessible completely for free. This configuration arises only under some circumstances (see next section 2.2) and it can lead to problems further down the road, and result in ungrammaticality. Having Multiple Agree for free does not allow for a theory that relates person/number hierarchy effects to configurations with multiple agreement. So if it in fact turns out to be the case that these two things are related, it would be an accident under the approaches that freely allow multiple agreement by a single probe with several goals.

2.2 Proposal: FG creation

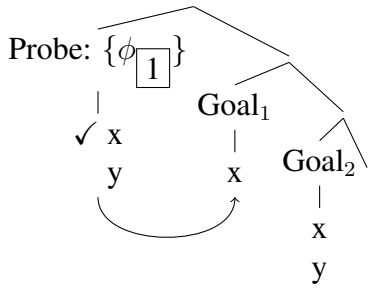
Coon & Keine (2020) argue that hierarchy effects in agreement arise when there is more than one DP visible to the probe, and when, given Agree in (10), the features of those DPs determine whether the step in (10b) will be done only once or it will be done multiple times. If the step in (10b) has been done several times, then **feature gluttony** has been created: the probe has copied onto itself features of more than one DPs, (11).

(11) **Feature gluttony** is a situation when a single probe P has entered Agree with more than one DP and thus copied more than one feature set [G] from them.

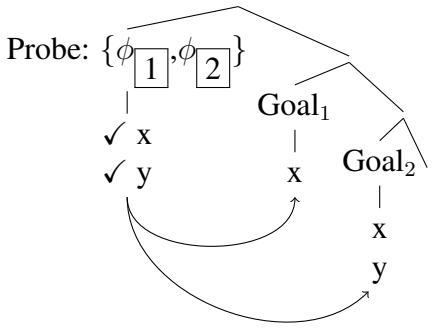
Let us see in what situations, given our assumptions and Agree in (10), feature gluttony will arise. It will arise in situations where more than 1 DP has features relevant to the Probe, and **a DP further from the Probe has some relevant feature(s) that a DP closer to the Probe lacks**. Let's illustrate this with an abstract example in (12)-(14).

[10]This might have consequences if one assumes, as I will, that Agree can be bi-directional and that probes can search their specifiers as well as their complements. The consequence is the following: we will have to assume that a probe on a head X only starts doing agreement when its maximal projection XP have been built. The reason for this consequence is the following: since agreeing with multiple DPs by one head is a single instance of Agree, then if it applied immediately as the syntactic head with the probe got merged, then it would not see the DP in its specifier, because it would have not yet been merged at this point.

(12) **Step#1:** agreement with Goal_1



(13) **Step#2:** agreement with Goal_2



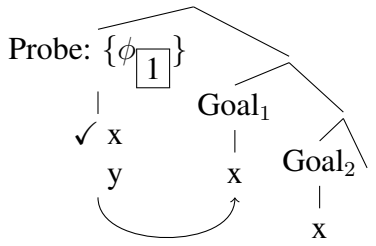
(14) Result of the Probe in (10)-(11):

$$P = \left\{ \phi_{\boxed{1}} = [x],\ \phi_{\boxed{2}} = \begin{matrix}[x] \\ | \\ [y]\end{matrix} \right\}$$

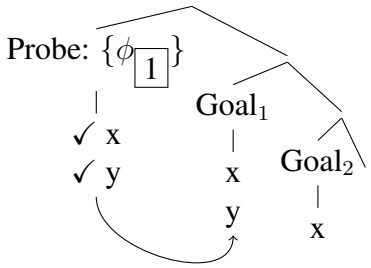
In (12) we see that the Probe has two segments that start probing, x and y. The closest Goal to the probe has segment x, but doesn't have y. The Goal that is further has both x and y. The probe will first interact with Goal_1. This interaction will result in the probe checking off (✓) and disactivating its x segment and copying the whole set of relevant features (in this case it's just x) from Goal_1 onto itself (abbreviated as $\phi_{\boxed{1}}$). The probe still has one more active segment (y), so it keeps probing further. In the next step, it interacts with Goal_2, (13), because this DP has segment y. This interaction results in the probe checking off its y feature (and the probe is thereby satisfied) and in copying the whole set of relevant features (in this case it is x and y) from Goal_2 onto itself (abbreviated as $\phi_{\boxed{2}}$). We have arrived at the result in (14): at the feature gluttony. The probe has two bundles of features from two different DPs on itself.

Now let's see when feature gluttony does not arise. There are two such configurations. First, feature gluttony does not arise when features of only one of the DPs are relevant to the probe. Second, it does not arise when features of more than one DP are relevant to the probe, and the DP that is further from the Probe doesn't have any relevant features which the closer DP doesn't also have. Two examples of such configurations are presented below: in (15)-(17) the two DPs have the same segments; in (16)-(18) DP_1 has the feature that DP_2 has plus an additional feature.

(15) **DPs have the same features**



(16) **DP_2 features are a subset of DP_1 features**



(17) Result of the Probe in (15):

$$P = \left\{ \phi_{\boxed{1}} = [x] \right\}$$

(18) Result of the Probe in (16):

$$P = \left\{ \phi_{\boxed{1}} = \begin{matrix}[x] \\ | \\ [y]\end{matrix} \right\}$$

In (15) the two goals could satisfy the probe equally well: both of them have the x segment that the probe is searching for, and neither of them has the y segment that the probe is searching for. In this case the probe will interact with the closest DP, check off its x segment, and copy the features of this DP onto itself. It will not interact with the further DP, because the checked-off x segment is already disactivated, and only y segment continues probing. The DP_2 does not have y, so the probe will not interact with it. Thus, the probe will gather only the features of the closest DP, (17), and the feature gluttony will not occur.

In (16) DP_1 has both of the two features that the probe is searching for, while DP_2 has only one of those features: DP_1 has both the segment x and the segment y, while DP_2 has only the segment x. The probe will interact with the first DP and get satisfied by it: it will check-off its x and y segments and copy DP_1's features onto itself, giving result to non-feature-gluttonous (18). Being satisfied, it won't interact with DP_2.

To sum up, here are the conditions for creating / avoiding feature gluttony:

(19) a. **Feature gluttony is created** in configurations when the interaction with the closest DP satisfies the probe partially and a further DP is able to satisfy some segment(s) of the probe that remain active after the first interaction.

b. **Feature gluttony is avoided** in configurations when either only one of the DPs has any features that the probe is searching for or the the relevant features on the closest DP are a superset of the the relevant features on the DPs which are further away from the probe.

Under Coon & Keine's proposal, **gluttonous configurations are not intrinsically bad**, but they are special in the sense that they can create complications for further syntactic operations and for the syntax-phonology interface. An example of syntactic complication that Coon & Keine discuss is obligatory clitic-doubling fed by Agree: movement of clitics need to obey both Attract Closest and Best match (simultaneously), which is impossible in a gluttonous configuration. FG-configurations can also create morphological problems: it is not clear how to pronounce a syntactic head which has gathered multiple hierarchically structured feature bundles. Ineffability is a possible outcome if other morphological tools, such as fission, portmanteau creation, or syncretism, don't come to rescue. In the next section, I argue that Algonquian inverse is also such a tool.

3 Inverse as a result of FG

I propose that **inverse** in Algonquian languages **is the spell-out of feature gluttony** created by the Voice probe agreeing with more than one DP. What exactly is this spell-out? I can imagine two answers to this question: (i) it is a default form; (ii) it is a very underspecified portmanteau. I don't think there is anything internal to Algonquian languages that would help us decide between the two options. Algonquian-external, Coon & Keine (2020) argue that default agreement cannot be a legitimate resolution of feature gluttonies based on agreement in so-called "assumed-identity"

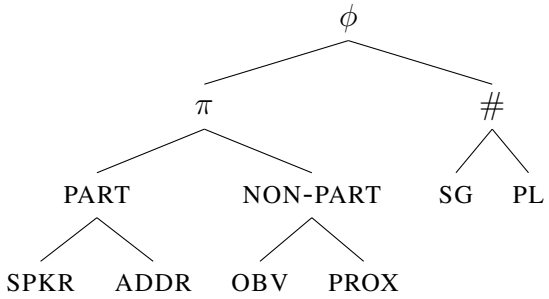
sentences in German. So maintaining Coon & Keine's analysis of hierarchy effects in German agreement would necessarily commit one to option (ii) for Algonquian inverse. I will adopt this option and treat inverse as an underspecified portmanteau.

(20) **Inverse**
oku / oq $\Rightarrow$ { $\{\pi\}$, $\{\pi\}$}

In (20) the portmanteau is a set of two sets of features, each of them contains only the π feature. The idea here would be that the Subset Principle (Halle 1997) applies to portmanteaus in the following way. A portmanteau of the form {X, Y} (where X and Y are sets of features) can spell out the set {X', Y'} on the syntactic head iff X is the subset of X', and Y is a subset of Y'.

Now I turn to the assumptions I need to make in order to analyze inverse as a spell-out of a FG-configuration. First, I need to assume the feature geometry in (21).

(21) Assumptions about feature geometry:



Deviating from Coon & Keine (2019), the change is that I assume NON-PART and OBV to be features of the hierarchy.[11] That reference to 3rd person (NON-PART) needs to be made was independently argued in (Nevins 2007) based on Algonquian-external material. Algonquian-internally, Oxford (2018) has argued that reference to 3rd person is unavoidable. As for obviative, Hammerly (2019) treats OBV as a feature when analyzing obviation in Ojibwe. Overall, it seems that Algonquian languages need to refer to non-participant proximate and obviative arguments (for example, for plural peripheral agreement), so I will assume that NON-PART and OBV are features present in the feature geometries of these languages.

Another assumption that I need to make concerns the directionality of Agree. While the cases discussed by Coon & Keine Agree all involved downwards Agree, I will need Agree to be bi-directional, as proposed by Béjar & Rezac (2009):

(22) **Bi-directional Agree:** try to be satisfied by something in your c-command domain, but if that failed, check out your specifier to see if it could satisfy you.

Finally, here is my proposal about the specification of probes in Passamaquoddy and other Algonquian languages that have inverse marking in the same cases as it does. I propose that Voice being an object probe is an illusion. It is actually a probe searching for obviative DPs. This is shown in (23) and (24).

[11] I here also represent PROX as a feature, but I think I do not need to appeal to it for the purposes of Voice agreement. I leave the question of whether PROX needs to be referenced for 3rd person Peripheral agreement (which distinguishes proximate and obviative arguments) for future research.

(23) **Independent Voice Probe**

(24) **Conjunct Voice Probe**

If there is a feature in the feature geometry, then a probe could in principle be searching for it. Thus, while my proposal might indeed seem unusual, since it is usually assumed that participant-searching probes (and not 3rd-person-searching ones) are responsible for the creation of hierarchy effects, I am not proposing anything that is not already possible in theories that appeal to feature geometries as a source of features that probes are looking for.

The difference between the two probes in (23)-(24) is whether they have the NON-PART segment or not. Note that, as was discussed in section 2.1, having an OBV feature on the probe does not make one also have a NON-PART feature on it. In the next two sections we will see how the presence / absence of NON-PART on the probe will help us derive the difference between the Independent hierarchy and the Conjunct hierarchy. Finally, I have to note that while the specification for the Independent probe in (23) is the final solution, I will consider refinements to (24) in the section 5 where I discuss portmanteaus distribution.

3.1 Inverse in Independent

Consider first the direct environments of the Independent, represented in tables 3-5.

PART + PART	Form	Translation
{1, 2}	k-tokom-**ol**	I hit you (Sg).
{11, 2}	k-tokom-**ol**-pon	We (excl.) hit you (Sg).
{1, 22}	k-tokom-**ol**-pa	I hit you (Pl).
{11, 22}	k-tokom-**ol**-pon	We (excl.) hit you (Pl).
{2, 1}	k-tokom-**i**	You (Sg) hit me.
{2, 11}	k-tokom-**i**-pon	You (Sg) hit us (excl).
{22, 1}	k-tokom-**i**-pa	You (Pl) hit me.
{22, 11}	k-tokom-**i**-pon	You (Pl) hit us (excl).

Table 3: Direct in Independent Part & Part Configurations

{**PART, 3**}	Form	Translation
{1, 3}	n-tokom-**a**	I hit her / him.
{11, 3}	n-tokom-**a**-n	We (excl.) hit her / him.
{1, 33}	n-tokom-**a**-k	I hit them.
{11, 33}	n-tokom-**a**-nnu-k	We (excl.) hit them.
{12, 3}	k-tokom-**a**-n	We (excl.) hit her / him.
{12, 33}	k-tokom-**a**-nnu-k	We (incl.) hit them.
{2, 3}	k-tokom-**a**	You (Sg) hit her / him.
{22, 3}	k-tokom-**a**-wa	You (Pl) hit her / him.
{2, 33}	k-tokom-**a**-k	You (Sg) hit them.
{22, 33}	k-tokom-**a**-wa-k	You (Pl) hit them.

Table 4: Direct in Independent {PART, 3} Configurations

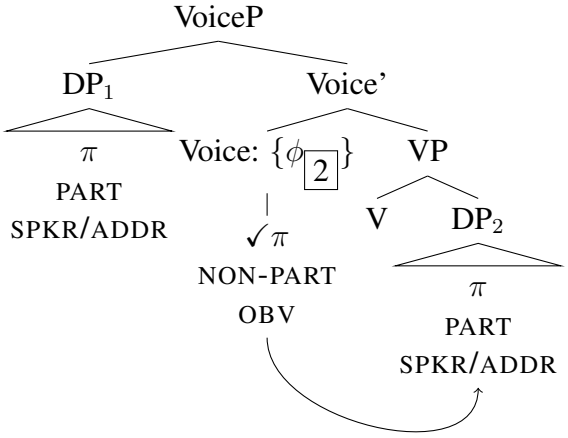
{**3, 4**}	Form	Translation
{3, 4}	'-tokom-**a**-l	(S)he (prox.) hits her / him (obv.).
{33, 4}	'-tokom-**a**-wa-l	They (prox.) hit her / him.
{3, 44}	'-tokom-**a**	(S)he (prox.) hits them (obv.).
{33, 44}	'-tokom-**a**-wa	They (prox.) hit them (obv.).

Table 5: Direct in Independent {3, 4} Configurations

In all of the configurations above we see direct object agreement. In PART + PART combinations (Table 1) we see 2nd person object marker *-ol* and 1st person object marker *-i*; in {PART, 3} (Table 2) and {3,4} (Table 3) combinations we see the non-participant marker *-a*.

I propose that the distinctive property of these environments is the fact that in them the higher DP (= subject) has no features that the lower DP (= object) does not have among the features that the probe is searching for (π, NON-PART, OBV). **In PART+PART, (25)**, Voice looks down, finds a participant object, checks its π feature and copies the features of the object onto itself. Voice searches then in its specifier for things that would satisfy NON-PART or OBV, but the participant subject has none of these features.

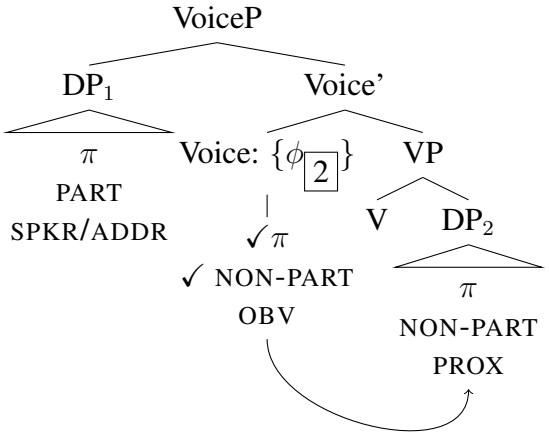
(25) **Direct** in {**PART + PART**}



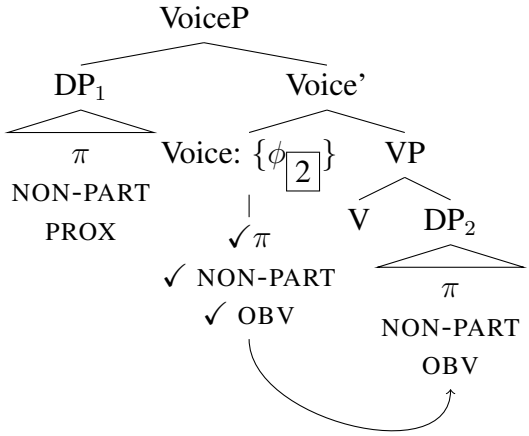
Thus, in (25) Agree fails (Preminger 2014). Since Voice has gathered only the features of the direct object, we will get direct object agreement.

In {PART, 3} (26), Voice looks down, finds a non-participant object, and checks its π and NON-PART features, coping the direct object's feature bundle onto itself. Its OBV keeps probing, but the subject is participant, so the search fails. **In {3, 4}, (27),** Voice looks down, finds an obviative DP, checks its π, NON-PART and OBV features, and copies the direct object's feature bundle onto itself. The probe is satisfied and does not probe further.

(26) **Direct** in {PART, 3}



(27) **Direct** in {3, 4}



In all of the cases above the Voice probe only enters into Agree with the first thing it enounters — with the object. Whether the probe is satisfied or not does not matter, it will spell out out what it got — object features. Note that placing a probe above both DPs would not be able to account for the fact that in direct cases we see object agreement (as opposed to subject agreement). To sum up, direct configurations are configurations where the subject does not have any relevant features that the object does not have, and in these configurations the probe only interacts with and spells features of the direct object.

Now consider the environments in which we see the inverse marker: {3, 4} (table 6), and {3, PART} (table 7) combinations. In both of these configurations we see the inverse marker *oku/oq* appear instead of direct object agreement.

{**4,3**}	Form	Translation
{4, 3}	'-tokom-**oku**-l	(S)he (obv.) hits her / him (prox.).
{4, 33}	'-tokom-**oku**-wa-l	(S)he (obv.) hits them (prox.).
{44, 3}	'-tokom-**oku**	They (obv.) hit her / him (prox.).
{44, 33}	'-tokom-**oku**-wa	They (obv.) hit them (prox.).

Table 6: Inverse in Independent {4, 3} Configurations

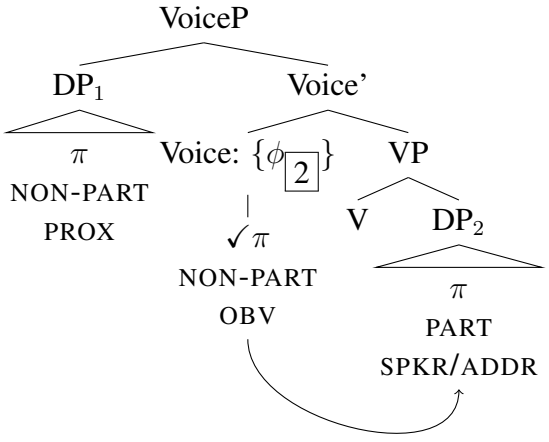
{**3, PART**}	Form	Translation
{3, 1}	n-tokom-**oq**	(S)he hits me.
{3, 11}	n-tokom-**oku**-n	(S)he hits us (excl.)
{33, 1}	n-tokom-**oku**-k	They hit me.
{33, 11}	n-tokom-**oku**-nnu-k	They hit us (excl.).
{3, 12}	k-tokom-**oku**-n	(S)he hits us (incl.).
{33, 12}	k-tokom-**oku**-nnu-k	They hit us (incl.).
{3, 2}	k-tokom-**oq**	(S)he hits you (Sg).
{3, 22}	k-tokom-**oku**-wa	(S)he hits you (Pl).
{33, 2}	k-tokom-**oku**-k	They hit you (Sg).
{33, 22}	k-tokom-**oku**-wa-k	They hit you (Pl).

Table 7: Inverse in Independent {3, PART} Configurations

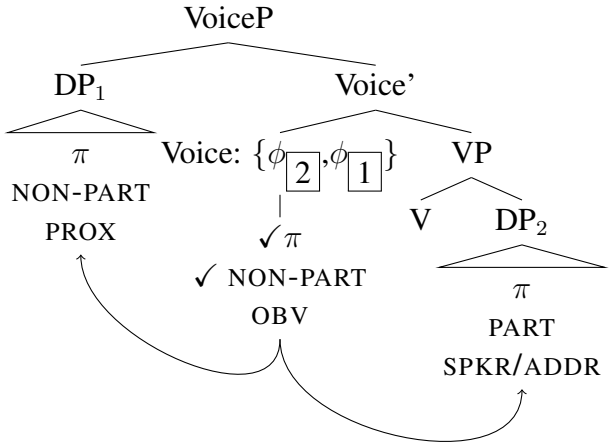
In both of these configurations the subject is featurally "closer" to obviative than the object. This means that the probe will interact with both of the DPs, which will result in **feature gluttony**.

Consider the derivation of {**3, PART**}**, (28)-(29)**. Voice looks down, finds a participant object, and checks its π feature. Object features are copied onto the probe. The probe's NON-PART and OBV features keep probing. They find the subject, which helps the probe check off its NON-PART segment. Then subject features are copied onto the probe. Thus, the probe ends up with ϕ-features of two different DPs.

(28) **Inverse** in {**3, PART**}**, Step 1**

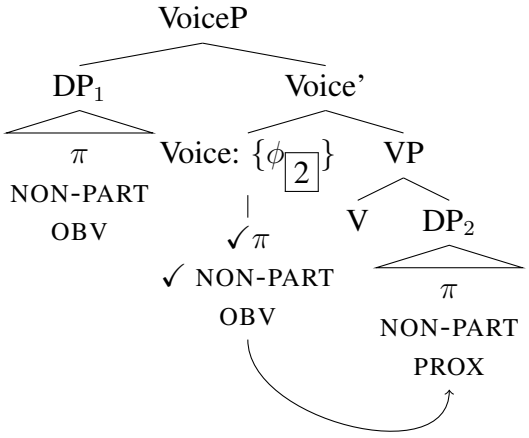


(29) **Inverse** in {**3, PART**}**, Step 2**

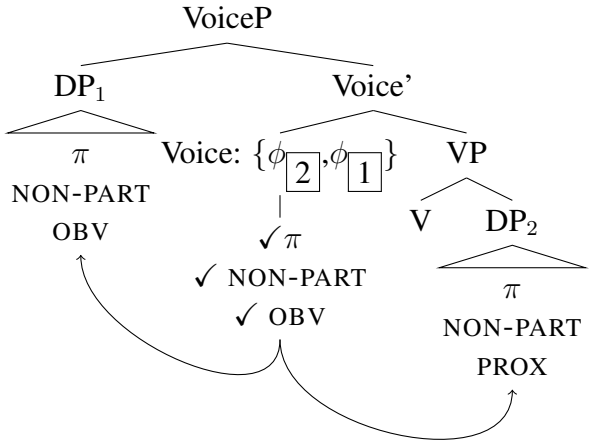


A similiar derivation occurs in {**4, 3**} **(30)-(31)** configurations. Voice looks down, finds a proximante non-participant DP and checks its π and NON-PART features. Object features are copied onto Voice. The OBV feature of the probe keeps probing and finds the subject, which is obviative, and so the probe can check off its OBV feature. Subject features get copied onto the probe. The probe is satisfied, but the feature gluttony is created again.

(30) **Inverse** in {**4, 3**}**, Step 1**



(31) **Inverse** in {**4, 3**}**, Step 2**



When feature gluttony has been created, the only way to spell it out is to use the underspecified portmanteau — the inverse marker.

3.2 Inverse in Conjunct

Now let us turn to the Conjunct forms. Recall that the hierarchy in Conjunct is quite similar. The only difference is that participants and non-participant proximates are grouped together:

(32) **Person hierarchy in Conjunct**
SAP (speech act participants: 1,2) and 3 (animate proximate) >4 (animate obviative)

This means that besides {PART + PART} (table 8), {PART, 3} (table 9)[12], and {3,4} (table 10) configurations, the {3, PART} also shows direct pattern = object agreement (table 11).

PART + PART	Form	Translation
{1, 2}	tokom-**ol**-an	I hit you (Sg).
{11, 2}	tokom-**ol**-ek	We (excl.) hit you (Sg).
{1, 22}	tokom-**ol**-eq	I hit you (Pl).
{11, 22}	tokom-**ol**-ek	We (excl.) hit you (Pl).
{2, 1}	tokom-**i**-yin	You (Sg) hit me.
{2, 11}	tokom-**i**-yek	You (Sg) hit us (excl).
{22, 1}	tokom-**i**-yeq	You (Pl) hit me.
{22, 11}	tokom-**i**-yek	You (Pl) hit us (excl).

Table 8: Direct in (U.) Conjunct Part & Part Configurations

[12]I am using negative forms for this paradigm, because the positive ones have portmanteaus which correspond to combination of Theme sign and Central agreements. I will discuss portmanteaus in detail in section 5.

{**PART, 3**}	Form	Translation
{1, 3}	tokom-**a**-w-an	I don't hit her / him.
{11, 3}	tokom-**a**-w-ehk	We (excl.) don't hit her / him.
{1, 33}	tokom-**a**-w-an	I don't hit them.
{11, 33}	tokom-**a**-w-ehk	We (excl.) don't hit them.
{12, 3}	tokom-**a**-w-ohq	We (excl.) don't hit her / him.
{12, 33}	tokom-**a**-w-ohq	We (incl.) don't hit them.
{2, 3}	tokom-**a**-w-on	You (Sg) don't hit her / him.
{22, 3}	tokom-**a**-w-ehq	You (Pl) don't hit her / him.
{2, 33}	tokom-**a**-w-on	You (Sg) don't hit them.
{22, 33}	tokom-**a**-w-ehq	You (Pl) don't hit them.

Table 9: Direct in (U.) Conjunct {PART, 3} Configurations (negative)

{**3,4**}	Form	Translation
{3, 4}	tokom-**a**-t	(S)he (prox.) hits her / him (obv.).
{33, 4}	tokom-**a**-hti-t	They (prox.) hit her / him.
{3, 44}	tokom-**a**-t	(S)he (prox.) hits them (obv.).
{33, 44}	tokom-**a**-hti-t	They (prox.) hit them (obv.).

Table 10: Direct in (U.) Conjunct {3, 4} Configurations

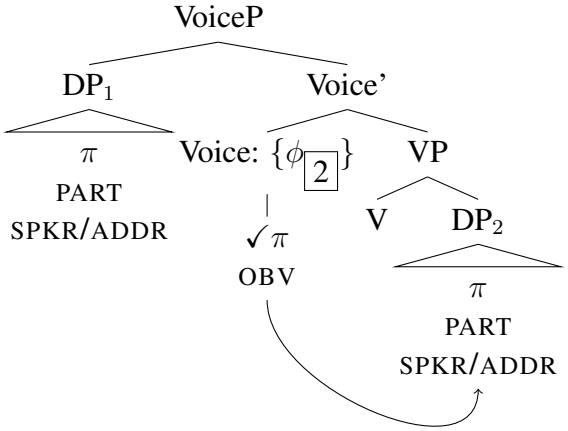
{**3, PART**}	Form	Translation
{3, 1}	tokom-**i**-t	(S)he hits me.
{3, 11}	tokom-**i**-nomot	(S)he hits us (excl.)
{33, 1}	tokom-**i**-hti-t	They hit me.
{33, 11}	tokom-**i**-nomot	They hit us (excl.).
{3, 12}	tokom-**ol**-inoq	(S)he hits us (incl.).
{33, 12}	tokom-**ol**-inoq	They hit us (incl.).
{3, 2}	tokom-**os**-k	(S)he hits you (Sg).
{3, 22}	tokom-**ol**-inaq	(S)he hits you (Pl).
{33, 2}	tokom-**os**-k	They hit you (Sg).
{33, 22}	tokom-**ol**-inaq	They hit you (Pl).

Table 11: Direct in (U.) Conjunct {3, PART} Configurations

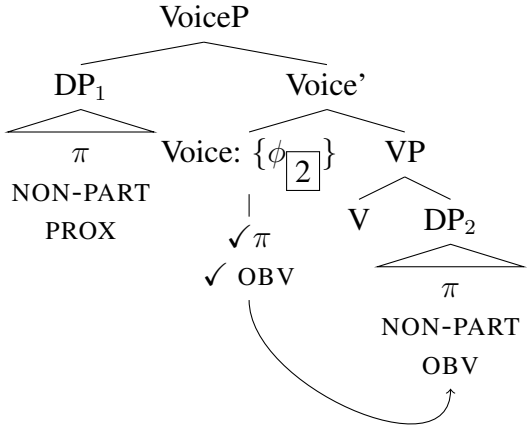
I have to note that for some forms in the table 11 existence of a thematic suffix is a matter of analysis: it is not clear whether *-i* should be separated from *nomot* in the forms ending in *inomot* ({3(3), 11}), and whether *-ol* should be separated from *inoq* and *inaq* in the forms ending in *olinoq* ({3(3), 12}) and *olinaq* ({3(3), 22}) respectively. Here I will treat these segments as separatable from the portmanteaus. In section 5, however, I will discuss a different option.

The difference between Independent and Conjunct can be accounted for if the Voice probe of Conjunct does not have NON-PART segment within its probing segments.[13] Derivations for {PART + PART}, (33), and {3,4}, (34), basically remain in Conjunct the same as in the Independent: in case of {PART + PART}, the probe will not agree with the higher DP because it doesn't have OBV feature; in case of {3,4}, (34), the probe will not agree with the higher DP because it will be completely satisfied by the lower DP.

(33) **Direct** in {**PART + PART**}

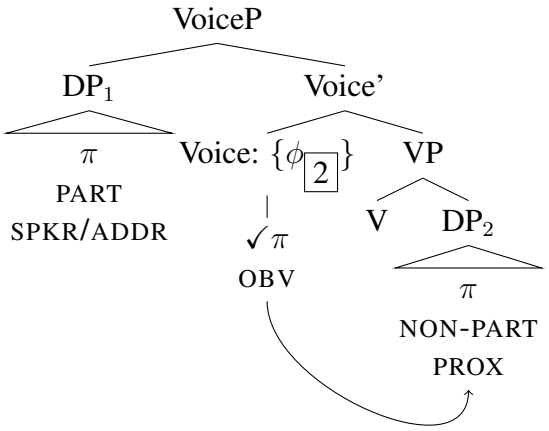


(34) **Direct** in {**3, 4**}

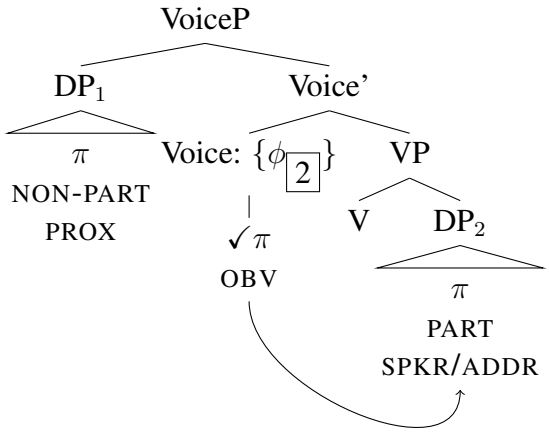


Removing the NON-PART segment from the probe results in participant and proximate non-participant DPs having the same features that the probe is searching for: both kinds of DPs have π segment, neither have OBV segment. This means we get not feature gluttony, but object agreement in both {PART, 3} and {3,PART} configurations: (35)-(36).

(35) **Direct** in {**PART, 3**}



(36) **Direct** in {**3, PART**}



In the {PART, 3} configuration, (35), the non-participant argument satisfies π, and the higher participant DP does not have the OBV feature that remains active on the probe, so the probe doesn't agree with it. In the {3,PART} configuration, (36), the participant argument satisfies π, and the higher non-participant DP can't satisfy the remaining OBV segment. Thus, in both configurations

[13]Note that a similiar "skipping" of a segment of the entailment scale on a probe is necessary for a feature gluttony-account of Me-First PCC (PART is skipped, while π and SPKR are present, Coon & Keine 2020).

the probe gathers features only of the first DP that it sees and interacts with, and, since it always interacts with the object first, these configurations will result in object agreement.

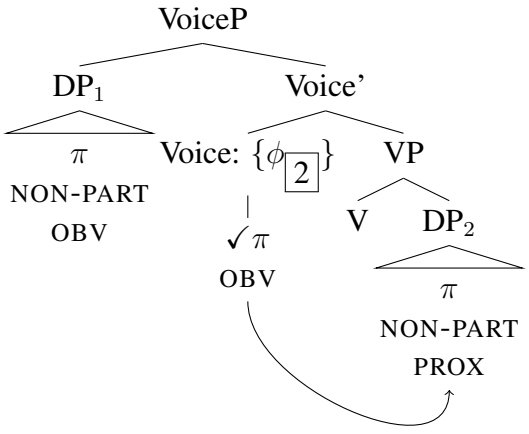
Configurations {4,3} in Conjunct have a small complication: in case the object is Singular, what we see is a portmanteau *iht* (table 12). This makes it unclear whether synchronically in the {4,3} configuration we have evidence for the form being direct or inverse.[14] However, with 3PL objects we clearly see the Inverse morphology (table 12), so in this section I will assume {4,3} in Conjunct always results in Inverse, and in the {44,3} configuration in particular it is just concealed by portmanteau creation. I will return to this issue again in section 5 on portmanteaus.

{**4,3**}	Form	Translation
{4, 3}	'-tokom-**iht**	(S)he (obv.) hits her / him (prox.).
{4, 33}	'-tokom-**oku**-hti-t	(S)he (obv.) hits them (prox.).
{44, 3}	'-tokom-**iht**	They (obv.) hit her / him (prox.).
{44, 33}	'-tokom-**oku**-hti-t	They (obv.) hit them (prox.).

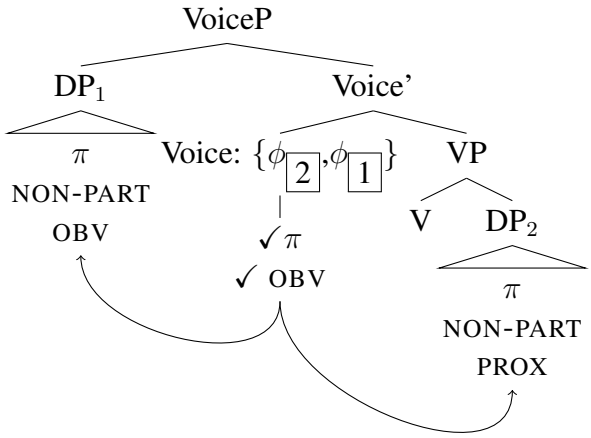
Table 12: Inverse in (U.) Conjunct {4, 3} Configurations

Putting this complication aside, I would like to show that my analysis indeed predicts {4,3} in Conjunct to result in Inverse. The two steps of the derivation are illustrated in (37)-(38).

(37) **Inverse** in {**4, 3**}**, Step 1**



(38) **Inverse** in {**4, 3**}**, Step 2**



The proximate object in this configuration will satisfy only the π segment of the probe. Interaction with the object will lead to copying the object's features onto the probe, (37). At the second step, the probe will interact with the obviative subject, satisfy its OBV segment and copy the subject's features onto itself, (38). As a result, the probe has gathered two sets of features from two DPs and created feature gluttony. This is spelled by the inverse marker.

Let me summarize the main features of my proposal again. Inverse marker in Passamaquoddy (and, potentially, in other Algonquian languages) is a result of feature gluttony created on the Voice probe: a situation when the probe has copied features from two different DPs onto itself. This happens only when the subject has features that the probe is searching for that the object does not have. I propose that the probe on Voice is sanwiched between the subject and the object and is searching for obviative noun phrases. This accounts for the observed hierarchy effects and also

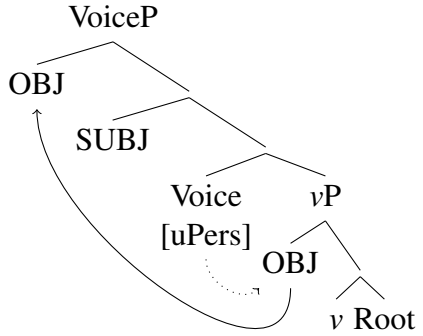
[14]Historically at least, it was an Inverse form (p.c. Conor Quinn).

for the fact that in the absence of inverse (= feature gluttony) we see object agreement (= first interaction agreement).

3.3 FG approach to Inverse vs Oxford 2018

At this point I would like to compare my proposal to the account of inverse in Algonquian languages argued for in (Oxford 2018). The main idea behind Oxford's proposal is that Voice probe is just a direct object probe. It agrees with the object and triggers its movement to Spec, VoiceP. This creates a multiple-specifier configuration as in (39) and makes the subject and the object equidistant for the higher agreement probes. This captures the omnivority of further instances of agreement: both Central (T) and Peripheral (C) agreement are locality-insensitive.[15]

(39) Voice agreement in (Oxford 2018: 9)

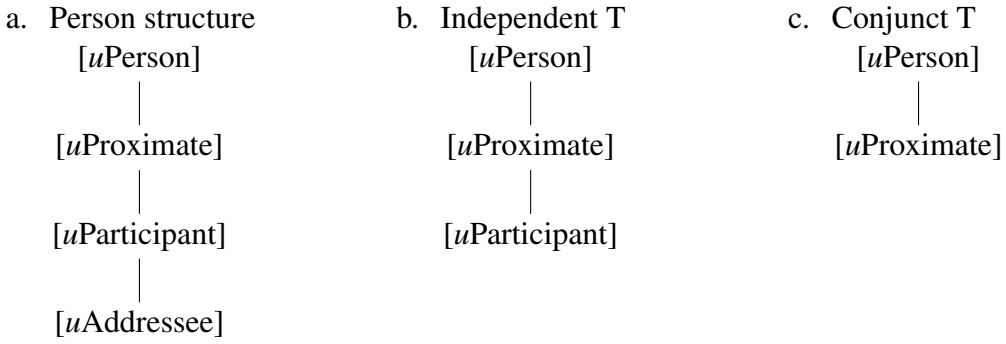


Oxofrd claims that the inverse marker in Voice is the result of impoverishment: when both Voice and a higher T probe agree with the same argument (direct object), then impoverishment operation removes the features on Voice, which results in Voice spelling out as an underspecified elsewhere form (inverse). When, however, the higher T probe agrees with both arguments or with the subject, no impoverishment takes place, and thus object agreement in Voice is expected to occur. Thus, the distribution of inverse is derivable from T agreement under Oxford's proposal.

Oxford claims that the T probe has different specification in Independent and Conjunct orders. He assumes the person structure in (40a) and argues that the Independent T has the hierarchically structured segments in (40b), while the Conjunct T has the segments in (40c).

[15] While Central (T) and Peripheral (C) agreement are not the topic of my paper, I would like to note that this solution for omnivority of higher agreement is compatible with my proposal about Voice agreement. Under my proposal, Voice always agrees with the object (at least in π): sometimes agreeing with object is followed by agreeing with subject (resulting in FG), sometimes the object is the only thing that Voice agrees with. This means that I can adopt Oxford's (2018) solution without any changes: Voice triggers movement of the object to its specifier after it agrees with it, creating equidistance of the subject and the object from higher heads. I could also follow another proposal by Oxford (Oxford 2019) which does not involve movement: it states that Voice and its specifier are equidistant from higher heads and thus the object features that Voice gathers are as close to any higher heads as subject features are.

(40) T probe specifications (Oxford 2018: 15)[16]



Given that Voice agreement makes the subject and the object equidistant from T, the question is: how does T determine what argument to agree with? Oxford proposes that T agrees with the *Best Match*: with a noun phrase whose person features match the specification of the probe best. For example, the Independent T will agree with a participant argument in the configuration with a participant and a non-participant argument and with proximate argument in the configuration with a proximate and an obviative arguments. When the two DPs can satisfy the probe equally well (i.e., neither DP has more segments that the probe is searching for compared to the other one), then T agrees with both of the DPs. This happens when there are two participants in the Independent or if there are two non-obviative arguments (participant + participant, participant + proximate non-participant) in Conjunct. In the Independent, Oxford argues that multiple agreement by T is reflected in fission from T: he treats the prefix and the Central slots in the template (see table 1) as corresponding to the same T head. In the Conjunct, Oxford claims that that multiple agreement by T is reflected in portmanteau creation (when portmanteaus for given combinations are available).

One particularly interesting insight of Oxford's proposal is that portmanteaus and inverse markers are correctly predicted to be in complementary distribution: presence of a portmanteau indicates multiple agreement by T, which in turn prevents impoverishment on Voice (T has two sets of features, Voice has one set, so they are not identical). So far I have offered no account for such complementarity, but see section 5 for some discussion.

I would like to discuss some disadvantages of Oxford's analysis, some of which are more general, others specific to Passamaquoddy. My main concern with his proposal can be summarized as follows: it is not obvious that T agrees in the way he suggests from the agreement morphology that we see. And if T agrees differently from what he suggests, then the explanation for the distribution of the inverse will be lost due to the tight connection between what T agrees with and whether Voice undergoes impoverishment (= inverse).

First, let's consider T agreement in Independent in both Algonquin and Passamaquoddy[17]. Under Oxford's proposal, (i) T is looking for participants; (ii) prefix is created as fission from T. Is there evidence for these claims that would be independent of Voice agreement? The empirical generalization about the Central slot agreement is presented in (41).

[16]Oxford calls this head "Infl" instead of "T". I disregard this difference to keep the label uniform in this paper.

[17]Independent T agreement works the same way in the two languages.

(41) **Central slot in Independent (*descriptive generalization*):**

a. Agree with 1PL if there is 1PL.

b. If there is no 1PL, agree with 2PL.

c. If there is no 1PL or 2PL, agree with 3PL.

d. Otherwise, don't agree.

By this description, agreement in the Central slot looks like a number agreement conditioned by person features. Note, importantly, that there is no suffix in this slot if there are no plural noun phrases in the sentence. For Oxford, it is an accident that this slot is filled only when plural noun phrases are around. It is also an accident that the prefix shows the agreement behavior in (42).

(42) **Prefix slot in Independent (*descriptive generalization*):**

a. Agree with 2nd person if there is 2nd person.

b. If there is no 2nd person, agree with 1st person.

c. If there are no 1st or 2nd person, agree with 3rd person.

This is so because for him the Central slot and the prefix are related to each other by fission: an arbitrary process of spelling some features of the head in a different slot of the template. Thus, while both (41) and (42) indeed show preference to agree with participants, the fact that the interactions we observe are more elaborate than just that receives no explanation. To illustrate this, consider a configuration with two plural participant arguments, e.g. 1PL subject and 2PL object.

(43) **We (excl.) hit you (pl)**

a. The actual form:
k-tokom-ol-pon
2-hit.TA.Ind-2-1PL
'We (excl.) hit you (pl).'

b. Not attested form:
* n-tokom-ol-pa
1-hit.TA.Ind-2-2PL
'We (excl.) hit you (pl).'

What does Oxford's analysis predict about this configuration? Given that both arguments are participants, T should agree with both of them. Then fission applies: one of the gathered bundles undergoes fission to the prefix position. The question then is: if both arguments were equidistant, what determines which feature bundle fisses off to the prefix position, and which stays as a suffix? I.e., why do we see the form in (43a) and not in (43b) for the meaning 'We (excl.) hit you (pl)'? Why couldn't both be possible? And given that this fission is not separating features from the same bundle, why does one of the bundles spell out only person features, while the other — only number features? It seems to me that the rule of fission needs to be quite complicated in order to correctly predict the patterns that (41) and (42) describe.

Motivating the fission analysis of the prefix, Oxford (to appear: 10) writes that *"...the patterning of the prefix and central ending as a single unit is reinforced by the fact that the two slots also disappear together: whenever the central ending fails to appear in a form in which it could conceivably appear, the prefix fails to appear as well."* I would like to note that this conclusion is very dependent on our assumptions about fission and null exponents, because it is not true across the board that the prefix and the suffix always co-exist. While they can indeed go both missing — see a form with an unspecified subject in (44), we also do see prefixes when no suffix is present (45)

— when there are no plural noun phrases in the sentence, and in Conjunct forms, in which there are no prefixes at all, we of course do see suffixes, and they are not always portmanteaus (46).[18]

(44) ∅-tokom-a-∅-k
Prefix-hit.US-3-**T**-PL
'They are being hit.'

(45) **n**-tokom-a-∅
1-hit-3-**T**
'I am hitting him/her.'

(46) ∅-tokom-i-**yek**
Prefix-hit.Conj-1-**1PL**
'You hit us.'

Finally, the same prefixes and central endings that we see on verbal forms in Independent are present in the nominal domain. This seems to be true across different Algonquian languages. For example, here's an illustration from Menominee (Macaulay 2009).

(47) Menominee (Macaulay 2009: 365)

a. **ne**-naew-a-w-**enaw**
1-see-TH-3-**1PL**
'We (excl) see him / her.'

b. **ne**-suniyan-aem-**enaw**
1-money-POSS-**1PL**
'our (excl) money.'

If fission is an operation formulated with respect to a head and a template, then arguably (47a) and (47b) would need two separate fission rules formulated for them, given that nominal and verbal templates are not the same and the heads present in NPs and VPs are arguably not the same. Thus, the fission analysis will need to dublicate the same rule in morphology twice. To sum up, it seems to me that the fission analysis of the prefix where it is viewed as originating on the same head as the Central agreement seems not very well motivated to me.

Now let's consider Conjunct agreement. At first I would like to discuss some facts that are the same for both Algonquin (the language that Oxford (2018) discusses) and Passamquoddy. The first issue has to do with how equidistance interacts with the spell-out. Let us consider configurations with 3rd person singular and 1st person singular arguments: {1Sg, 3Sg} and {3Sg,1Sg}. The examples from Passamaquoddy of these configurations are in (48).

(48) Passamaquoddy

a. tokom-**uk**
hit.Conj-1SgS.3SgO
'I hit him/her.'

b. tokom-i-**t**
hit.Conj-1-3
'(S)he hit me.'

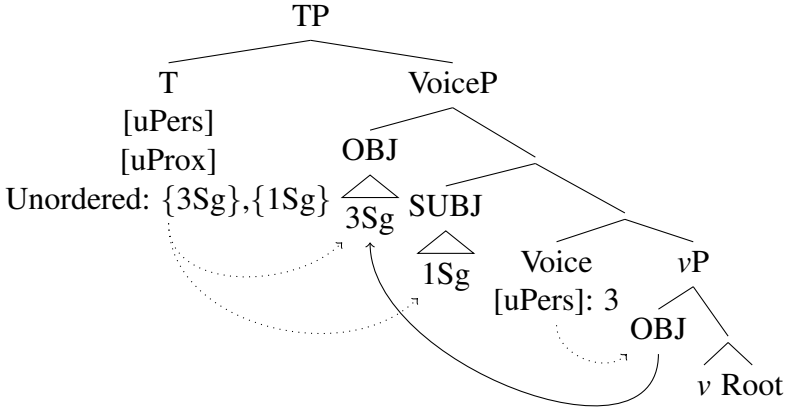
We see different agreement in {1Sg, 3Sg} and {3Sg,1Sg}: in the first configuration, (48a), we don't see the suffix corresponding to Voice and we see a portmanteau; in the second configuration, (48b), we see object agreement in Voice and subject agreement in T. How does this difference come about? Let's put the issue of the Voice agreement aside and assume that both (48a) and (48b) have object agreement in Voice, which, possibly, gets obscured in (48a) by morphonological processes. But why do we see a portmanteau in the Central slot in (48a) but not in (48b)?

I think Oxford (2018) does not have a satisfactory answer to this question: he needs to assume that the features of the subject and object are specified for case (Oxford, p.c.) in order to correctly

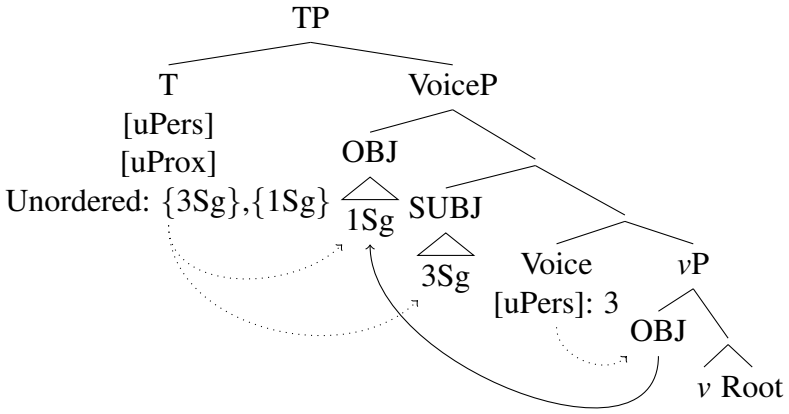
[18] In (44)-(46) I indicate by "∅" the position where there could have been a prefix or a Central suffix that is not present, and I write "Prefix" and "T" in the corresponding gloss.

derive the pattern in (48). Here is why. According to Oxford's proposal, T in Conjunct searches for proximate arguments. After Voice has moved the object to one of its specifiers, thereby creating their equidistance, in the configurations in (48) T probes and finds two equidistant noun phrases which satisfy its specification equally well. Unable to decide which noun phrase is the Best match, T copies both feature bundles onto itself. This is illustrated in (49)-(50).

(49) {1Sg, 3Sg} configuration



(50) {3Sg, 1Sg} configuration



Note that since the two noun phrases are equidistant, the T has to copy their features simultaneously and thus the two feature bundles have to be unorderd on the T head. This means that in (49) and in (50) T should have the exact same featural representation after Agree. This implies that, without further stupulations, Oxford predicts (48a) and (48b) to result in identical forms. This is however not what we see in (48a)-(48b). What Oxford then needs to assume is that all features from the noun phrases come specified with case that the noun phrase has received. This is already a little bit stipulative, given that there is no overt nominative and accusative marking in Algonquian languages. But let us imagine that this is indeed the case. Then the answer to the assymetry in (48) would be that only the following two feature bundles can be spelled out with the portmanteau *uk*: $\{1Sg_{NOM}\}$,$\{3Sg_{ACC}\}$. If there is no portmanteau available for $\{3Sg_{NOM}\}$,$\{1Sg_{ACC}\}$, what is predicted for its spell out? According to (Oxford 2018: 17), when no portmanteau is available, T spells out "as the next most specified VI...which is not a portmanteau". According to Oxford's person structure in (40a), and assuming the following vocabulary items (VIs) available in Conjunct,

(51)[19], it is predicted that we should see first person agreement in the {3Sg,1Sg} configuration.

(51) a. *an* ↔ [Pers, Prox, Part]
b. *t* ↔ [Pers, Prox]

This is so because the morpheme *an* is a more specified VI than the morpheme *t* due to the nature of the person structure in (40a). Note also that we know independently that *an* spells out 1Sg because it occurs in animate intransitive forms, (52), and we know that *an* is not case-sensitive because it occurs both in forms where 1Sg is a subject, (53), and in forms where 1Sg is an object — in the unspecified subject form (54).

(52) opi-**yan**
hit.AI.Conj-**1Sg**
'I sit.'

(53) tokom-ol-**an**
hit.Conj-2-**1Sg**
'I hit you.'

(54) tokom-oki-**yan**
hit.Conj-US-**1Sg**
'Someone hit me.'

This suggests that *an* cannot be ruled out as an exponent for the T in (50) due to being case-discriminating.[20] Thus, it seems that even with case subscripts added to the representation of the feature bundles, Oxford makes a wrong prediction that in {3Sg,1Sg} configurations T should show 1Sg agreement.

Another wrong prediction, which is related to the one just discussed, is that it is predicted that in Conjunct forms with two participant arguments in the absence of a portmanteau T should always spell addressee's features. This again, follows if we assume person structure as in (40a) and assume the VIs presented in (55) for morphemes corresponding to 2Sg and 1Sg arguments respectivelly.

(55) a. *on* ↔ [Pers, Prox, Part, Add]
b. *an* ↔ [Pers, Prox, Part]

If in the absence of a portmanteau a more specific VI needs to be used, then 2nd person VIs should win over 1st person VIs. However, this is not what we find. What we find in Passamaquoddy is that in {1Sg, 2Sg} and {2Sg, 1Sg} configurations the Central slot agreement follows the subject. This is illustrated in (56)-(57).

(56) tokom-ol-**an**
hit.Conj-2-**1Sg**
'I hit you.'

(57) tokom-i-**yin**
hit.Conj-1-**2Sg**
'You hit me.'

Finally, in the {2(Sg/Pl), 1Pl} configurations we see what looks like object agreement both in Voice and in T. This is true both of Passamaquoddy and of Algonquin, as illustrated in (58)-(59) below. At the first glance, this looks like a direct violation of the impoverishment rule for Voice that Oxford proposes: if both T and Voice agree with the same argument, why doesn't Voice undergo impoverishment and why don't we see inverse?

[19]This assumption is based on Oxford's assumptions about similiar items in Algonquin. E.g., Algonquin's *j* is an equivalent of Passamaquoddy's *t*, and I have provided identical specification as in (Oxford 2018: 17).

[20]This is so unless we assume that the object in (54) gets nominative case. Given that there is no overt nominative or accusative case in the language, it seems impossible to find evidence for what case the object gets in (54).

(58) Passamaquoddy

tokom-**i**-**yek**
hit.Conj-**1**-**1Pl**

'We (excl.) hit you (sg/pl).'

(59) Algonquin
wa:bam-**i**-**ya:ng**
see-**1**-**1Pl**
'You (sg/pl) see us (excl.).'
(Jones 1977:89) via (Oxford 2018: 42)

Note that in the system that Oxford has, however, in (58)-(59) T agrees with both noun phrases, because they are both proximate arguments. There happens to be no {2(Sg/Pl), 1Pl} portmanteau in these languages, so the choice of the VI will be determined by how specific are the VIs available. Again, if we assume the person feature structure that Oxofrd assumes (40a) and add a minimal assumption that plural noun phrases have an additional plural feature, then the specifications of 2Pl and 1Pl suffixes in Conjunct would look like this:

(60) a. *eq* ↔ [Pers, Prox, Part, Add, Pl]
b. *ek* ↔ [Pers, Prox, Part, Pl]

Since feature specification of *eq* is a superset of the feature specification of *ek*, this predicts that we should use the 2Pl marker *eq* in configurations where we are deciding between spelling out 1Pl and 2Pl. Again, this is not what we observe in (58)-(59).

Finally, there is an argument against Oxford's proposal that applies only to Passamaquoddy. The argument has to do with the {PART,3} configurations. In positive {PART,3} forms, we see creation of portmanteaus (table 13): *uk* ({1Sg, 3}) and *ot* ({2Sg, 3}). We also see that even if no portmanteau is created (i.e., when markers *ek* (1Pl excl.), *oq* (1Pl incl.) and *eq* (2Pl) occur), the Voice agreement goes missing.

{**PART, 3**}	Form	Translation
{1, 3}	tokom-**uk**	I hit her / him.
{11, 3}	tokom-**ek**	We (excl.) hit her / him.
{1, 33}	tokom-**uk**	I hit them.
{11, 33}	tokom-**ek**	We (excl.) hit them.
{12, 3}	tokom-**oq**	We (excl.) hit her / him.
{12, 33}	tokom-**oq**	We (incl.) hit them.
{2, 3}	tokom-**ot**	You (Sg) hit her / him.
{22, 3}	tokom-**eq**	You (Pl) hit her / him.
{2, 33}	tokom-**ot**	You (Sg) hit them.
{22, 33}	tokom-**eq**	You (Pl) hit them.

Table 13: Direct in (U.) Conjunct {PART, 3} Configurations (positive)

In {PART,3} sentences containing negation portmanteaus *uk* ({1Sg, 3}) and *ot* ({2Sg, 3} get disrupted: instead of a portmanteau we see Voice agreement, negation, and subject agreement (table 14). Voice agreement markers also emerge in forms which did not have portmanteaus in positive sentences (forms with plural participant subjects).

{PART, 3}	Form	Translation
{1, 3}	tokom-**a**-w-an	I don't hit her / him.
{11, 3}	tokom-**a**-w-ehk	We (excl.) don't hit her / him.
{1, 33}	tokom-**a**-w-an	I don't hit them.
{11, 33}	tokom-**a**-w-ehk	We (excl.) don't hit them.
{12, 3}	tokom-**a**-w-ohq	We (excl.) don't hit her / him.
{12, 33}	tokom-**a**-w-ohq	We (incl.) don't hit them.
{2, 3}	tokom-**a**-w-on	You (Sg) don't hit her / him.
{22, 3}	tokom-**a**-w-ehq	You (Pl) don't hit her / him.
{2, 33}	tokom-**a**-w-on	You (Sg) don't hit them.
{22, 33}	tokom-**a**-w-ehq	You (Pl) don't hit them.

Table 14: Direct in (U.) Conjunct {PART, 3} Configurations (negative)

Disruption of the portmanteaus by negation is unexpected under Oxford's analysis. For him portmanteaus are not the product of allomorphy, but are the result of multiple agreement of T with equidistant noun phrases. Thus, presence or absence of negation should not make a difference for T agreement and portmanteau creation: instead of the forms *tokom-a-w-an* (hit-3-NEG-1Sg) 'I don't hit her/him/them' and *tokom-a-w-on* (hit-3-NEG-2Sg) 'You (Sg) don't hit her/him/them' Oxford predicts the unattested forms *tokom-a-w-uk* (hit-3-NEG-1Sg.3) and *tokom-a-w-ot* (hit-3-NEG-2Sg.3). Note that case specification of feature bundles cannot solve this problem: the case of the bundle should not be dependent on the presence of negation, and thus portmanteaus should be accessible and preferred for the {1Sg,3} and {2Sg,3} configurations.

To sum up, Oxford's proposal about T agreement faces some issues if we look at the exponents more closely. These issues are in principle solvable: we could postulate null exponents in cases where we expect multiple agreement but don't see the predicted exponent, we could add some allomorphy rules, employ case marking on feature bundles, and make more elaborate fission rules. It seems to me though that this would obscure rather than explain the actual generalizations about T agreement. My proposal about direct/inverse agreement does not face the same challenges because it remains neutral on the question of how T agreement proceeds. For me, the hierarchy effect we see on Voice is created by Voice (by the nature of Agree and the specification of the probe) and not as a result of an interaction with a higher probe.

4 Detour: on the properties of FG-explanations

This section is a digression from the discussion of Algonquian agreement. It explores the question of the power of a FG-explanation for hierarchy effects: which hierarchy effects feature gluttony could take care of and which it could not.

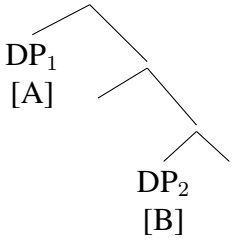
Is it possible to know whether a certain hierarchy effect can be analyzed in terms of feature gluttony? I tentatively propose that it is: if a hierarchy effect fits a certain profile, it can receive a FG-analysis. First, the hierarchy effect should fit the description in (61):

(61) **Configuration with a FG-hierarchy effect:** (to be modified later)
A configuration containing two DPs, one c-commanding the other, such that its morpho-

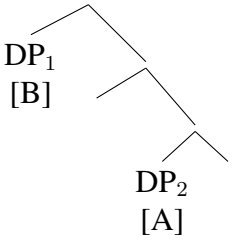
logical output or grammaticality status depends on the relative status of the two DPs with respect to some hierarchy based on a grammatical category (e.g., person or number).

(61) can be illustrated with the following abstract example. Imagine that there are two DPs in the structure such that DP_1 is c-commanding DP_2, and such that the hierarchy has two classes of some grammatical category, A and B, and each of the two DPs belongs to one of these classes. Then this configuration exhibits a hierarchy effect if the output of the configuration depends on what categories (A or B) the two DPs belong to. Here is an example of such dependence:

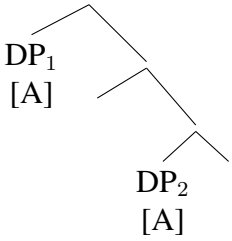
(62) **Output: X**



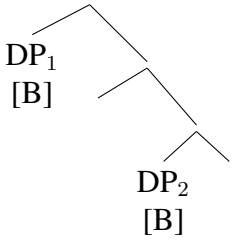
(63) **Output: Y**



(64) **Output: Y**



(65) **Output: Y**



Here we see that the output is "X" if the c-commanding DP belongs to the category "A" and the c-commanded DP belongs to the category "B", and it is "Y" otherwise.

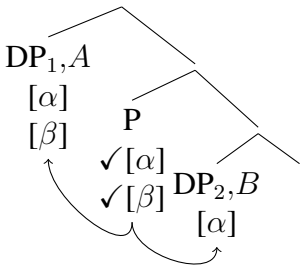
How would FG-explanation for the hierarchy effect in (62)-(63) look like? There are two possible ways to get a FG-explanation: either (i) the probe is sandwiched between the two DPs and class A is ordered higher by the hierarchy than class B, or (ii) the probe is above both DPs and class B is ordered higher by the hierarchy than class A.

(66) FG-solution for (62)-(63)

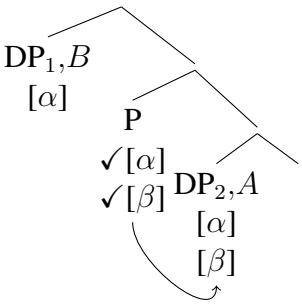
1. • [DP_1 [P(robe) DP_2]]
   • A >B
2. • [P(robe) [DP_1 DP_2]]
   • B >A

A way to implement the ordering of the hierarchy is to say that the class that is higher on the hierarchy has more features than the class that is lower on the hierarchy. Let us assume that the higher class has features α and β, while the lower class has only feature α. Then the first FG-solution can be represented as in (67)-(70).

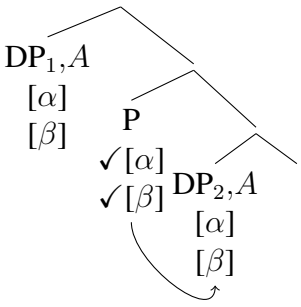
(67) **Output: X**



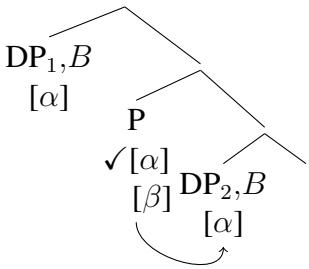
(68) **Output: Y**



(69) **Output: Y**



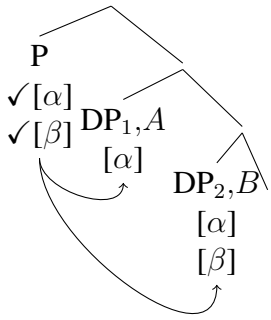
(70) **Output: Y**



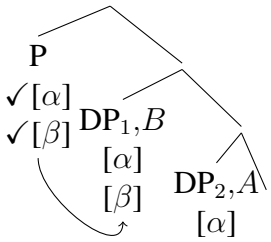
The probe has the same featural specification as the highest memeber of the hierarchy: it has both α and β in its probing segments. Output "X" corresponds to creation of feature gluttony: the probe agrees with both DPs because its first interaction (with DP_2) only partially satisfies the probe, and the second interaction is able to satisfy a segment that the first could not. The output "Y" corresponds to interaction with the lower DP only. It occurs in configurations where the higher DP does not have any features that the probe is looking for that the lower DP does not have.

The second solution is presented in (71)-(74).

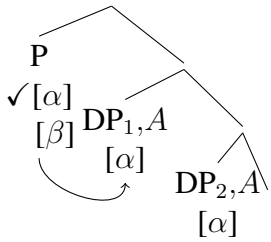
(71) **Output: X**



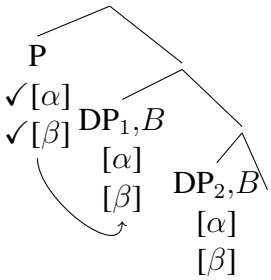
(72) **Output: Y**



(73) **Output: Y**



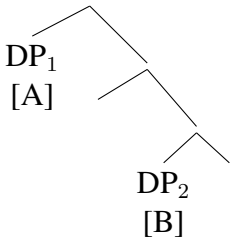
(74) **Output: Y**



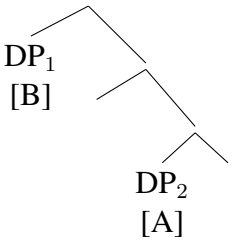
Here, again, the probe has both α and β in its probing segments. But now the probe is higher than both DPs, and the hierarchy is different: B class has more segments (both α and β) that class A (only α). Both solutions share the property that the configuration that has different output than the other three is a FG-configuration, and the DP that is further away from the probe has more features that the probe is searching for compared to the DP that is closer to the probe.

What would change if the output was different? For example, imagine that we get the output "X" for a B-class DP c-commanding an A-class DP, and output "Y" for an A-class DP c-commanding a B-class DP:

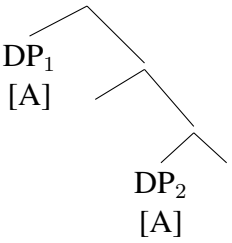
(75) **Output: Y**



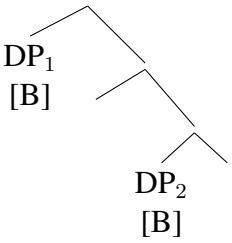
(76) **Output: X**



(77) **Output: Y**



(78) **Output: Y**

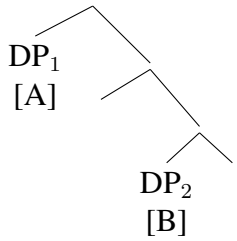


The pattern in (75)-(78) also has two possible FG-solutions. If one assumes that the probe is sandwiched between the two DPs, then the class B will need to be higher on the hierarchy than class A. If one assumes that the probe is above both of the DPs, then the class A will need to be higher on the hierarchy than class B. In both cases (76) would result in a feature gluttony.

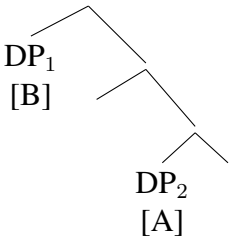
What about other possible patterns? If the outputs of A-class DP c-commanding B-class DP (75) and B-class DP c-commanding A-class DP (76) were the same, then, independent of what the output is for same-class configurations, we would not be dealing with a hierarchy effect, because the relative ordering of A and B on the hierarchy would not be influencing the output.

If the outputs of A-class DP c-commanding B-class DP (75) and B-class DP c-commanding A-class DP (76) are kept different, then I can think of only two additional patterns: patterns in which the outputs of the two same-class configurations are also different, (79)-(82) and (83)-(86).

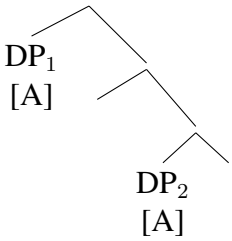
(79) **Output: X**



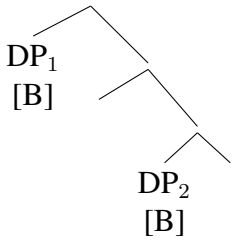
(80) **Output: Y**



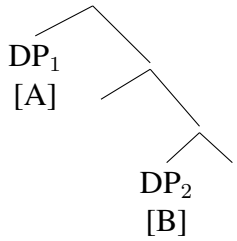
(81) **Output: Y**



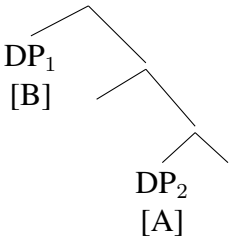
(82) **Output: X**



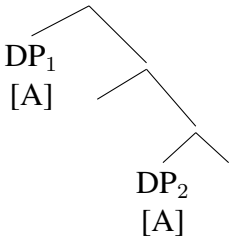
(83) **Output: X**



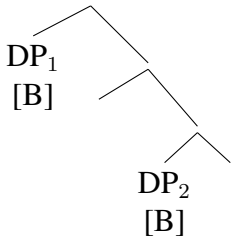
(84) **Output: Y**



(85) **Output: X**



(86) **Output: Y**



However, these two configurations can be analyzed without appealing to any hierarchy. In (79)-(82) the lower DP determines the output, while in (83)-(86) the higher DP determines the output. Thus, we can conclude that a hierarchy effect that can be analyzed with FG needs to follow 1 + 3 pattern: there has to be one special output for when the two DPs are from different classes and a certain c-commanding relation holds, and a different output otherwise: (87).

(87) **Configuration with a FG-hierarchy effect:** (final version)
A configuration containing two DPs, one c-commanding the other, such that there is a hierarchy based on a grammatical category (e.g., person or number) and the class of the two DPs on that hierarchy determines the morphological output or the grammaticality status in the following way:

- when the two DPs belong to different classes, the c-commanding relation determines the output, and the two outputs are different;
- when the two DPs belong to the same class, the output is the same, and is the same as one of the outputs in configurations with different-class DPs.

Hierarchy effects could have different manifestations: what outputs "X" and "Y" are could be different for different phenomena. For example, in case of PCC effects, one of the outputs is often an ungrammatical sentence, while the other is a grammatical sentence. For the direct/inverse agreement in Algonquian languages, one of the outputs is object agreement, while the other one is inverse marker. The form of the output could provide a guide to where the probe is situated in the syntactic representation. For example, in Algonquian direct/inverse agreement has object agreement as the elsewhere output. This imposes a view according to which the probe is sandwitched

between the two arguments. If the elsewhere output showed subject agreement instead, one would have to pursue the solution where the probe is located above both arguments.

We have considered an abstract simplified case with only two classes on the hierarchy. There are often more than two classes involved in hierarchy effects, and I would like to propose two additional conditions which restrict the hierarchies subject to a FG-analysis, (88).

(88) **Two conditions on the hierarchy for FG-analysis:**

1. the relevant classes of the hierarchy need to be **strictly ordered**;
2. it should be possible to represent the relevant classes as sets of features such that for each two classes A >B that are adjacent with respect to the strict ordering, **the features of the class A** that the probe is searching for are **a superset of the features of the class B** that the probe is searching for.

The first condition needs a definition of strict ordering, I provide it in (89).

(89) **Strict ordering**
The classes on the hierarchy are *strictly ordered* iff:

a. for each two classes A and B, either A >B, or B >A: if a configuration with a higher A-class DP and lower B-class DP gives output X, then a configuration with a higher B-class DP and a lower A-class DP gives output Y (where X $\neq$ Y)

b. **transitivity condition** holds:
for any three classes A, B, C, if A > B and B > C, then A > C

Strict ordering ensures that the classes of the hierarchy have no overlap and are related through transitivity. For example, if we have four classes, A >B >C >D, and two outputs X and Y, then a strictly ordered hierarchy will look like in (90) (here {A, B} represents a configuration where an A-class DP c-commands a B-class DP).

(90) A >B >C >D

a. {A, B} $\rightarrow$ X	e. {A, D} $\rightarrow$ X	i. {B, D} $\rightarrow$ X
b. {B, A} $\rightarrow$ Y	f. {D, A} $\rightarrow$ Y	j. {D, B} $\rightarrow$ Y
c. {A, C} $\rightarrow$ X	g. {B, C} $\rightarrow$ X	k. {C, D} $\rightarrow$ X
d. {C, A} $\rightarrow$ Y	h. {C, B} $\rightarrow$ Y	l. {D, C} $\rightarrow$ Y

The second condition of (88) ensures that the strictly ordered hierarchy can be represented in terms of features on the probe. Assume we have a hierarchy with four classes, A >B >C >D. Then in order to figure out the specification of the probe, we need to come up with features α, β, γ and δ such that all classes have the α feature, all except the lowest on the hierarchy have the β feature, the first two classes of the hierarchy (A and B) have the γ feature, and only the highest class (A) has the δ feature. Then we could state that the probe is searching for all the features that the highest class of the hierarchy has: α, β, γ and δ. This is represented in table 15, where "-β", "-γ" and "-δ" could be read as either an absence of such feature or a feature that is opposite to α, β, γ and δ respectively. This is not important as far as feature gluttony concerned, because these features, if present, will not be interacted with by the probe.

A	B	C	D
α	α	α	α
β	β	β	-β
γ	γ	-γ	-γ
δ	-δ	-δ	-δ

Table 15: Feature sets of the classes of the hierarchy

The probe that has segments α, β, γ and δ will successfully capture hierarchy effects produced by the hierarchy A >B >C >D: it will create feature gluttony every time the second DP it interacts with has more features from the set $\{\alpha, \beta, \gamma, \delta\}$ than the first DP it has interacted with. I.e., it will create feature gluttony every time the second DP it interacts with is higher on the hierarchy than the first DP it interacts with.

Turning back to Algonquian direct/inverse agreement, let us consider how my proposal in section 3 fits into a more general approach of FG-explanations to hierarchy effects developed in this section. In Independent, the classes of the hierarchy are "Obviative", "3rd person Proximate" and "Participant", and their ordering is Obviative >3rd person Proximate >Participant. The feature sets of these classes are presented in the table 16. As before, the probe is searching for all the features of the highest class on the hierarchy (Obviative), and each two adjacent classes differ in one of the features that the probe is searching for.

Obviative	3rd person Proximate	Participant
π	π	π
NON-PART	NON-PART	−NON-PART=PART
OBV	OBV	−OBV

Table 16: Hierarchy in Independent

I have proposed that Conjunct is different from Independent only in that the probe does not have the NON-PART segment. If we just remove the middle line from the table 16, we will get table 17. In this table, we see that Obviative and 3rd person Proximate are identical in features, and thus can be united into a single class. Thus, we get table 18, which has only two classes of the hierarchy.

Obviative	3rd person Proximate	Participant
π	π	π
OBV	OBV	−OBV

Table 17: From Independent to Conjunct

Obviative	Proximate
π	π
OBV	−OBV

Table 18: Hierarchy in Conjunct

To sum up, in this section I tried to establish what a hierarchy effect should look like in order to be able to receive an analysis in terms of feature gluttony. I have come to the following tentative conclusion. There should be a configuration with two DPs, one c-commanding the other, and a hierarchy which determines what output we get depending on what classes of the hierarchy the two DPs belong to. The features of the highest class on the hierarchy are the features that the probe should have. In (87) I have tried to state my understanding of how the output of the configuration should be linked to the hierarchy. In addition, I formulated two conditions that a hierarchy should

have in order to be subject to a FG-analysis: classes of the hierarchy should be strictly ordered with respect to one another, and each two adjacent classes on the hierarchy should have feature sets that the probe is searching for that stand in a subset relation (the features of the lower-ranked class should be a subset of the features of the higher-ranked class). This is by no means a conclusive description of the properties that make a given hierarchy effect analyzable in terms of feature gluttony, but just a first attempt at unveiling some of such properties.

5 Portmanteaus: should FG be held accountable?

In the 3 section I have disregarded portmanteaus found in Conjunct forms from my consideration when analyzing direct/inverse agreement in Conjunct. This section is devoted to them. I observe that there is a hierarchy effect found in portmanteau creation (section 5.1) and propose a way to understand this effect in terms of feature gluttony (section 5.2).

5.1 A hierarchy effect in portmanteau disruptability

Just like Oxford (2018), I assume that portmanteaus are a preferred option for spelling two feature bundles, which is used when the lexicon contains a vocabulary item with the relevant features. However, unlike Oxford, I would like to argue that, at least in Passamaquoddy, portmanteaus do not always result from Multiple Agree. An argument in favor of this view comes from a hierarchy effect in portmanteau disruptability.

Passamaquoddy has six portmanteaus in the Conjunct paradigm; all of them are found in configurations where at least one of the arguments is 3rd person:

(91) Portmanteaus in Conjunct

a. *-uk* {1Sg subject, 3Sg or 3PL object}
b. *-ot* {2Sg subject, 3Sg or 3PL object}
c. *-iht* {4Sg or 4Pl subject, 3Sg object}
d. *-inomot* {3Sg or 3PL subject, 1Pl excl. object}
e. *-olinoq* {3Sg or 3PL subject, 1Pl incl. object}
f. *-olinaq* {3Sg or 3PL subject, 2Pl object}

A hierarchy effect is observed in configurations where one of the arguments is a participant, and another argument is 3rd person (92): disruptability of the portmanteau by negation depends on the structural relation between the two arguments.

(92) **Generalization:**
Portmanteaus that are created in the {3, PART} configuration, cannot be disrupted by negation, while portmanteaus that are created in the {PART, 3} configuration, are disrupted by negation.

Let us consider different cases more closely, as, in addition to (92), plurality of participant arguments also plays a role in the morphological outputs we observe. Let us first consider {PART, 3} configurations. When the participant argument is singular, we always see a portmanteau created (table 19). In addition, note that the Theme sign goes missing: we do not see 3rd person *-a* marker.

{PART.SG, 3}	Form	Translation
{1, 3}	tokom-**uk**	I hit her / him.
{1, 33}	tokom-**uk**	I hit them.
{2, 3}	tokom-**ot**	You (Sg) hit her / him.
{2, 33}	tokom-**ot**	You (Sg) hit them.

Table 19: Direct in (U.) Conjunct {PART.SG, 3} Configurations (positive)

One hypothesis about the absence of the Theme sign could be the following: maybe adding portmanteaus that start with a vowel (*-uk*, *ot*) to a Theme sign that consists of a vowel (*-a*) creates a hiatus problem, which is resolved by deleting *-a*. While it is true that Passamaquoddy does not like vowel hiatus, there is evidence that hiatus resolution would go in a different direction and delete the vowel of the portmanteau instead of deleting the Theme sign *-a*. This evidence comes from Independent forms with 1Pl subject and 3rd person object. These forms are direct and thus have 3rd person Theme sign *-a*. They also have 1Pl agreement in T, which is spelled out by a morpheme *-onnu* of the Independent paradigm. Attaching *-onnu* to *-a* creates hiatus, which, as we see from (93a), is resolved by deleting the first vowel of the attaching suffix (the ending *nu* of the suffix is dropped when no additional morphemes follow the affix).

(93) a. Attested:

n-tokom **+ a** **+ o**nnu →
1-hit.TA.Ind 3Obj 1Pl
n-tokom-**a-n**
1-hit.TA.Ind-3-1Pl
'We (excl.) hit her / him.'

b. Expected (unattested):

tokom **+ a** **+ o**t →
hit.TA.Ind 3Obj 2SgSub.3Obj
*tokom-**a-t**
hit.TA.Ind-3-2SgSub.3Obj
Intended: 'You (sg) hit her/him/them.'

Thus, we learn from (93a) that attaching a morpheme spelling out T agreement that starts with the shwa (*o* in the transcription) to the Theme sign morpheme *-a* leads to deletion of the former, not the latter. This means that the expected outcome of attaching a portmanteau *-ot* to the Theme sign morpheme *-a* should be deletion of the shwa in *-ot*, not deletion of *-a* (93b). This makes us suspect that the absence of the Theme sign in table 19 should not be attributed to hiatus resolution.

If we look at configurations with plural participant subjects and 3rd person objects, we see that the mystery of the missing Theme sign goes beyond the forms with portmanteaus.

{PART.PL, 3}	Form	Translation
{11, 3}	tokom-ek	We (excl.) hit her / him.
{11, 33}	tokom-ek	We (excl.) hit them.
{12, 3}	tokom-oq	We (excl.) hit her / him.
{12, 33}	tokom-oq	We (incl.) hit them.
{22, 3}	tokom-eq	You (Pl) hit her / him.
{22, 33}	tokom-eq	You (Pl) hit them.

Table 20: Direct in (U.) Conjunct {PART.PL, 3} Configurations (positive)

While no portmanteaus are created in the {PART.PL, 3(3)} configuration, Theme signs disappear in these forms as well. Again, at least for the suffix *-oq* that begins with a shwa, we would have expected deletion of shwa instead of deletion of the Theme sign, which casts doubt on the hiatus resolution explanation for the forms in the table 20.

Interestingly, when the forms in tables 19-20 are negated, the Theme sign reappears (table 21).

{**PART, 3**}	Form	Translation
{1, 3}	tokom-a-w-an	I don't hit her / him.
{11, 3}	tokom-a-w-ehk	We (excl.) don't hit her / him.
{1, 33}	tokom-a-w-an	I don't hit them.
{11, 33}	tokom-a-w-ehk	We (excl.) don't hit them.
{12, 3}	tokom-a-w-ohq	We (excl.) don't hit her / him.
{12, 33}	tokom-a-w-ohq	We (incl.) don't hit them.
{2, 3}	tokom-a-w-on	You (Sg) don't hit her / him.
{22, 3}	tokom-a-w-ehq	You (Pl) don't hit her / him.
{2, 33}	tokom-a-w-on	You (Sg) don't hit them.
{22, 33}	tokom-a-w-ehq	You (Pl) don't hit them.

Table 21: Direct in (U.) Conjunct {PART, 3} Configurations (negative)

Crucially, the portmanteaus that have been created in the positive forms in the {PART.SG,3(3)} configuration, are not present in the negative forms anymore. I.e., instead of the unattested **tokom-a-w-uk* 'hit.TA.Conj-3-Neg-1SgSubj.3Obj' we see *tokom-a-w-an* 'hit.TA.Conj-3-Neg-1SgSubj', and instead of the unattested **tokom-a-w-ot* 'hit.TA.Conj-3-Neg-2SgSubj.3Obj' we see *tokom-a-w-on* 'hit.TA.Conj-3-Neg-2SgSubj'. This is unexpected if the portmanteaus created in {PART,3(3)} configurations were created by Multiple Agree on the T head.

I propose that what happens in {PART,3(3)} configurations is that the features on Voice and the features on T are spelled out together when nothing intervenes between them. This could be done either by appealing to spans, or by treating this as a locally conditioned allomorphy. What is important is that the process that created portmanteaus in these configurations has to be dealing with features of two separate heads and require their adjacency. When negation intervenes between Voice and T, the conditions for allomorphy or spelling out the span are not met anymore, thus no portmanteaus are created.

On this view, disappearence of the Theme sign is caused by the attempt to spell-out Voice and T together. If there is a portmanteau for spelling out Voice and T features together available in the lexicon, it will spell-out features of both heads. If there is no portmanteau available, as is the case in forms with plural participants, then the features of the subject receive the privelege of being spelled-out.[21] If this line of reasoning is on the right track, then it teaches us that in {PART,3(3)} configurations what happens in T is not Multiple Agree with both arguments, but actually just subject agreement.

[21]It seems to me that there are multiple ways of implementing this idea. The privelege that the features of plural participants have could be coming from being the subject / T agreement, or from being features of a participant noun phrase, or of a participant plural noun phrase. I leave the issue of what is it exactly that leads to preference of agreement with a plural participant in the absence of a portmanteau open.

Now let us consider configurations where the c-command relation is reversed: where the subject is a 3rd person argument, and the object is a participant. When the object is a singular participant (table 22), we see that there is a Theme sign agreeing with the object,[22] followed by a suffix in T agreeing with the 3rd person subject (when following a suffix that ends in a vowel, *t* for 3Sg subject, *htit* for 3Pl subject; *-k* when following a suffix that ends in a consonant). No portmanteaus are created in this configuration.

{**3, PART.SG**}	Form	Translation
{3, 1}	tokom-i-t	(S)he hits me.
{33, 1}	tokom-i-hti-t	They hit me.
{3, 2}	tokom-os-k	(S)he hits you (Sg).
{33, 2}	tokom-os-k	They hit you (Sg).

Table 22: Direct in (U.) Conjunct {3, PART.SG} Configurations

When the object is a plural participant (table 23), we see portmanteaus being created. It is not clear whether the Theme sign should be separated from these portmanteaus as a separate morpheme (as I have assumed in the section 3) or be considered just the beginning of the portmanteau. An argument for separation is that it is clearly morphologically possible to identify the segment that would be the Theme sign (*-ol* for 2nd person, *-i* for 1st person). An argument against it is that no morpheme can intervene between the segments *-ol* and *-i* and the these portmanteaus.

{**3, PART.PL**}	Form	Translation
{3, 11}	tokom-**i**(-)**nomot**	(S)he hits us (excl.)
{33, 11}	tokom-**i**(-)**nomot**	They hit us (excl.).
{3, 12}	tokom-**ol**(-)**inoq**	(S)he hits us (incl.).
{33, 12}	tokom-**ol**(-)**inoq**	They hit us (incl.).
{3, 22}	tokom-**ol**(-)**inaq**	(S)he hits you (Pl).
{33, 22}	tokom-**ol**(-)**inaq**	They hit you (Pl).

Table 23: Direct in (U.) Conjunct {3, PART.PL} Configurations

In particular, consider what happens when the forms are negated. Given what we have have learned about the {PART, 3(3)} configurations, we could have expected negation to intervene between the Theme sign and the T agreement in the {3(3),PART} forms as well. However, this is not what happens (table 24): the portmanteaus remain undisrupted.[23]

[22]The Theme sign *ol* that spells out 2nd person undergoes allomorphy when followed by *-k* and becomes *os* .

[23]In forms {3(3),2} we see an allomorph of the negation morpheme *u*, which occurs between the Theme sign and the T agreement, as expected. In forms {3(3), 1} the negative morpheme itself goes missing, and negation is marked only by changing the ending of the morpheme that follows negation from *-t* to *-hq*. As far as I know, this allomorphy happens in all cases when T spells out *-(hti)t*.

{**3, PART**}	Form	Translation
{3, 1}	tokom-i-hq	(S)he doesn't hit me.
{3, 11}	tokom-**i**(-)**nomohq**	(S)he doesn't hit us (excl.)
{33, 1}	tokom-i-hti-hq	They don't hit me.
{33, 11}	tokom-**i**(-)**nomohq**	They don't hit us (excl.).
{3, 12}	tokom-**ol**(-)**inohq**	(S)he hits us (incl.).
{33, 12}	tokom-**ol**(-)**inohq**	They hit us (incl.).
{3, 2}	tokom-ol-u-hk	(S)he hits you (Sg).
{3, 22}	tokom-**ol**(-)**inahq**	(S)he hits you (Pl).
{33, 2}	tokom-ol-u-hk	They hit you (Sg).
{33, 22}	tokom-**ol**(-)**inahq**	They hit you (Pl).

Table 24: Direct in (U.) Conjunct {3, PART} Configurations (negative)

Why don't the portmanteaus that are created in the {3(3), PART.PL} configuration get disrupted? The only evidence of the form being negated that we see is that the ending of the portmanteau changes: *t* becomes *hq*, *q* becomes *hq*. These changes to the final consonant often happen to the suffix that follows negation, but why don't we see the negation itself?

I would like to propose that the portmanteaus that are created in {3(3), PART} configurations are created by a process that is different from the ones created in {PART,3(3)} configurations. They result not from spans or allomorphy, but from a configuration with multiple agreement by a single head. The next section develops this idea in more detail.

To sum up, in this section I have shown that disruptability of portmanteaus in Conjunct forms in Passamaquoddy shows a hierarchy effect: portmanteaus that are created in {PART,3(3)} configuration are disrupted by negation, but the ones that are created in {3(3), PART} are not disruptable. There are further complications that have to do with whether the participant argument is plural, and this is summarized in the table 25 below.

Configuration	Theme Sign	Agreement	Disruptability by Negation
{PART.SG, 3}	no	portmanteau	**disrupted**
{PART.PL, 3}	no	subject (PART.PL) agreement	disrupted (Theme sign emerges)
{3, PART.SG}	yes	subject (3) agreement	—
{3, PART.PL}	yes/no	portmanteau	**not-disrupted**

Table 25: Portmanteaus in Conjunct with a PART and a 3rd person arguments

I take the absence of portmanteaus in the {PART.PL,3(3)} configuration to be an accident (there are just no appropriate VIs in the lexicon). As for the absence of portmanteaus in {3(3),PART.SG}, I am less sure that this is an accident, and will try to make this fact follow from my analysis.

The hierarchy effect that we observe can be also stated in the following way. When two DPs belong to different classes (participant and non-participant), the output of the configuration is determined by the c-command relation between them: one output is "if a portmanteau is created, it is disrupted by negation", the other output is "if a portmanteau is created, it is not disrupted by negation". This looks like the configuration with a hierarchy effect that we described in (87)[24]. The question then is whether this hierarchy effect could be also analyzed in terms of feature gluttony.

[24]Ideally, we would want to know what happens in configurations where two DPs fall into the same class of the hi-

5.2 Portmanteau as a better way of pronouncing FG

In this section I make an attempt to analyze the hierarchy effect in portmanteau disruption (92) in terms of feature gluttony. The main idea I would like to pursue is that portmanteaus that we see in Conjunct forms are just another way of spelling out a feature gluttony created by Voice;[25] and this way of spelling a FG out is better than using the inverse marker.

In order to pursue this idea, I need to make some assumptions about T agreement and its interactions with Voice agreement. Descriptively, T agreement in Conjunct proceeds as in (94).

(94) **Central slot in Conjunct (*descriptive generalization*):**

a. Agree with 1PL if there is 1PL.

b. If there is no 1PL, agree with 2PL.

c. If there is no 1PL or 2PL, agree with a non-obviative argument (PART(icipant) or PROX(imate)); if both arguments are non-obviative, choose the subject.

d. Otherwise, don't agree.

I would like to propose that this descriptive behavior corresponds to the T probe having the following segments: PL_{SPKR}, PL_{PART}, PART and PROX,[26] where PL_{SPKR} is a complex feature that checks if a noun phrase is both plural and speaker at the same time, and PL_{PART} checks if a noun phrase is both plural and participant at the same time.[27] Moreover, I propose, following Oxford (2019), that the features on Voice and the features of the subject in the Spec, VoiceP position are equidistant

erarchy. However, this is not possible to determine in our case, because (i) there are no portmanteaus in configurations with two participants in Passamaquoddy; (ii) configurations with two proximate 3rd person arguments are disallowed in Passamaquoddy.

[25]One might have a question about whether it is possible to analyze Conjunct portmanteaus as the spell-out of the feature gluttony created on T. This question requires further research, but my tentative conclusion is that it is probably not possible to analyze Conjunct portmanteaus this way. The reason is that a FG-explanation necessarily requires the two DPs (or other two sources of feature bundles) to be in an asymmetrical relation with respect to each other (one must c-command the other). If this is so, it is difficult to explain the fact that T sometimes behaves as if it could see both DPs and compare their features as to which fit its own specification best.

In particular, consider the configuration with a 2Pl subject and a 1Pl object, where what we see on T is 1Pl agreement. If the features of the subject were c-commanding the features of the object, then we would expect this configuration result in feature gluttony. This is so because from the overall behavior of T we see that it is a probe that agrees with plural speakers, plural participants, plural proximates and just proximates. Given that a 2Pl noun phrase is a proximate plural participant, it is clear that T should interact and agree with it. Then if T agrees with a 1Pl object afterwards, it should create a FG, and either pronounce it as a portmanteau or run into a spell-out problem causing ungrammaticality. But this does not happen. If however there is some sort of equidistance between the two feature bundles, then T could just pick to agree only with the one that is its best match (1Pl). But if equidistance holds, the probe on T could not be a probe that creates a feature gluttony, because FG-creation requires an assymetrical relation.

[26]Note that, according to our assumptions about the feature geometry in (21), there is no feature that is present on participants and proximate non-participants to the exclusion of obviative non-participants. In other words, participant arguments are not considered to be proximate. If there was a feature that united participants and proximate non-participants, then the T probe in Conjunct could have been searching for that feature instead of searching for conjunction of PART and PROX. The reason why I do not argue that such feature exists is because I need PART and NON-PART to be a branching point within the feature geometry for the Voice agreement, and, if I maintain the assumption that feature geometries are structures with binary branching in which each node has only one mother node, then there could be no feature that unites PART and PROX arguments to the exclusion of OBV.

[27]This move to adding more complex features is, of course, not a desirable move to make. I view it as a temporary solution, which however might be supported by the fact that participant plurals have semantic effects that other plurals do not have (see, e.g., discussion of participant plurals in (Ackema & Neeleman 2018)).

from higher probes like T. However, I would like to change a little bit what this equidistance means for T agreement. I propose two principles of equidistance, which are presented in (95).

(95) **Two principles of Equidistance**

a. *Best Match!*
If two sources of feature bundles, X and Y, are equidistant from a probe P, then P agrees with the feature bundle that matches more of its feature segments than the other one.

b. *Prefer DP!* (non-constraint-based formulation)
If two sources of feature bundles, X and Y, are equidistant from a probe P and match the same number of P's feature segments, then P agrees with that feature bundle that is present on a DP (as opposed to a functional head).

The first principle is exactly what Oxford (2018) proposes: when equidistance holds, T agrees with the thing that matches best what it is searching for. The second principle adds an additional requirement: in case both goals match the specifications of the probe to the same extent, agree with the nominal goal (as opposed to agreement with a functional head). In effect, this principle requires to choose agreement with subject over agreement with the Voice head, all else being equal.

The formulation of *Prefer DP!* in (95b) explicitly requires checking that both DPs satisfy *Best Match!* equally well. We might not want to encode that as part of the *Prefer DP!* principle. An alternative to (95b) would be to formulate *Prefer DP!* as in (96) and view both principles of equidistance in the spirit of an optimality-theoretical framework — as viable constraints, such that *Best Match!* outranks *Prefer DP!* (*Best Match!* $\gg$ *Prefer DP!*).

(96) *Prefer DP!* (constraint-based formulation)
If two sources of feature bundles, X and Y, are equidistant from a probe P, then P agrees with that feature bundle that is present on a DP (as opposed to a functional head).

To briefly illustrate how this would work, consider tables 26-27. The first table represents the configuration with 2nd person singular subject and 1st person singular object ($\{2,1\}$), the second table — with 2nd person singular subject and 1st person plural object ($\{2,11\}$). The subject's features are accessible to T directly, the object's features are accessible to T via Voice.

$\{2,1\}$	*Best Match!*	*Prefer DP!*
☞$\{2\}$ (subject)	✓ (PART)	✓
$\{1\}$ (Voice)	✓ (PART)	*

Table 26: *Prefer DP!* determines the outcome ($\{2,1\}$)

$\{2,11\}$	*Best Match!*	*Prefer DP!*
$\{2\}$ (subject)	* (PART)	✓
☞$\{11\}$ (Voice)	✓ ($\text{PL}_{SPKR} \wedge \text{PL}_{PART} \wedge$ PART)	*

Table 27: *Best Match!* determines the outcome ($\{2,11\}$)

Table 26 shows a case where *Prefer DP!* determines the outcome. Both subject features and object features satisfy *Best Match!* equally well: features of both DPs satisfy only one segment of the probe (PART). So althouth *Prefer DP!* is lower ranked than *Best Match!*, it gets to decide which features T will agree with, and so T agrees with the subject (= features on an actual DP).

In table 27 we see a case of *Best Match!* determining T's agreement: since 1PL DP satisfies 3 out of 4 segments of the probe ($\text{PL}_{SPKR} \wedge \text{PL}_{PART} \wedge$ PART), while 2Sg DP satisfies only one segment (PART), only 1PL is the best match. So the candidate that shows agreement with Voice wins already at this stage, and the constraint *Prefer DP!* does not get to influence T's choice.

Now let us look more closely at how T's best match is determined in Conjunct, and at how this interacts with *Prefer DP!* in the outlined system. I will first consider cases where no undirsuptable portmanteaus are being created and show how my account of T agreement can capture them (section 5.2.1). Then I will procede to the cases with undisruptable portmanteaus and provide a FG-account for them (section 5.2.2).

5.2.1 T agreement in Conjunct: besides undisruptable portmanteaus

As we have seen from the descriptive generalization in (94), T in Conjunct is a probe that searches for 1PL, but will also agree with 2PL in its absense, or, in the absence of that, with a participant or proximate non-participant argument (if both DPs are non-obviative, with the subject one). Within our framework, we could say that T has the probing segments as in (97a). Note that in order to analyze T agreement in this way, we have to give up on our intial assumption that all the features on the probe have to be in the entailment relation: under our feature geometry neither PART entails PROX, nor PROX entails PART. There might be a way to fix this issue if we can invent a feature that participants and proximate non-participants share to the exclusion of obviative arguments (see footnote 26 for discussion), but I will leave this issue aside for now and assume that (97a) constitutes a possible probe. Note that the probe in (97a) could be equivalently stated as a conjunction (97b): both are notational variants of the probe that interacts with PL_{SPKR}, PL_{PART}, PART, and PROX, and is satisfied if it found all of these features. I will adopt the notation in (97b) to simplify future representations.

(97) T probe in Conjunct

a. [PL_{SPKR}]
[PL_{PART}]
[PART]
[PROX]

b. T: $\text{PL}_{SPKR} \wedge \text{PL}_{PART} \wedge$ PART $\wedge$ PROX

Let us first consider configurations in which there is a 1PL (exclusive or inclusive) noun phrase in the structure (table 28).[28] If we ignore the forms that have undisruptable portmanteaus (cells in gray), we will see that in all the other forms there is 1 Pl agreement in T: *(y)ek* suffix for exclusive 1PL and *oq* suffix for inclusive 1PL. This is expected under our proposal about the T probe in Conjunct. Given the equidistance, T agrees with the DP that matches its features best. 1PL noun phrases can satisfy 3 out of 4 features that T is searching for (PL_{SPKR}, PL_{PART}, and PART), no other noun phrase can satisfy as many, so T agrees with the 1PL DP.

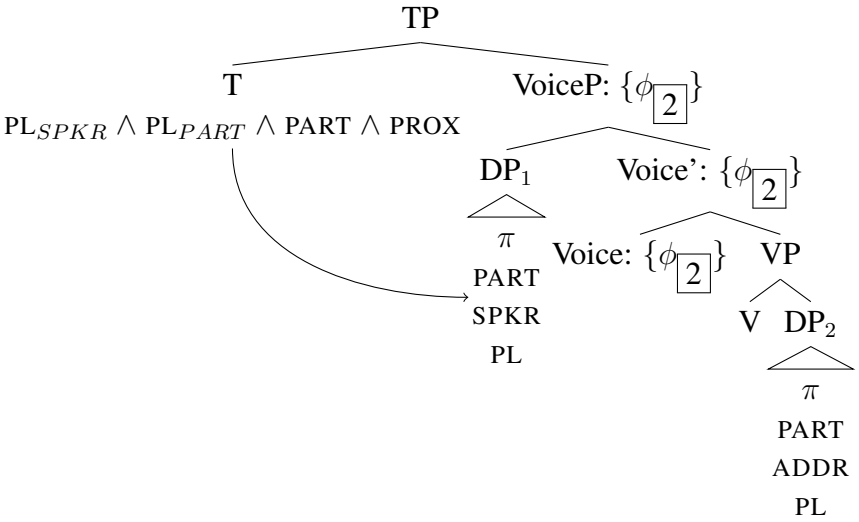
[28] In cases where there are disruptable portmanteaus I present negated (= disrupted) forms.

{11, 2}	tokom-ol-**ek**	We (excl.) hit you (Sg).
{11, 22}	tokom-ol-**ek**	We (excl.) hit you (Pl).
{2, 11}	tokom-i-**yek**	You (Sg) hit us (excl).
{22, 11}	tokom-i-**yek**	You (Pl) hit us (excl).
{11, 3}	tokom-a-w-**ehk**	We (excl.) don't hit her / him.
{11, 33}	tokom-a-w-**ehk**	We (excl.) don't hit them.
{12, 3}	tokom-a-w-**ohq**	We (excl.) don't hit her / him.
{12, 33}	tokom-a-w-**ohq**	We (incl.) don't hit them.
{3, 11}	tokom-**inomot**	(S)he hits us (excl.)
{33, 11}	tokom-**inomot**	They hit us (excl.).
{3, 12}	tokom-**olinoq**	(S)he hits us (incl.).
{33, 12}	tokom-**olinoq**	They hit us (incl.).

Table 28: T agrees with a 1PL DP (U.) Conjunct

Note that where exactly T will get the features from depends on whether 1PL DP is a subject or an object. When a 1PL DP is a subject, T will agree with it directly:

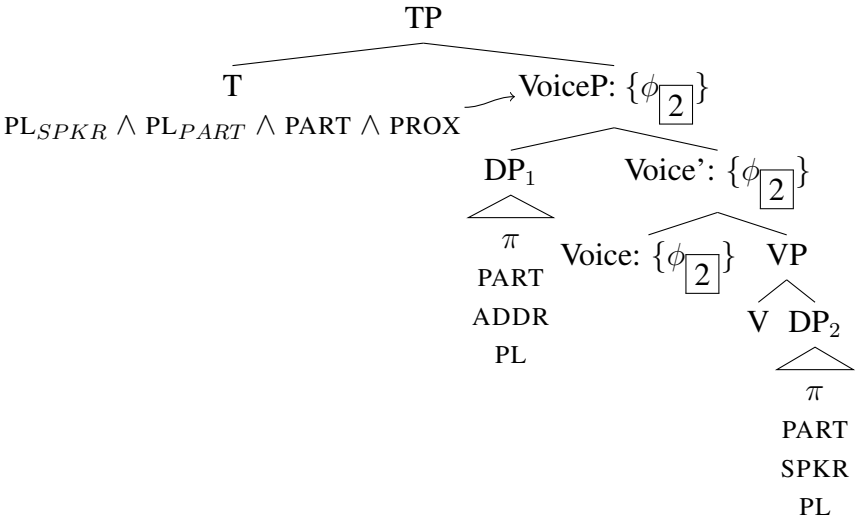
(98) {1Pl, 2Pl} configuration



where {ϕ 2} = π ∧ PART ∧ ADDR ∧ PL (satisfies 2/4 features: PL$_{PART}$, PART);
DP$_1$'s features = π ∧ PART ∧ SPKR ∧ PL (satisfies 3/4 features: PL$_{SPKR}$, PL$_{PART}$, PART)

When a 1PL DP is in the object position, T will not agree with it directly, but will only do so via the Voice head. This is illustrated in (99), where a configuration with a 2PL subject and 1PL object is shown. Here Voice has agreed with the object and copied its features onto itself ({ϕ 2}). These features get projected with the head and reach the maximal projection (VoiceP), which is as "far" from T as its specifier with the subject DP. Now since the features that Voice has gathered satisfy T better than the subject's features (they can satisfy 3 segments of T, while the subject can satisfy only 2), T agrees with the features of the VoiceP, which are the features of the 1PL object.

(99) {2Pl, 1Pl} configuration



where {ϕ 2} = π ∧ PART ∧ SPKR ∧ PL (satisfies 3/4 features: PL$_{SPKR}$, PL$_{PART}$, PART);
DP$_1$'s features = π ∧ PART ∧ ADDR ∧ PL (satisfies 2/4 features: PL$_{PART}$, PART)

Table 29 below provides information about all kinds of DPs about how many features of the Conjunct T they satisfy. As one can see, if there is a 1Pl noun phrase, it will be the best match, because no other noun phrase can satisfy 3 out of 4 features that T is searching for.

DP	Features of T (PL$_{SPKR}$ ∧ PL$_{PART}$ ∧ PART ∧ PROX) that it satisfies
1Sg	1/4: PART
1Pl (excl.)	3/4: PL$_{SPKR}$, PL$_{PART}$, PART
1Pl (incl.)	3/4: PL$_{SPKR}$, PL$_{PART}$, PART
2Sg	1/4: PART
2Pl	2/4: PL$_{PART}$, PART
3Sg	1/4: PROX
3 Pl	1/4: PROX
4Sg	0/4
4Pl	0/4

Table 29: How much of T's features different DPs can satisfy

If there is no 1Pl noun phrase, then a 2Pl noun phrase, which can satisfy 2/4 of T's features is predicted to always be the best match. In the table (30)[29] are shown all the cases where there is a 2Pl DP but there is no 1Pl DP in the structure. As one can see, we indeed always see agreement with the 2Pl on T, unless an undisrupted portmanteau occurs (gray cells). As in the previous case, it does not matter whether the 2Pl noun phrase is the subject or the object. If it is the subject ({22,1}, {22,3}, {22,33} configurations), then T will directly agree with it; if it is the object ({1,22} configuration), then T will agree with the features of the object by getting them from the VoiceP. In both cases we will see the *(y)eq* suffix on T.

[29]In cases where there are disruptable portmanteaus I present negated (=disrupted) forms.

{1, 22}	tokom-ol-**eq**	I hit you (Pl).
{22, 1}	tokom-i-**yeq**	You (Pl) hit me.
{22, 3}	tokom-a-w-**ehq**	You (Pl) don't hit her / him.
{22, 33}	tokom-a-w-**ehq**	You (Pl) don't hit them.
{3, 22}	tokom-**olinaq**	(S)he hits you (Pl).
{33, 22}	tokom-**olinaq**	They hit you (Pl).

Table 30: T agrees with a 2PL DP (U.) Conjunct

Now let us consider configurations where there are neither 1Pl nor 2Pl noun phrases present. There are two remaining kinds of noun phrases: ones that can satisfy only one of the T's features (1Sg and 2Sg can satisfy PART; 3Sg and 3Pl can satisfy PROX) and ones that can satisfy none of its features (obviative arguments). Let's first consider cases with no obviative arguments (table 31).[30]

PART + PART	Form	Translation
{1, 2}	tokom-ol-**an**	I hit you (Sg).
{2, 1}	tokom-i-**yin**	You (Sg) hit me.
{**PART, 3**}	Form	Translation
{1, 3}	tokom-a-w-**an**	I don't hit her / him.
{1, 33}	tokom-a-w-**an**	I don't hit them.
{2, 3}	tokom-a-w-**on**	You (Sg) don't hit her / him.
{2, 33}	tokom-a-w-**on**	You (Sg) don't hit them.
{**3,** PART}	Form	Translation
{3, 1}	tokom-i-**t**	(S)he hits me.
{33, 1}	tokom-i-**hti-t**	They hit me.
{3, 2}	tokom-os-**k**	(S)he hits you (Sg).
{33, 2}	tokom-os-**k**	They hit you (Sg).

Table 31: T agreeing with the subject DP in Conjunct

When all the arguments are either singular participants or proximate non-participants, T always agrees with the subject, using the suffixes in (100).

(100) a. {π, PART, SPKR, SG} $\Rightarrow$ *-an*

b. {π, PART, (ADDR), SG} $\Rightarrow$ *-on*
can undergo a regular phonological rule (see {2,1}): o $\Rightarrow$ i / i__

c. {π, NON-PART, PROX, SG} $\Rightarrow$ *-t* iff / V__,
-k otherwise

d. {π, NON-PART, PROX, PL} $\Rightarrow$ *-hti-t* iff / V__,
-k otherwise

When the subject is 1Sg ({1,2}, {1,3}, {1,33}), we see the first person singular suffix *-an*. When the subject is 2Sg ({2,1}, {2,3}, {22,33}), we see the second person singular suffix *on* (which

[30] I present negated (=disrupted) forms for cases where there is a disruptable portmanteau in the positive form.

becomes *-i* if it follows the vowel *i*, with a glide later inserted to resolve the hiatus). When the subject is 3Sg ({3,1}, {3,2}) we see the 3rd person singular suffix *-t* if it follows a vowel and *-k* if it follows a consonant. Finally, when the subject is 3Pl ({33,1}, {33,2}), we see 3rd person plural suffix *htit*[31] if this suffix follows a vowel and *k* if it follows a consonant.

The fact that in all of these cases T agrees with the subject is expected under my proposal. In all of these cases features of the subject and features of the object can satisfy T to the same extent: they can satisfy only one of T's features. Singular participants can satisfy only PART, proximate non-participants can satisfy only PROX. This means that both DPs in all of the configurations in table 31 are the best match (bost are feature-wise the best DPs available in the structure).[32] This equality will allow *Prefer DP!* to kick in: since subject features are accessible from the first source — a real DP, they will be preferred over the second-source object features from a functional projection (VoiceP). Table 32 provides an illustration with a 3Sg subject and 1Sg object configuration. While both noun phrases satisfy *Best match!*, only the 3Sg DP also satisfies *Prefer DP!*

{3,1}	*Best Match!*	*Prefer DP!*
☞{3} (subject)	✓: 1 feature = PROX	✓
{1} (Voice)	✓: 1 feature = PART	*

Table 32: *Prefer DP!* determines the outcome ({3,1})

Finally, consider the cases when there is an obivative DP in the structure. All such cases are presented in the table (33):

{**3,4**}	Form	Translation
{3, 4}	tokom-a-**t**	(S)he (prox.) hits her / him (obv.).
{33, 4}	tokom-a-**hti-t**	They (prox.) hit her / him.
{3, 44}	tokom-a-**t**	(S)he (prox.) hits them (obv.).
{33, 44}	tokom-a-**hti-t**	They (prox.) hit them (obv.).
{**4,3**}		
{4, 33}	'-tokom-oku-**hti-t**	(S)he (obv.) hits them (prox.).
{44, 33}	'-tokom-oku-**hti-t**	They (obv.) hit them (prox.).
{4, 3}	'-tokom-**iht**	(S)he (obv.) hits her / him (prox.).
{44, 3}	'-tokom-**iht**	They (obv.) hit her / him (prox.).

Table 33: T agrees with a proximate (3rd person) DP (U.) Conjunct

The grey cells represent cases where we encounter a portmanteau. In {4(4), 3} configurations we see a portmanteau *-iht* and the absence of a Theme sign marker. It turns out that this portmanteau is not disruptable, just like the portmanteaus in the {3(3), PL.PART} configurations. One can see this from the paradigms found in the Passamaquoddy-Maliseet Dictionary (2008):

[31] I remain neutral on whether *htit* should be separated into two different morphemes, *hti* '3Pl' and *t* '3'.

[32] Note that by 'best match' I do not mean a goal that satisfies the probe completely. As one might have noticed, none of the DPs would ever be considered the best match if complete match with the probe was required, because even 1PL DPs satisfy only 3 out of 4 of T's features (they lack the PROX feature). By 'best match' I mean 'within the configuration, there is no DP that can satisfy the probe better'. By this definition, more than one DP can be 'the best match', because more than one DP can satisfy the same number of features on the probe.

(101) a. tokom-**iht**
hit.TA.CONJ-**4>3.SG**
'(S)he / they (OBV) hit(s) her/him (PROX).'

b. tokom-**ihq**
hit.TA.CONJ-**4>3.SG.NEG**
'(S)he / they (OBV) doesn't / don't hit her/him (PROX).'

We see that negation does not disrupt the portmanteau, but only changes its last consonant, which is a common phonological process for suffixes that follow negation. What would we expect to see if it was disruptable? We would expect to see the inverse marker *-oku*, negation (*w*) and T's agreement with 3Sg object (*t/k*). However, it seems that a combination of a vowel, *w* and a consonant (*t/k*) is not tolerated by Passamaquoddy's phonology. We can see this from cases like (102b).

(102) a. tokom-i-**t**
hit.TA.CONJ-1OBJ-3SG
'(S)he hits me.'

b. tokom-i-**hq**
hit.TA.CONJ-1OBJ-3SG.NEG
'(S)he doesn't hit me.'

In (102b) we see a negative form of (102a). In (102a) the Theme sign is a vowel (*i*) and T agreement is a consonant (*t*). One could expect that insertion of negation between them would result in *iwt*. But as we see from (102b), that does not happen: the negation itself gets lost, signalling its presence only by changing *t* to *hq*. So if in the configuration {4(4), 3} the portmanteau was disruptable, we would probably not see the negation itself as well: we would expect it to vanish in between a vowel and a consonant, leaving a trace by changing the consonant to its right. Thus, we would expect forms like *tokom-oku-hq* for the negated {4(4), 3} configuration.

Such forms are considered ungrammatical by native speakers, (103)-(104).[33] Note that, according to these examples, the last consonant of the portmanteau does not need to undergo the change (*t* ⇒ *hq*). The conditions under which the change of the ending of the morpheme following negation occurs are unknown to me at the moment and require further investigation.

(103) skat-pekehl-**ihq** /skat-pekehl-**iht**
NEG-bite.TA.CCONJ-**4>3.SG.NEG** /NEG-bite.TA.CCONJ-**4>3**
/*skat-pekehl-**oku-hq** olmuss-ol, nit-tehc
/NEG-bite.TA.CConj-**INV-3SG.NEG** dog-OBV it.INAN-PTCL
supehl-a-l olmuss-ol
smoothen.TA.IND-3OBJ-OBV dog-OBV
'When a dog does not bite Roger, Roger pets the dog.'

(104) keq mehsi skat Roger uhsimis-ol wicuhkem-**iht** /*wicuhkem-**oku-hq**?
Q why NEG Roger younger.sibling-OBV help.TA.CONJ-**4>3** /help.TA.CONJ-**INV-3SG**
'Why doesn't Roger's sister help him?'

Thus, we can conclude that in {4(4), 3} forms, which at an earlier stage of the language were inverse forms (Conor Quinn, p.c.), we are synchronically observing a portmanteau morpheme which cannot be disrupted by negation. I will put this form aside for now and will return back to it in the next section.

[33]The data in (103)-(104) have been gathered during an MIT fieldtrip to Passamaquoddy communities in Indian Township and Pleasant Point (Maine, USA) in January 2020. I am grateful to our consultants, as well as Roger Paul, Norvin Richards and all the participants of the trip for their help.

Besides the undisruptable portmanteaus, all the other forms in the table 33 show that T agrees with the proximate argument. For example, consider the {4,33} configuration:

{4,33}	*Best Match!*	*Prefer DP!*
{4} (subject)	*: 0 features	✓
☞{33} (Voice)	✓: 1 feature = PROX	*

Table 34: *Best match!* determines the outcome ({4,33})

Here the features of the proximate object that are on Voice win over the features of the obviative subject. Although obviative features are from a real DP, *Best match!* takes priority: the obviative argument can't satisfy any of the T's features, while the proximate argument can satisfy one of them (PROX), so T agrees with the features of the proximate object. The same logic applies to all the other cases. Thus, T will always agree with the proximate argument in a configuration where one of the arguments is proximate and the other one is obviative.

To sum up, in this section we have seen that the proposal advanced here about the T probe in Conjunct can account for all the cases where there is no undisrupted portmanteau being created. The next section makes a proposal about undisrupted portmantesu that we find in Conjunct: *iht* ({4(4),3}), *inomot* {3(3), 11}, *olinoq* {3(3), 12} and *olinaq* {3(3), 22}.

5.2.2 T agreement in Conjunct: undisruptable portmanteaus

The main idea that I would like to pursue is that undisruptable portmanteaus that we see in Conjunct are another way of spelling out feature gluttony. Table 35 repeats all the cases where we see undisrupted portmanteaus in Conjunct.

{3, 11}	tokom-**inomot**	(S)he hits us (excl.)
{33, 11}	tokom-**inomot**	They hit us (excl.).
{3, 12}	tokom-**olinoq**	(S)he hits us (incl.).
{33, 12}	tokom-**olinoq**	They hit us (incl.).
{3, 22}	tokom-**olinaq**	(S)he hits you (Pl).
{33, 22}	tokom-**olinaq**	They hit you (Pl).
{4, 3}	'-tokom-**iht**	(S)he (obv.) hits her / him (prox.).
{44, 3}	'-tokom-**iht**	They (obv.) hit her / him (prox.).

Table 35: Undisruptable portmanteaus in Conjunct

First question that arises is: which probe should be responsible for creating a gluttonous configuration in the cases of table 35?

I think that T cannot be a probe that leads to FG. As we have seen in the previous section, an adequate description of what T agrees with has to appeal to some notion of equidistance: not only is T omnivorous, but it has the ability to choose the best match from the features available. This is difficult to account for if there is a structural asymmetry between the features of the subject and the features of the object. We know that a singular participant is in principle a possible goal for T; why then does T not agree with it when there is a plural participant object? If the features of the

subject are structurally higher than the features of the object, this behavior is difficult to account for. However, if there is equidistance between the two sets of features (resulting from the object features getting on Voice and projecting onto the VoiceP level), then T's ability to evaluate both sets of features at the same time is expected: none of the feature sets is "higher" than another, so T just chooses the best match from them.

So we want T to be equidistant from the features of the subject and the features of the object. But this is incompatible with T being a probe that could create a Feature Gluttony. As we have noted in the definition of a FG-configuration in (87), there has to be a c-command relation between the two goals. Without that, FG is not achievable. This brings us to the conclusion that T cannot be the probe that creates feature gluttonies due to its equidistance from the subject and the object features.

So I would like to suggest that the probe that is responsible for creating FGs in the table 35 is the same probe that we have observed creating FGs before: the probe on Voice. This means that a FG-account of undisrupted portmanteaus in Conjunct has to make sure that Feature Gluttony is created on Voice in the configurations in the table 35. We will see that while this is relatively easy to implement for the {4(4),3} configurations, the configurations {3(3), PART.PL} will face a rather difficult challenge.

To explain the undisruptable portmanteaus, we need an analysis of how T and Voice interact — the mechanism of how exactly T gets its features from Voice. I will assume that Voice's features project onto VoiceP level, which makes them equidistant from the features of the subject with respect to higher probes. Now imagine that T's best match is the feature bundle ϕ that is found on VoiceP. How will T agree with it? I propose that the answer to this question depends on two things: (i) whether Voice has created a FG or not; (ii) whether among possible exponents of T are portmanteaus that could potentially lexicalize a FG on Voice. My proposal is summarized in (105).

(105) **T's Best Match is ϕ on Voice.**

a. **FG-pied piping:**
if ϕ is part of a FG and T has a portmanteau to expone the whole FG
$\Rightarrow$ T removes FG from Voice, gets it onto itself and expones it as a portmanteau.

b. **ϕ-copying:**
if ϕ is not part of a FG or if T does not have a portmanteau to expone Voice's FG
$\Rightarrow$ T agrees with ϕ on Voice and copies it without removing.

The main idea here is the following. When Voice creates a FG, a problem of finding a way of spelling it out arises. FG can be exponed on Voice itself by a very underspecified portmanteau (= the inverse marker), (20), repeated here as (106).

(106) **Inverse**
oku / oq $\Rightarrow$ { $\{\pi\}$, $\{\pi\}$}

This is not the best way of spelling out two sets of phi-features: we lose all the information about what these phi-features are. When T agrees with a feature bundle present on Voice, it can sometimes help Voice out. If T has a better, more specific portmanteau for spelling the Voice's FG, it can pied-pipe the whole FG together with the ϕ-bundle that it is actually interested in and spell this FG on T with the more specific portmanteau (105a). Of course, it could be the case that T does not have a more specific portmanteau. In that case T will only agree with Voice and copy the relevant

ϕ-bundle without interfering with the Voice's spell-out in any way (105b). This will also happen in case Voice has not created a feature gluttony. Let's illustrate this proposal by comparing the {4,3} configuration, which results in an undisrupted portmanteau, with the {4,33} configuration, which shows an inverse marker in Voice with separate T agreement.

As before, I assume that all configurations with an obviative subject and a proximate object result in a FG on Voice. This is compatible with both Voice having three probing segments ($\pi \wedge$ NON-PART $\wedge$ OBV) and Voice having two probing segments ($\pi \wedge$ OBV). Now it so happens that T in Conjunct has a portmanteu morpheme *iht* as its potential exponent; I propose that *iht* has the following specification:

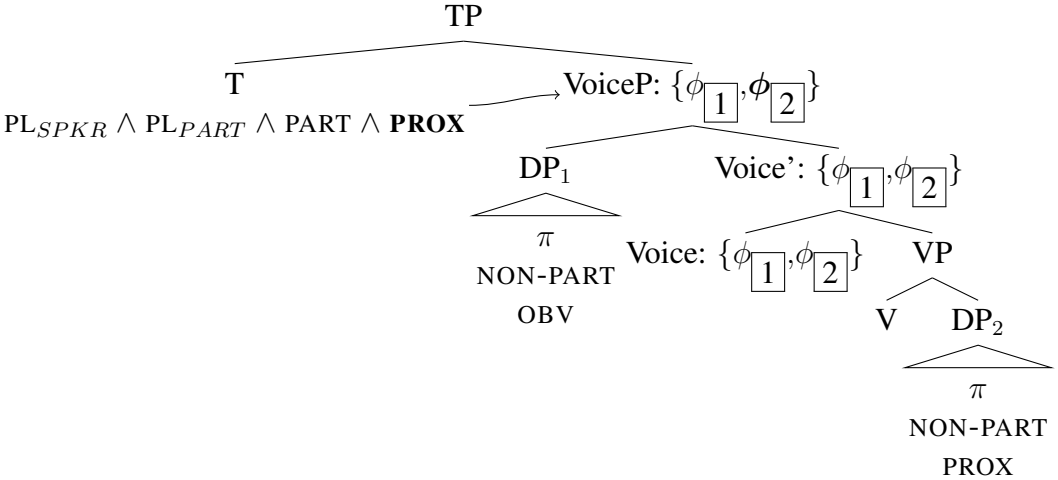
(107) **Portmanteau for {4(4), 3}**
iht $\Rightarrow$ { {π, NON-PART, OBV}, {π, NON-PART, PROX, SG}}

Note that (107) can expone the two feature bundles in the {4(4),3} configurations, but it cannot expone the two feature bundles in the {4(4),33} configurations. This is so because the Subset Pricniple for portmanteaus, repeated here as (108), requires that {π, NON-PART, PROX, SG} be a subset of one of the feature bundles. Since SG will not be in the set of the features of the 3PL argument, this portmanteau cannot expone the two feature bundles in the {4(4),33} configurations.

(108) **The Subset Principle for portmanteaus**
A portmanteau of the form {X, Y} (where X and Y are sets of features) can spell out the set {X', Y'} on the syntactic head iff X is the subset of X', and Y is a subset of Y'.

In the {4,3} configuration T will find its Best Match on Voice (109): Voice's feature bundle {$\phi_{\boxed{2}}$} has the proximate feature that T is searching for. This feature bundle is part of a FG, and it happens to be the case that T has a portmanteau to spell this FG out (107).

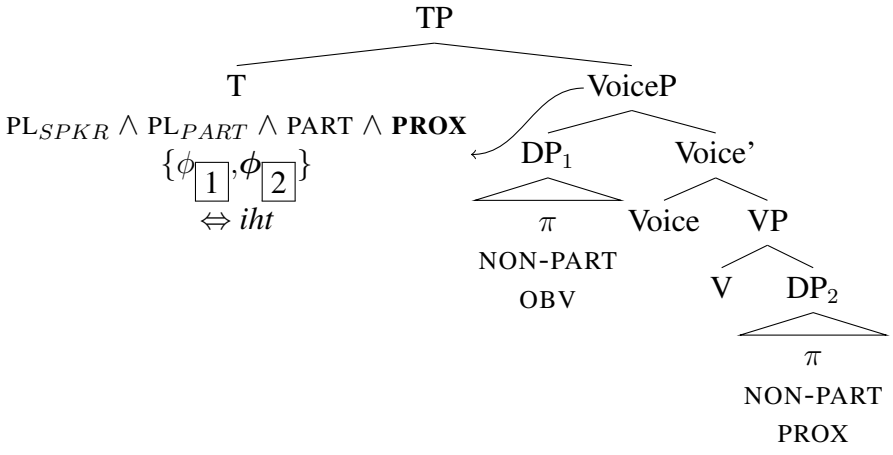
(109) {4, 3} configuration: T finds its Best Match on VoiceP



where {$\phi_{\boxed{2}}$} = $\pi \wedge$ NON-PART $\wedge$ PROX (satisfies 1/4 of T's features: PROX);
DP$_1$'s features = $\pi \wedge$ NON-PART $\wedge$ OBV (satisfies 0 of T's features)

Thus, T removes the FG from Voice and expones it as a portmanteau *-iht*, (110).

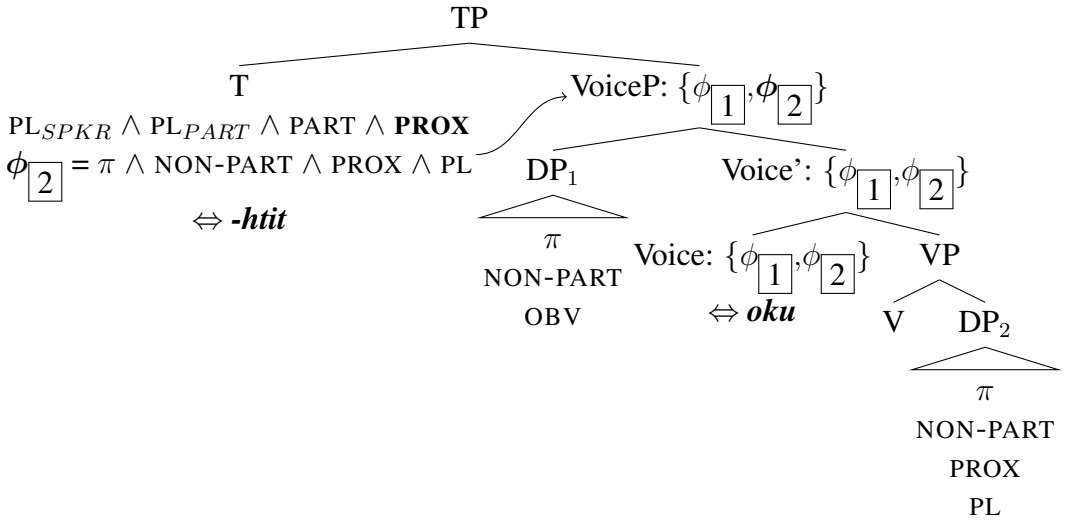
(110) {4, 3} configuration: T expones the FG that Voice created



where {ϕ[2]} = π ∧ NON-PART ∧ PROX (satisfies 1/4 of T's features: PROX);
DP$_1$'s features = π ∧ NON-PART ∧ OBV (satisfies 0 of T's features)

Now consider the {4,33} configuration. As in the previous case, T finds its Best Match on Voice — the feature bundle corresponding to the proximate object. However, unlike in the previous case, T does not have a portmanteau that could expone the whole FG that Voice has created. So T only makes a copy of the object's set of features and expones them, without removing any features from Voice. The FG on Voice is exponed by the underspecified portmanteau — the inverse marker.

(111) {4, 33} configuration: ϕ-copying



The fact that the portmanteau *-iht* cannot be disrupted by negation receives a natural explanation under this account. Under assumption that Neg(ation)P is a projection that intervenes between T and Voice, we do not expect *-iht* to be disruptable, because it expones the T head. This is not a case of allomorphy or spelling out a span, so there is no reason why the presence of negation should matter. Note that this analysis also captures the absence of Voice agreement: since T got its features by removing them from Voice, there are no more features on the Voice head to be exponed.

Now let us consider other cases of non-disruptable portmanteaus. All of the other cases involve configurations with a 3rd person subject and a plural participant object. I would like to have the same explanation for the undisruptability of these portmanteaus as the one I have proposed for *iht*. This means that in all {3(3), PART.PL} configurations we need Voice to create a FG, and T to pied-pipe that FG and expone it as a portmanteau. Note that in these configurations T's Best Match will indeed be found on Voice: it is the features of the plural participant. Under this proposal *-inomot*, *olinoq*, *olinaq* are single morphemes (*i* and *ol* are treated as unseparable), and the corresponding forms do not have anything exponing Voice.

The main question that arises with respect to the {3(3), PART.PL} configurations is: what do we need to change about the specification of the Voice probe in order for the {3(3), PART.PL} configurations to result in FG (in addition to {4(4),3(3)} configurations that result in FG)? It turns out that the answer to this question is quite complicated.

The challenge that arises amounts to the following: it is impossible to come up with a strictly ordered hierarchy for a FG-explanation that would give us FG in {3(3), PART.PL} and {4(4),3(3)}, but in no other configurations. As I have discussed in section 4, a strictly ordered hierarchy is a necessary condition for a FG-explanation. Now let me explain why the hierarchy needed for giving FG only in {3(3), PART.PL} and {4(4),3(3)} configurations cannot be strictly ordered. I repeat the definition of the strict ordering, (89), below as (112).

(112) **Strict ordering**
The classes on the hierarchy are *strictly ordered* iff:
   a. for each two classes A and B, either A >B, or B >A: if a configuration with a higher A-class DP and lower B-class DP gives output X, then a configuration with a higher B-class DP and a lower A-class DP gives output Y (where $X \neq Y$)
   b. **transitivity condition** holds:
   for any three classes A, B, C, if $A > B$ and $B > C$, then $A > C$

Now consider the output of four configurations that we encounter in Conjunct:

(113) a. {3, PART.SG} = no FG (direct object agreement)
   b. {3, PART.PL} = FG (undisruptable portmanteaus)
   c. {PART.SG, PART.PL} = no FG (direct object agreement)
   d. {PART.PL, PART.SG} = no FG (direct object agreement)

Here is a proof that these four configurations make it impossible to create a strictly ordered hierarchy, and thus have a FG-explanation:

(114) **Proof that (113) is incompatible with a strictly ordered hierarchy:**

1. From the fact that the {3, PART.SG} configuration results in no FG it follows that 3rd person proximate arguments should be not higher on the hierarchy than PART.SG: PART.SG $\geqslant$ 3.
2. From the fact that the {3, PART.PL} configuration results in FG it follows that 3rd person arguments are higher on the hierarchy than PART.PL arguments (otherwise FG would not have been created): 3 >PART.PL.
3. By transitivity, from (1) and (2) above we can conclude that that PART.SG >PART.PL.

4. However, from the fact that the {PART.SG, PART.PL} configuration results in no FG it follows that PART.SG arguments are not nigher on the hierarchy than PART.PL arguments: ¬ [PART.SG >PART.PL].
5. (3) and (4) together result in a contradiction. Thus, 3, PART.SG and PART.PL cannot form a strictly ordered hierarchy, Q.E.D.

This is a big problem. One solution would be to abandon the idea of analyzing the hierarchy effect in disruptability of portmanteaus in terms of feature gluttony. I however will attempt a different solution: I will adopt an idea that probes can have disjunctive specifications (Roversi 2019 on agreement in Äiwoo, also Bondarenko & Zompì 2020 on Svan agreement) and show how it can save a FG-approach to undisruptable portmanteaus.

We have already seen that an approach to agreement along the lines of Béjar & Rezac (2009) and Coon & Keine 2020 already has conjunctive agreement encoded in it: a probe that has segments A, B, and C can be represented as a conjunction A ∧ B ∧ C: (115a) is equivalent to (115b).

(115) **Conjunction in agreement**
- a. Probe with probing segments A, B, C:
  [A]
  [B]
  [C]
- b. Conjunctive Probe: A ∧ B ∧ C
- c. **Interaction condition:** A ∨ B ∨ C (while they are active)
- d. **Satisfaction condition:** A ∧ B ∧ C (when all become inactive)

If we restate the same approach in terms of Deal (2015), we can state the same probe by defining an interaction condition in (115c) and a satisfaction condition in (115d). The probe interacts with any goal that has A or B or C (while all the three "segments" are active). The probe is satisfied when it find all the three: A and B and C. One can note that disjunction is already used in defining the probe's interaction condition. It does not matter whether we represent the probe in terms of segments or in a different way. As long as we want the probe to interact and agree with several kinds of features, we needs some notion of disjunction. The only new thing then that we need to add is that the satisfaction condition can also be a disjunction.

What does a disjunctive satisfaction condition mean? For example, if a probe's satisfaction condition is A ∨ B, it means that finding either A or B will totally satisfy the probe, there is no need to search for finding both A and B.

Disjuncts can be more complicated than just a single feature. If that is the case, the question arises of how exactly agreement with a disjunctive probe proceeds. Here's some rules:

(116) **The rules of disjunctive probing:**
- a. If a goal X can fully satisfy one of the disjuncts of the disjunction A ∨ B, it checks off that disjunct and thereby satisfies the probe.
- b. If a goal X cannot fully satisfy any of the disjuncts, but it can partially satisfy one of the disjuncts, it checks off some features of that disjunct.
- c. The first interaction determines the disjunct: all checking of the features must proceed within the same disjunct that was first interacted with.

The rules in (116) are by no means complete.[34] However, these rules are sufficient for the case of disjunctive probing that I will need to introduce.

Now we have all the tools to make a proposal about the Voice probe in Conjunct: (117). As one can see, this probe has two disjuncts. The first disjunct is the same as the specification of the Voice probe in Independent: it is a conjunction $\pi \wedge$ NON-PART $\wedge$ OBV.

(117) **Conjunct Voice** *(final version)*

a. Segmental representation:

$[\pi]$
[NON-PART] $\vee$ [PART.SG]
[OBV]

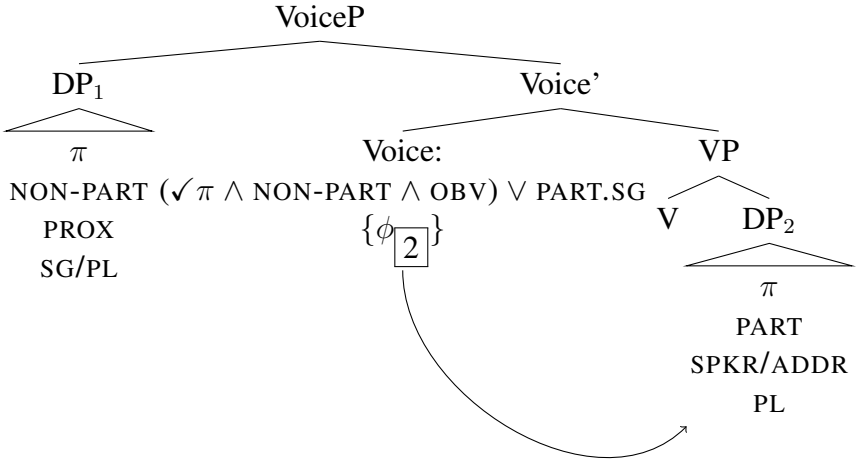
b. Representation in terms of conjunction and disjunction:
$(\pi \wedge$ NON-PART $\wedge$ OBV$) \vee$ PART.SG

The second disjunct contains one complex feature: the feature that checks that the goal is a singular participant. This disjunct basically serves as a stop-condition: the moment Voice will find a singular participant, it will stop its search.

Let us now consider how the Voice agreement will proceed in the four configurations in (113). The $\{$3(3), PART.PL$\}$ configuration is represented in (118). Voice probes and interacts with the object. It is not a singular participant, so it cannot satisfy the second disjunct. However, it can partially satisfy the first disjunct: it can check off the π feature of the first disjunct, which it does, and the object's features get copied onto Voice.

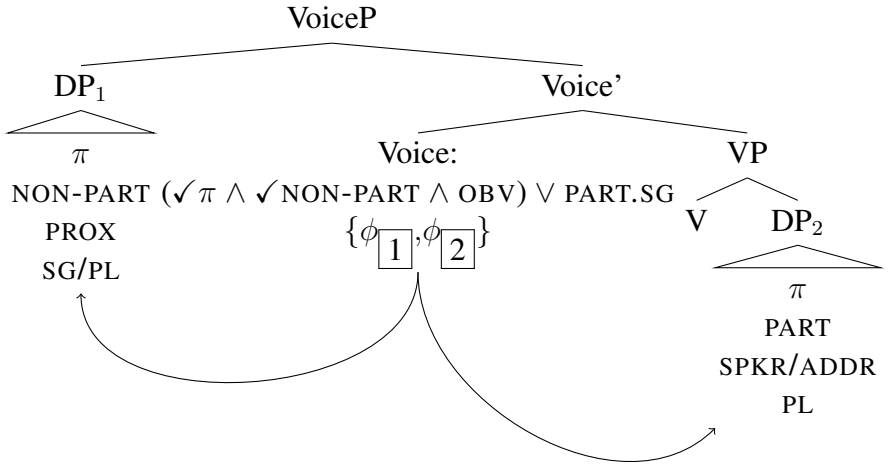
(118) Voice agreement in the $\{$3(3), PART.PL$\}$ configuration

a. Voice agrees with the object: $\checkmark\pi$



[34]The following questions arise, among others: what happens if the goal can partially satisfy both disjuncts? what happens if there are more than two disjuncts?

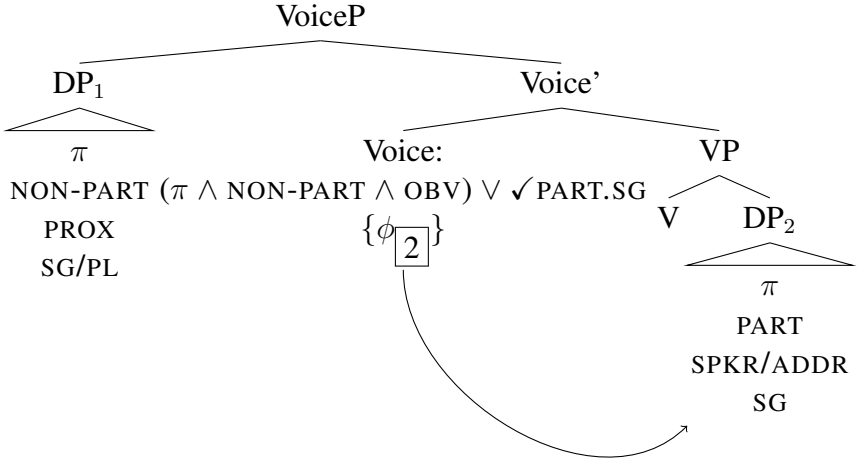
b. Voice agrees with the subject: ✓NON-PART



Voice continues searching and it finds the subject, which checks off the NON-PART segment of the first disjunct. This is followed by Voice copying the subject's features onto itself. Thus, a feature gluttony is created on Voice.

Now let us see why the feature gluttony will not be created in the other three configuraitons of (113). In the {3(3), PART.SG} configuration, (119), Voice will get satisfied in the first interaction: the object can fully satisfy the second disjunct of the probe (PART.SG), and thereby it immediately satisfies the probe. No further probing occurs.

(119) Voice agreement in the {3(3), PART.SG} configuration

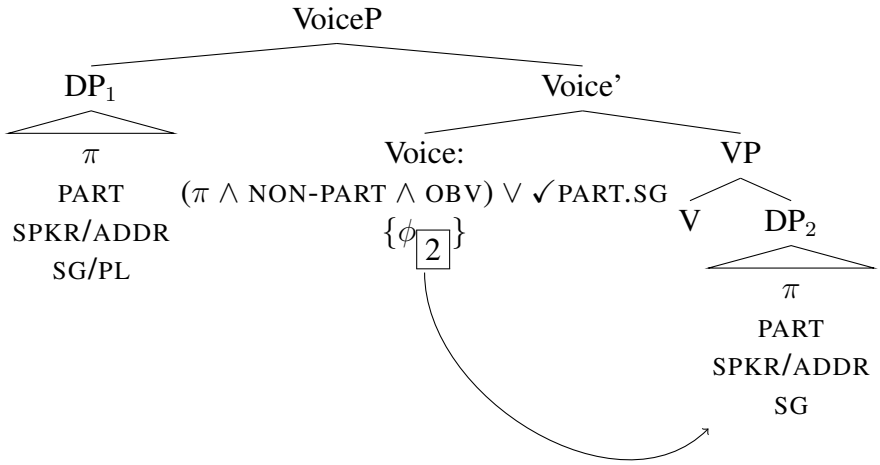


If the object is a singular participant, the derivation will proceed the same way no matter what the subject is. So, if the subject will be a participant noun phrase (singular or plural), Voice will still be satisfied and stopped by a singular participant object, (120). No FG will arise.

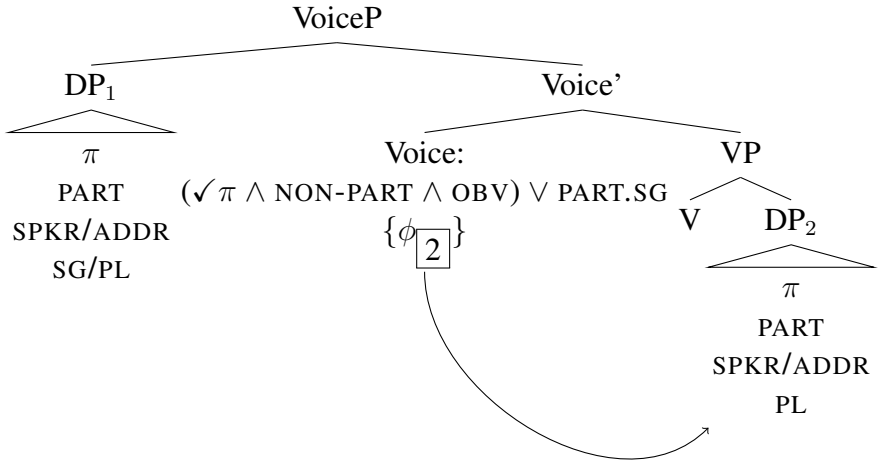
Configurations with a plural participant object will also not result in feature gluttony if the subject is a participant noun phrase. In (116) we have proposed that the first interaction of the probe determines the disjunct. Plural participants cannot satisfy the second disjunct, but they can partially satisfy the first disjunct — the π feature in it. This means that whenever a configuration will have a plural participant object, Voice's agreement will happen as if the second disjunct wasn't there to begin with, (121). So even in the {PART.SG,PART.PL} configuration we will get direct: a

PART.SG argument cannot satisfy any more features within the first disjunction, and switching to a second disjunct is an illegal move. Thus, no FG emerges.

(120) Voice agreement in the {PART, PART.SG} configuration



(121) Voice agreement in the {PART, PART.PL} configuration



Thus, we achieve the desired result: FG will be created only in {3(3), PART.PL} and {4(4),3(3)} configurations. We got this result by suggesting that the hierarchy in the Conjunct is exactly the same as in the Independent (table 36), and that the Voice probe is a disjunction of the specification of the highest category on the hierarchy (obviative NP) and the "singular particiant" feature.

Obviative	3rd person Proximate	Participant
π	π	π
NON-PART	NON-PART	−NON-PART=PART
OBV	OBV	−OBV

Table 36: Hierarchy in Conjunct *(final)*

What the second disjunct added is that whenever there is a PART.SG object, the probe gets immediately satisfied and no FG is created. This makes the {3(3), PART.SG} configuration, which would otherwise result in FG, not create FG and show object agreement.

The outlined analysis makes an interesting prediction, which, unfortunately, is not testable in Passamaquoddy and might not be testable in other Algonquian languages. It predicts that if the combination of an obviative subject and a singular participant object was possible, it would have a "direct" configuration with no FG emerging.[35] This is so because the stop-condition PART.SG (= the second disjunct of Voice) is blind to what the features of the subject are. Whether is it is a proximate non-participant, obviative non-participant, or a participant, Voice will be satisfied as soon as it sees a singular participant object and will not search further.

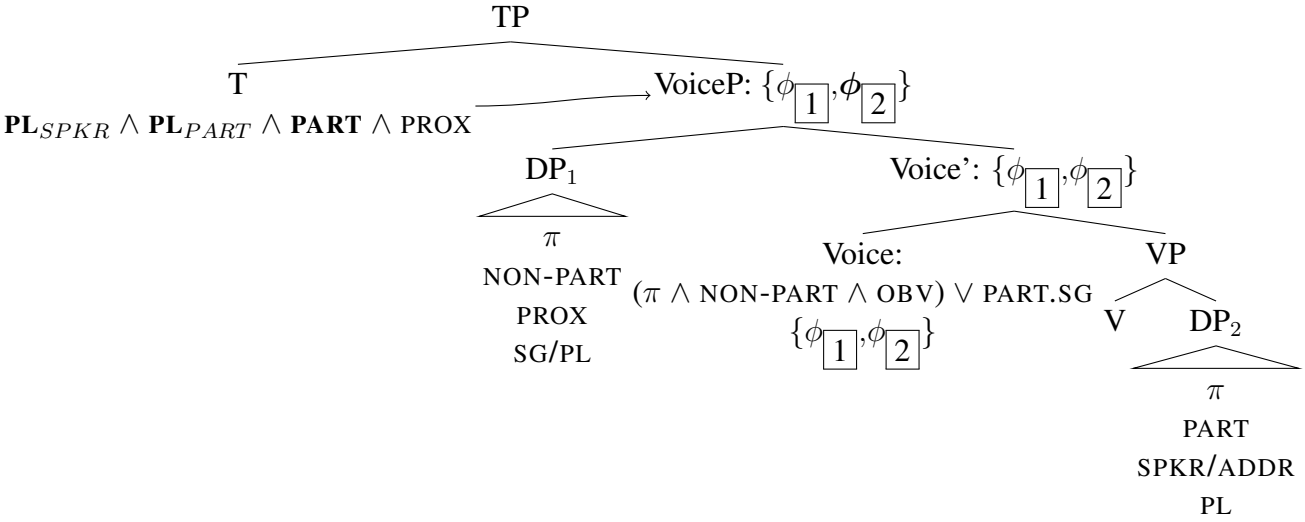
In (122) I generalize this property of stop-conditions to an arbitrary hierarchy. If the Probe has a stop-condition (= disjunct) A_{k1} which is a certain feature of goals that generally fall into a category A_k, then disjunctive probing predicts that all configurations where the subject belongs to a category that is higher than A_k and the object belongs to A_{k1} will not result in feature gluttony.

(122) **A property of stop-conditions**
If there is a hierarchy $A_1 > ... > A_k > ... > A_n$ and a probe P is searching for a disjunction of the specification of A_1 and a stop-condition A_{k1} from the A_k, then for all i = 1...k-1, $\{A_i, A_{k1}\}$ should result in no FG.

Getting back to the undisruptable portmanteaus in the {3(3), PART.SG} configuration, let's illustrate the interaction between T and Voice.

Voice has created a FG, gathering features from the object and the subject. Voice's features will project onto the level of VoiceP, and thus the features of the object that Voice gathered and the features on the subject NP will become equidistant from T. T will be searching for the Best Match, and the object features on Voice turn out to be the Best Match: depending on the person features of the participant object, the object features will satisfy either 2 or 3 segments of T, while the subject features can satisfy only one. This is illustrated in (123).

(123) {3(3), PART.PL} configuration: T finds Best Match on Voice



[35] While morphologically obviative subjects can occur with participant objects, this only happens when the subject is obviative due to having a possessor. In these cases it is not clear that the subject is also "obviative" with respect to the NP-external syntax: the verb agrees in the same way as if the subject was a proximate noun phrase. This issue needs more investigation, but at this point it doesn't seem to me that these obviative-marked subjects are obviative with respect to the VoiceP syntax, so I don't think we can draw any conclusions from these configurations.

where $\{\phi_{\boxed{2}}\}$ = $\pi \wedge$ PART $\wedge$ SPKR/ADDR $\wedge$ PL
(satisfies 2/4 of T's features (PART and PL_{part}) if the object is ADDR;
satisfies 3/4 of T's features if the object is SPKR (PART, PL_{part}, PL_{spkr}));
DP_1's features = $\pi \wedge$ NON-PART $\wedge$ PROX (satisfies 1/4 of T's features: PROX)

Having found the Best Match on Voice within a FG, T checks whether it could expone this FG better than Voice. It turns out that it can: T has lexical items that could spell FGs created the {3(3), PART.SG} configurations better than underspecified portmanteaus, (124)-(125).

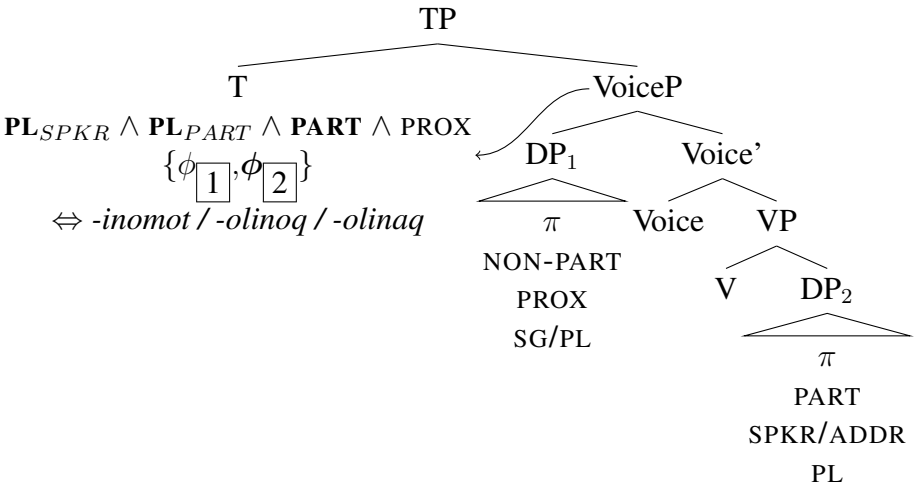
(124) **Portmanteau for {3(3), 1PL.EXCL}**
inomot $\Rightarrow$ { {π, NON-PART}, {π, PART, SPKR, PL}}

(125) **Portmanteau for {3(3), 1PL.INCL}**
olinoq $\Rightarrow$ { {π, NON-PART}, {π, PART, SPKR, ADDR, PL}}

(126) **Portmanteau for {3(3), 2PL}**
olinaq $\Rightarrow$ { {π, NON-PART}, {π, PART, ADDR, PL}}

Thus, T pied-pipes the whole FG, relieving Voice from having to spell it out. The FG is lexicalized as a portmanteau which expones the T head, (127).

(127) {3(3), PART.PL}: T expones the FG that Voice created



The undisruptability of the portmanteau by negation follows from the fact that it is a lexical item that expones features on T. It is not created by adjacency-sensitive contextual allomorphy or a span. So the presence of negation below T has no effect on the portmanteau besides the general phonological effect of negation on the suffix that follows it.

My proposal also makes the following prediction:

(128) **Prediction about the complementary distribution:**
Given that undisruptable portmanteaus are an alternative spell-out of a Feature Gluttony created on Voice, I predict complementary distribution of the inverse marker and the undisruptable portmanteaus.

This is a good prediction. Oxford(2018) notes that across Algonquian languages, portmanteaus and inverse markers are always in complementary distribution. He derives this fact by saying that portmanteaus happen when T agrees with both arguments, but the inverse marker occurs when T agrees only with the object (= impoverishment) — thus the two can never co-occur.

I derive the same fact in a different way. If a portmanteau is disruptable, we are dealing with contextual allomorphy of T and Voice heads. The fact that disruptable portmanteaus do not occur together with the inverse marker is an accident of allomorphy rules. However, the complementary distribution of undisruptable portmanteaus and inverse markers is not an accident: the two things are two different ways of spelling out a feature gluttony. There never are two FGs created, so you never see both exponents within the same sentence.

My approach also makes a further prediction. If an undisruptable portmanteau is lost, I predict that a language should start using the inverse marker instead. This pattern of language change might indeed be attested. Oxford (2014) shows that in Plains Cree, Parry Island Ojibwe, Listuguj Mi'gmaq and Cheyenne the inverse extends in Conjunct forms to the {3(3), PART.PL} configurations. We could hypothesize that these languages were like Passamaquoddy and had portmanteaus instead of the inverse marker in these configurations, but then lost them, which led to the use of the default portmanteau for spelling out these gluttonous configurations.

It is also interesting to note that the oposite direction of the diachronic change is possible too: Passamaquoddy's portmanteau *-iht* that we see in the {4(4), 3} configurations is an example of that. While some time ago this was a form with the inverse marker (pc. Conor Quinn), now it seems to behave as an undisruptable portmanteau. The form has changed, but the purpose remained the same: spelling out a feature gluttony.

6 Concluding remarks

In this paper I argued based on data from Passamaquoddy that an account of hierarchy effects that appeals to the creation of a feature gluttony (Coon & Keine 2020) can be used to explain the direct/inverse marking in Algonquian languages.

I proposed that the probe on Voice, that corresponds to the direct/inverse agreement (Oxford 2018), is a probe that is searching for obviative arguments. When the object is "closer" to being obviative than the subject is or is "equally" obviative, then Voice agrees only with the object (= *direct*). Whenever the subject is "closer" to being an obviative noun phrase than the object is, Voice agrees with both the subject and the object, creating a feature gluttony. I proposed that the inverse marker is an underspecified portmanteau spelling out that gluttony.

I have noticed a further hierarchy effect in Conjunct forms that has to do with disruptability of portmanteaus being created, and proposed that undisruptable portmanteaus are yet another way of saving the FG created on Voice.

The investigation of these matters made me explore the question of what kinds of hierarchy effects can be explained in terms of feature gluttony creation. Strict ordering between the categories of the hierarchy seems to be an important condition for a FG-explanation, which can be bypassed only by quite powerful measures such as disjunctive probing.

There are many loose ends that I have to leave open. One loose end that I find particularly interesting is the question of how well can my proposal extend to those Algonquian languages that have made innovations in their agreement systems since the Proto-Algonquian times, and have extended the inverse marker in Independent and Conjunct forms to more cells of the paradigm.

7 References

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Appendix: agreement tables

Number → Person ↓	**Sg**	**Dual**	**PL**
1	n-...	n-...-p-on	n-...-ulti-p-on
2	k-...	k-...-p-a	k-...-ulti-p-a
12	—	k-...-p-on	k-...-ulti-p-on
3	...-u	...-uwo-k	...-ult-uwo-k
4	...uwo-l	...-u	...-ult-u
∅	...-n		

Table 1: **AI markers in the Independent** (Present tense, positive)

Number → Person ↓	**Sg**	**Dual**	**PL**
1	...-y-an	...-y-ek	...-ulti-y-ek
2	...-y-in	...-y-eq	...-ulti-y-ek
12	—	...-y-iq	k-...-ulti-y-iq
3	...-it/ok/et	...-hti-t	...-ulti-hti-t
4	...li-t	...-li-t	...-ulti-li-t
∅	...-mok / mk		

Table 2: **AI markers in the Conjunct** (Present tense, positive)

Object → Subject ↓	**3Sg**	**3PL**
1	n-...-in	n-...-in-ol
2	k-...-in	k-...-in-ol
3	...-in	...-in-ol
11	n-...-ine-n	n-...-ine-nnu-l
12	k-...-ine-n	k-...-ine-nnu-l
22	k-...-ini-y-a	k-...-ini-y-a-l
33	’-...-ini-y-a	’-...-ini-y-a-l

Table 3: **TI markers in the Independent** (Present tense, positive)

Object → Subject ↓	**1**	**2**	**3**	**4**	**11**	**12**	**22**	**33**	**44**
1	—	k-...-ol	n-...-a	—	—	—	k-...-ol-p-a	n-...-a-k	—
2	k-...-i	—	k-...-a	—	k-...-i-p-on	—	—	k-...-a-k	—
3	n-...-oq	k-...-oq	—	’-...-a-l	n-...-oku-n	k-...-oku-n	k-...-oku-w-a	—	’-...-a
4	—	—	’-...-oku-l	—	—	—	—	’-...-oku-w-a-l	—
11	—	k-...-ol-p-on	n-...-a-n	—	—	—	k-...-ol-p-on	n-...-a-nnu-k	—
12	—	—	k-...-a-n	—	—	—	—	k-...-a-nnu-k	—
22	k-...-i-p-a	—	k-...-a-w-a	—	k-...-i-p-on	—	—	k-...-a-w-a-k	—
33	n-...-oku-k	k-...-oku-k	—	’-...-a-w-a-l	n-...-oku-nnu-k	k-...-oku-nnu-k	k-...-oku-w-a-k	—	’-...-a-w-a
44	—	—	’-...-oku	—	—	—	—	’-...-oku-w-a	—
∅	n-...-ok	k-...-ok	...-a	...-a	n-...-oke-p-on	k-...-oke-p-on	k-...-oke-p-a	...-a-k	...-a-k

Table 5: **TA markers in the Independent** (Present tense, positive)

Prefix agreement:

- k(t) = {2}
- n(t) = {1}
- ’ = {3/4}
- **Rules:**
  - If there is a 2nd person DP, agree with it.
  - If there is no 2nd person but there is a 1st person DP, agree with it.
  - If there are no 1st or 2nd person DPs, agree with a 3rd person.

Theme sign agreement:

- ol = {2}
- i = {1}
- a = {3/4}
- oku/oq = inverse marker
- **Rules:**
  - Hierarchy: {1,2} >3 >4
  - If subject is equal or higher than object on the hierarchy, agree with the object.
  - If object is higher than subject, inverse marker occurs.

Central agreement:

- p = participant
- w = non-participant
- (o)n(nu) = 1PL
- a = PL
- **Rules:**
  - agreement happens only if there is a PL, order of arguments never matters (omnivory), 1PL are preferred over 2PL.
  - **p-on**: 11 + 2, 11 + 22, {∅,11}, {∅,12}
  - **p-a**: 22 + 1, {∅,22}
  - **w-a**: 3(3) + 2PL, 4(4) + 3PL.
  - **(o)n(nu)**: 3(3) + 1PL.

Peripheral agreement:

- k = 3PL
- l = Obv Sg
- suprasegm. = Obv Pl
- **Rules:**
  - 3PL agrees if the other argument is a participant.
  - If the other argument is 4(4), 3PL agrees in PL in Central.
  - {∅,33}, {∅,44}.

Object → Subject ↓	**1**	**2**	**3**	**4**	**11**	**12**	**22**	**33**	**44**
1	—	...-ol-an ...-ol-uw-an	...-uk ...-a-w-an	—	—	—	...-ol-eq ...-ol-uw-ehq	...-uk ...-a-w-an	—
2	...-i-y-in ...-i-w-on	—	...-ot ...-a-w-on	—	...-i-y-ek ...-i-w-ehk	—	—	...-ot ...-a-w-on	—
3	...-i-t ...-i-hq	...-os-k ...-ol-u-hk	—	...-a-t ...-a-hq	...-i-nomot ...-i-nomohq	...-ol-inoq ...-ol-inohq	...-ol-inaq ...-ol-inahq	—	...-a-t ...-a-hq
4	—	—	...-iht ...-ihq	—	—	—	—	...-oku-hti-t ...-oku-hti-hq	—
11	—	...-ol-ek ...-ol-uw-ehk	...-ek ...-a-w-ehk	—	—	—	...-ol-ek ...-ol-uw-ehk	...-ek ...-a-w-ehk	—
12	—	—	...-oq ...-a-w-ohq	—	—	—	—	...-oq ...-a-w-ohq	—
22	...-i-y-eq ...-i-w-ehq	—	...-eq ...-a-w-ehq	—	...-i-y-ek ...-i-w-ehk	—	—	...-eq ...-a-w-ehq	—
33	...-i-hti-t ...-i-hti-hq	...-os-k ...-ol-u-hk	—	...-a-hti-t ...-a-hti-hq	...-i-nomot ...-i-nomohq	...-ol-inoq ...-ol-inohq	...-ol-inaq ...-ol-inahq	—	...-a-hti-t ...-a-hti-hq
44	—	—	...-iht ...-ihq	—	—	—	—	...-oku-hti-t ...-oku-hti-hq	—
∅	...-oki-y-an ...-oke-w-an	...-oki-y-in ...-oke-w-on	...-ut ...-a-muhk	...-ut ...-a-muhk	...-oki-y-ek ...-oke-w-ehk	...-oki-y-iq ...-oke-w-ohq	...-oki-y-eq ...-oke-w-ehq	...-ut ...-a-muhk	...-ut ...-a-muhk

Table 6: **TA markers in the Conjunct** (Present tense, positive + negative)

Central non-portmanteau

- on /in = {2}
- eq = {22}
- an = {1}
- ek = {11}
- oq = {12}
- t / k = {3Sg}
- hti-t = {3Pl}

Separatable portmanteaus

- uk = {1,3}
- ot = {2,3}
- iht (not sure) = {4,3}
- ut = {∅, 3/4}

Non-separatable portmanteaus

- nomot = {3,11}
- inoq = {3,12}
- inaq = {3,22}

Theme Sign

- ol = {2}
- i = {1}
- a = {3/4}
- oku/oq = inverse marker

Object → **Subject ↓**	**3Sg** and **3PL**
1	...-y-an
2	...-y-in
3	...-t
11	...-y-ek
12	...-y-iq
22	...-y-eq
33	-...-hti-t

Table 4: **TI markers in the Conjunct** (Present tense, positive)

II = 3rd person	**Independent**	**Conjunct**
Sg	...-u / -iw / -∅ /-e	...-ik / -ahk / -ak / -ek
Pl	...-uwo-l / -iwo-l /-u-l / -et-u-l	...-ik / -ahk / -ak / -ek

Table 7: **II markers in Independent & Conjunct** (Present tense, positive)