On Reaching Agreement Late

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1   Two notions and a question

Consider the fundamental licensing operation of minimalist syntax, Agree, which is usually characterized as follows (see e.g. Chomsky 2001)[1]:

(1)   *Agree: the fundamental licensing operation of minimalist syntax*
        Given a probe X and a goal Y, where:
        a.   X c-commands Y,
        b.   X lacks values for uninterpretable features that can be supplied by the values of matching features on Y,
        c.   Y lacks values for uninterpretable features that can be supplied by X,
        d.   No potential goal intervenes between X and Y,
        e.   X and Y are in the same phase,
        Agree supplies the values of each category's uninterpretable features from matching features of the other category.

The question that I want to address here can be stated very simply. What is the relation between Agree and the phenomenon of morphological agreement? By *morphological agreement* I mean the sort of morpho-syntactic co-variation in form illustrated by the English examples of subject-verb agreement in (2). (For reasons that will become clear shortly, I assume that the phenomenon can be construed broadly enough to include e.g. clitics and their combinations.)

(2)   *English subject-verb agreement*
        The cat is a mammal. / Cats are mammals.

The standard answer to this question is that morphological agreement transparently reflects Agree. That answer has had two consequences, which I believe are intertwined. On the one hand, it has led to a wealth of research on morphological agreement, clitic combinations, and subject-object interactions in particular languages, which has contributed immensely to our understanding of

the intricacies of these patterns. On the other hand, it has led to a steady expansion in the range of options included under the umbrella of Agree. To judge from recent research, the operation Agree must be reconfigured to explicitly permit some or all of the following: (a) split feature checking (Anagnostopoulou 2005, Alexiadou & Anagnostopoulou 2006); (b) Agree that probes down and then up (Béjar & Rezac 2009); (c) multiple Agree (Hiraiwa 2000; Nevins 2007, 2011); (d) Agree that probes for marked or contrastive values of a feature (Nevins 2007); (e) obligatory Agree whose failure does not stop the derivation from proceeding (Preminger 2011); and (f) Agree that allows the case-marking of potential goals to "[play] a role in whether or not they will be actually targeted" (Preminger 2011: 119, building on Bobaljik 2008). It seems reasonable to wonder whether this enlarged syntactic toolkit is in conflict with minimalist ideals.

This paper takes a different position on the relation between Agree and morphological agreement. Departing from the standard view, I claim that morphological agreement need not transparently reflect Agree. (For precedents, see Chung 1998, to appear; Sigurðsson 2006.) Perhaps the strongest version of this position is staked out by Bobaljik (2008). He claims that the feature sharing responsible for morphological agreement—as well as clitic combinations, subject-object interactions, and the like—occurs not in narrow syntax but in the morphology. Although I will not go quite this far, I will maintain that the mechanisms that regulate clitic combinations and subject-object interactions are conditions on spell-out, which take effect not in narrow syntax but in the morphology. These claims are illustrated and motivated with respect to person-animacy effects in Chamorro, an Austronesian language of the Mariana Islands.

Section 2 of this paper introduces some of the basics of Chamorro clause structure. Then, Section 3 describes the person-animacy effects found in transitive clauses. Section 4 points to one indication that these effects might result from the syntactic licensing operation Agree. Section 5 examines a wider range of evidence that argues for implementing these effects in the morphology. Section 6 offers two versions of a morphological analysis. Finally, Section 7 concludes.

2   An introduction to Chamorro
2.1   Clause structure
Chamorro is a head-initial language that allows a range of null arguments. In the word order of the clause, the predicate comes first, followed by arguments and adjuncts. The word order of arguments and adjuncts following the predicate is flexible, but the neutral word order of clauses formed from verbs is *Verb Subject Object Other*.

(3)   *Word order / null arguments*
   a.   *Ha   patcha   si   nanå-hu   i   sanhilu'   i   hetnu.*
        AGR touch   UNM mother-AGR the top.L   the oven
        'My mother touched the top of the incubator.' (EM 92)

b. *Ha   sienti   na   mampus   maipi.*
   AGR feel   COMP too   AGR.hot
   'She felt that it was too hot.' (EM 92)

c. *Impottånti   na   u   guaha bottu-n såntus gi   gima'.*
   AGR.important COMP AGR exist   statue.L saints LOC house
   'It is important to have statues of the saints at home.' (CD, entry for *såntus*)

Chamorro has a voice system. Clauses formed from transitive verbs can be active, passive, or antipassive. Passive verbs show the infix *-in-* or the prefix *ma-*; antipassive verbs show the prefix *man-/fan-*; active verbs have no overt voice inflection.

(4) *Voice system*
   a. *Ha   guaiya   si   Julia   si   Vicente.*
      AGR love   UNM Julia   UNM Vicente
      'Julia loves Vicente.' *[active transitive]*
   b. *Guinaiya   si   Vicente (gi)as Julia.*
      AGR.PASS.love UNM Vicente OBL   Julia
      'Vicente is loved by Julia.' *[passive]*
   c. *Mang-guaiya   si   Julia   as   Vicente.*
      AGR.AP-love   UNM Julia   OBL Vicente
      'Julia loves Vicente.' *[antipassive]*

Note that this is not a Philippine-type voice system. Every Chamorro clause has exactly one DP that is the most prominent: this DP is the external argument of active transitive clauses and antipassives, and the internal argument of passives. Further, passive and antipassive clauses are syntactically *intransitive*. As is standard, I assume that the external argument of active transitive clauses (and antipassive clauses) first merges as the specifier of small v and then is Case-licensed via Agree with T, as part of raising to T's specifier. In passive clauses, small v has no specifier, so the internal argument is Case-licensed via Agree with T—again, as part of raising to T's specifier.

Chamorro also has wh-movement. A wide range of XP's can undergo wh-movement, including subjects (5a), direct objects (5b), oblique complements, and adjuncts.

(5) *Wh-movement*
   a. *Håyi   para   u   hånao _ ?*
      who?   FUT   AGR go
      'Who will go?' (CD, entry for *håyi*)
   b. *Håfa   un   chuli' _ gi   hilu'   kåttri?*
      what?   AGR take   LOC top.L bed
      'What did you take from the bed?' (CD, entry for *gi*)

Certain possessors can undergo wh-movement when the entire possessive DP is headed by the null indefinite article.

(6) *Wh-movement of possessor*
  Håyi   un   fåhan   [karetå-ña _]?
  who? AGR buy   car-AGR
  'Whose car did you buy?'

More types of XP's can undergo wh-movement than can raise to the specifier of T—a difference usually traced to the featural needs of C versus T. All this suggests that Move, and therefore Agree, works as expected in this language.

2.2 Subject-predicate agreement

Chamorro has an intricate system of subject-predicate agreement that encodes the person and/or number of the subject as well as realis vs. irrealis mood. Crucially, the agreement paradigms are different for transitive verbs than for intransitive predicates. Transitive verbs are inflected for person and number, via pre-predicate morphemes that are written as separate words. In the realis mood, intransitive verbs and adjectives are inflected only for number, via a different set of affixes; in the irrealis mood they are inflected for both person *and* number.

(7) *Subject-predicate agreement in transitive vs. intransitive clauses*
  a. **In**   *guaiya   si   Vicente.*
     AGR   love   UNM Vicente
     'We (excl.) love Vicente.' *[**transitive** realis]*
  b. **Mañ**-*ålik   ham.*
     AGR-laugh   we
     'We (excl.) laughed.' *[**intransitive** realis]*

The agreement paradigms are given below. (The intransitive paradigm also distinguishes between dual and plural number. For simplicity, the dual forms are omitted).

(8) *Paradigms for subject-predicate agreement*

	TRANSITIVE VERBS			INTRANSITIVE VERBS / ADJS	
	Realis	*Irrealis*		*Realis*	*Irrealis*
1 SG	**hu**	**(bai) hu**	1 SG	-um- / −	(bai) hu
2 SG	**un**	**un**	2 SG	-um- / −	un
3 SG	**ha**	**u**	3 SG	-um- / −	u
1 IN PL	**ta**	**(u)ta**	1 IN PL	man-	(u)ta fan-
1 EX PL	**in**	**(bai) in**	1 EX PL	man-	(bai) in fan-
2 PL	**in**	**in**	2 PL	man-	in fan-
3 PL	**ma**	**uma**	3 PL	man-	u fan-

I now zoom in on the transitive agreement paradigm (in bold), which is the focus of the rest of this paper.

3 Person-animacy effects
3.1 The patterns of interest
Chamorro has person-animacy effects reminiscent of the subject-object interactions found in languages with direct-inverse systems (see Aissen 1997, 1999, and much literature since). Specifically:

(i) Transitive clauses with a third person subject and a second person direct object are ungrammatical, as (9) shows.

(9) *3 > 2
    a. *Kao ha kuentusi hao åntis di u hånao?
        Q AGR speak.to you before AGR go
        ('Did he speak to you before he left?')
    b. *Kao para u konni' hamyu na tres para i sho?
        Q FUT AGR take you.PL L three to the show
        ('Is he going to take the three of you to the show?')

(ii) Transitive clauses are ungrammatical when their subject is a non-pronoun and their direct object is a third person animate pronoun. This fact, which is illustrated below, holds true whether the third person pronoun is overt (10a-b) or null (10c); see Chung 1984.

(10) *Non-pronoun > 3 animate pronoun
    a. *Ha lalåtdi gui' si Maria.
        AGR scold him UNM Maria
        ('Maria scolded him.')
    b. *Para u bisita siha si Juan agupa'.
        FUT AGR visit them UNM Juan tomorrow
        ('Juan is going to visit them tomorrow.')
    c. *Ha tattiyi si Juan guatu gi kareta.
        AGR follow UNM Juan there LOC car
        ('Juan followed her to the car.')

It is important that (ii) specifically concerns *animate* pronouns. Non-pronoun subjects can routinely be paired with direct objects that are *inanimate* pronouns, as (11) shows. (Inanimate pronouns in Chamorro are null unless they are reflexive; see Chung 1989.)

(11) Non-pronoun > 3 inanimate pronoun
    Ti para u hagu' i patgun.
    not FUT AGR reach the child
    '[Put the knife where] the child cannot reach it.' (CD, entry for *hagu'*)

(iii) Transitive clauses with an inanimate subject and an animate direct object are ungrammatical. This can be seen from (12).

(12) *Inanimate > animate*
    a. *Ha na'kåti i manenghing i patgun.
       AGR make.cry the cold the child
      ('The cold made the child cry.')
    b. *Para u na'lalålu' i isturiå-ña si Maria.
       FUT AGR make.angry the story-AGR UNM Maria
      ('His story is going to make Maria angry.')

Other combinations of subject and direct object are licit, as can be seen from the naturally occurring examples cited in (13). Most of these examples come from the Chamorro Dictionary database (CD), an electronic database of some 30,000 Chamorro sentences created by the Chamorro community in the CNMI as part of an NSF-funded project to revise the Chamorro-English dictionary.

(13) *Other subject-object combinations*
    a. *Bai hu afuetsas hao.*
       AGR force you
      '[Give it to me at once or] I will force you.' *[1 > 2]* (CD, entry for *afuetsas*)
    b. *Esta buen etchu hao na un imbesti yu'.*
       already see.what.happened you COMP AGR challenge me
      'You are at the right age that you are challenging me.' *[2 > 1]* (CD, entry for *buen etchu*)
    c. *Ha faisin håfa na ha baba i hetnu.*
       AGR ask what COMP AGR open the oven
      'She asked her why she had opened the incubator.' *[3 pro > 3 pro]* (EM 93)
    d. *Ma å'fi i kannai-hu.*
       AGR put.sling.on the arm-AGR
      'They put a sling on my arm.' *[3 pro > inan]* (CD, entry for *å'fi*)
    e. *Ha patcha si Doreen i neni.*
       AGR touch UNM Doreen the baby
      'Doreen touched the baby.' *[anim > anim]* (CD, entry for *patcha*)
    f. *Ha kånnu' si Juan i umatang.*
       AGR eat UNM Juan the black.bass
      'Juan ate the black bass.' *[anim > inan]* (CD, entry for *umatang*)
    g. *Ha na'ispongha i gaputilu-hu i hapbun gaputulu*
       AGR make.fluffy the hair-AGR the soap.L hair
      'The shampoo that I used made my
      ni hu usa.
       COMP AGR use

hair fluffy.' *[inan > inan]* (CD, entry for *na'ispongha*)

As a first approximation, following earlier work of mine (Chung 1998: 34), we can say that the direct object cannot outrank the subject on the hierarchy shown below.

(14) *The Chamorro person-animacy hierarchy*
    2 > 3 animate pronoun > animate > inanimate

Importantly, the effects described above in (i-iii) specifically target transitive clauses. They are therefore evaded by all intransitive clause types, including passive clauses and antipassive clauses. The examples in (15) make the point that the passive counterparts of the ungrammatical transitive clauses in (9-10) and (12) are well-formed.

(15) *Some grammatical passives*
    a. *Kao   kuinentusi   hao åntis di u   hånao?*
       Q   AGR.PASS.speak.to you before   AGR go
       'Were you spoken to by him before he left?'
    b. *Para   u   fan-binisita   gias Juan   agupa'.*
       FUT   AGR   AGR-PASS.visit   OBL Juan   tomorrow
       'They are going to be visited by Juan tomorrow.'
    c. *Tinattiyi   (gui') as Juan   guatu gi   kareta.*
       AGR.PASS.follow   she   OBL Juan   there LOC   car
       'She was followed by Juan to the car.'
    d. *Nina'kåti   i   patgun ni   manenghing.*
       AGR.PASS.make.cry   the   child   OBL   cold
       'The child was made to cry by the cold.'

(16) makes a similar point for the antipassive counterparts of these clauses.

(16) *Some grammatical antipassives*
    a. *Man-bisita   si   Juan   nu   siha.*
       AGR.AP-visit UNM   Juan   OBL   them
       'Juan visited them.'
    b. *Håyi   para   u   fan-mam-atmåda   nu   hågu?*
       who?   FUT   AGR   AGR-AP-slap   OBL   you
       'Who is going to slap you?'

Aissen (1997, 1999) was the first to connect these data to the patterning of direct-inverse systems in Algonquian languages. Her OT approach to subject-object interactions in terms of harmonic alignment is formulated explicitly to encompass direct-inverse systems as well as person-animacy effects in Chamorro.

Unsurprisingly, attempts to recreate Aissen's insights in minimalist syntax have been framed in terms of Agree (e.g. Anagnostopoulou 2005, Bruening 2005, Nevins 2011). Let us now ask what a minimalist account of the Chamorro facts might look like.

4 An account in terms of multiple Agree

The account to be investigated here follows Nevins' (2007, 2011) appeal to multiple Agree to handle PCC effects, including (certain) subject-object interactions. It goes like this.

Suppose we assume that a probing head has the ability to target multiple goals simultaneously within a given domain (= multiple Agree; see Hiraiwa 2000). Suppose further that we adopt Nevins (2007, 2011) system for handling PCC effects, which allows (multiple) Agree to search selectively for feature values. Specifically, the search domain of a probing head can be restricted to the *marked* value of a feature. An intervention condition ensures that if a probing head searches for the marked value of a feature, no constituent with an *unmarked* value of that feature can intervene between probe and goal. (This is one subcase of Nevins' (2007) Contiguous Agree.) In Nevins' system, the universal person features are [Author], which distinguishes first person from other persons, and [Participant], which distinguishes first and second persons from third person. The marked value of the features [Author] and [Participant] is +. If we accept all this, just two more assumptions are needed to produce an account of the Chamorro person-animacy effects in terms of Agree. First, in Chamorro the marked value of the features [Pronoun] and [Animate] is +.[2] Second, direct objects in Chamorro must undergo object shift to the specifier of small v, tucking in under the external argument. This obligatory object shift ensures that the subject and the direct object will end up in the same phase, where they can be targeted simultaneously by multiple Agree; see Nevins 2011.
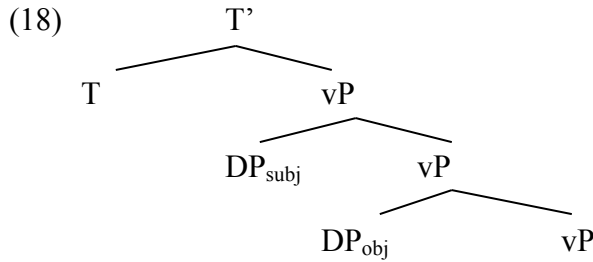
We can then describe the person-animacy effects as follows (ignoring the issue of inanimate pronouns for simplicity).

(17) *An Agree account of person-animacy effects in Chamorro*
      T's search domain is restricted to marked values of the features
      [Participant], [Pronoun], and [Animate].

To see how (17) works, consider (18), which shows the partial structure of a transitive clause after object shift.

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[2] Judith Aissen observes that what counts as the marked value of [Animate] could well depend on the grammatical relation of DP. For simplicity, I gloss over this issue.

(18)

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              T'
          ╱        ╲
         T          vP
               ╱        ╲
          DP_subj        vP
                     ╱        ╲
                 DP_obj        vP
```

Both the subject and the direct object are c-commanded by T and in the same phase as T, so they could in principle fall within T's search domain. T's search domain is restricted by (17) to marked (i.e. +) values of the features [Participant], [Pronoun], and [Animate]. This means that whenever the direct object bears a marked (+) value for [Participant], [Pronoun], or [Animate] but the subject does not, multiple Agree will violate the intervention condition, and ungrammaticality will result.

5   Reflexives

Some support for such an approach to person-animacy effects comes from the patterning of transitive clauses with reflexive direct objects. Chamorro has no distinct morphological paradigm for (animate) reflexive pronouns. Instead, ordinary morphological pro-forms can be given a reflexive interpretation. Crucially, transitive clauses whose direct object pronoun has a reflexive interpretation do not show person-animacy effects: they can have a subject that is a non-pronoun (Chung 1989). Compare (10) with the following.

(19) *Non-pronoun > 3 reflexive pronoun*
    a. *Ma-yulang   i   pesadót anai   ha   talang gui'*
        AGR.PASS-break the scale   when AGR weigh himself
        'The scale broke when Pedro weighed
        si   Pedro.
        UNM   Pedro
        himself.' (CD, entry for *pesadót*)
    b. *Sessu ha   riferi gui'   gi   Bipblia si   påli'.*
        often AGR refer himself LOC bible   UNM priest
        'The priest often refers himself to the Bible.' (CD, entry for *riferi*)

Kratzer (1998, 2009) has proposed that various types of bound pronouns, including reflexive pronouns, originate as indices that are otherwise featurally underspecified (see also Reuland 2012). These minimal pronouns inherit their morphosyntactic features—the features that determine how they are pronounced—"at a point in the derivation where the semantic interpretation component can no longer see them" (Kratzer 2009: 189). Suppose that in Chamorro, at the point when T searches for marked values of [Animate], [Pronoun], and [Participant], the constituents I have been calling reflexive direct

object pronouns are minimal pronouns, underspecified for these features. These minimal pronouns will be invisible to multiple Agree, and the results will be predicted to be well-formed. (For precedents, see Rivero 2004 and Deal 2010.)

This seems attractive. However, investigation of a wider range of facts reveals evidence less favorable to a multiple Agree analysis. I discuss this evidence next.

6   First person

Consider the fact that first person pronouns fall completely outside the system of person-animacy effects in Chamorro. A first person pronoun can be the subject of a transitive clause regardless of the character of the direct object. This can be seen from (13a), which illustrates 1 > 2, as well as the examples below.

(20)   *Transitive clauses with first person subjects*
    a.   *Hu   afuetsas gui' para u   atan yu'.*
        AGR force   her   FUT   AGR look me
        'I compelled her to look at me.' *[1 > 3]* (CD, entry for *afuetsas*)
    b.   *Hu   fa'na'an Fotti si   Juan.*
        AGR name   Fotti UNM Juan
        'I named Juan (= gave Juan the name) Fotti.' *[1 > anim]* (CD, entry for *fa'na'an*)
    c.   In   atcha i   liluk hålum gi   tapbla.
        AGR pound the nail   inside LOC board
        'We pounded the nail on the plywood.' *[1 > inanim]* (CD, entry for *atcha*)
    d.   *Hu   sodda' [na   ginin tånu' Chinu mågi i*
        AGR find   COMP from land.L China here the
        'I found that my family is from
        familiåk-ku].
        family-AGR
        China.' *[1 > inanim]* (CD, entry for *hali'*)

Further, a first person pronoun can be the direct object regardless of the character of the subject. This is shown in (13b), which illustrates 2 > 1, as well as (21):

(21)   *Transitive clauses with first person direct objects*
    a.   *Ha   nå'i yu' un pietna.*
        AGR give me a   thigh
        '[John killed his cow and] he gave me one thigh.' *[3 > 1]* (CD, entry for *pietna*)
    b.   *Gigun   ha   achetgi yu' si   Tåta …*
        as.soon.as AGR wink.at me UNM father
        'As soon as Father winks at me…' *[anim > 1]* (CD, entry for *achetgi*)
    c.   *Mamokkat yu' gi   hemhum ya   ha   gua'ding yu' i*
        AGR.walk I   LOC dark   and AGR trip   me the

'I walked in the dark and the stick tripped

   hayu.
   stick
   me.' *[inan > 1]* (CD, entry for *gua'ding*)

   d. *Ha   istotba   ham   [na   ha   bisita   si   Manuel   i*
      AGR disturb us   COMP AGR visit   UNM Manuel the
      'That Manuel visited our daughter disturbs

      hagan-måmi].
      daughter-AGR
      us.' *[inan > 1]*

In a multiple Agree analysis, such a distribution ought to follow from the featural make-up of first person pronouns. But if first person is universally [+Author] and [+Participant], as Nevins (2007) assumes, then the intervention condition on multiple Agree should rule out all of (21a-d). The point is more general. In a multiple Agree analysis, any attempt to craft Chamorro-specific feature specifications that would prevent first person pronouns from activating the intervention condition as direct objects would cause them (wrongly) to count as interveners when subjects. This is problematic.

7   Case licensing

Case licensing raises a different issue for an analysis of person-animacy effects in terms of multiple Agree. Given that Agree is the operation responsible for syntactic licensing, one might hope that the DP's targeted by T would be just those that are Case-licensed by T, either alone or perhaps in tandem with small v (say, because small v has undergone head movement to T). For the most part, this hope is realized: the person-animacy effects target the subject, which is Case-licensed by T, and the direct object, which is Case-licensed by small v. In the clauses in (22), the direct object is a possessive DP whose possessor is a pronoun. Multiple Agree does not see the pronoun possessor. (If it did, these clauses would be ungrammatical.) Instead, Agree targets the subject (which is [+Animate]) and the direct object (which is [+Animate] in (22a) and [-Animate] in (22b)), with the licit outcomes shown below.

(22) *Possessive direct objects*

   a. *Kao   ha   li'i'   si   Maria   i   patgon-mu   nigap?*
      Q   AGR see   UNM Maria the child-AGR   yesterday
      'Did Maria see your child yesterday?'

   b. *Ha   fåhan   si   Jose   i   karetå-ña.*
      AGR buy   UNM Jose the car-AGR
      'Jose bought her car [because he felt sorry for her].'

However, as Wagers *et al*. (2012) have observed, the situation is different when the direct object is a possessive DP headed by the null indefinite article. Multiple

Agree can evidently probe into such bare possessive DP's. In other words, when the direct object is a bare possessive DP, the person-animacy effects are sensitive to the pairing of the subject not only with the direct object, but also with the direct object's *possessor*. That is why the clauses below are ill-formed.

(23) *Bare possessive direct objects*
    a. **Kao ha li'i' si   Maria patgon-mu nigap?*
        Q   AGR see UNM Maria child-AGR   yesterday
        ('Did Maria see a child of yours yesterday?') *[*3 > 2]*
    b. **Ha fåhan si   Jose karetå-ña.*
         AGR buy   UNM Jose car-AGR
        ('Jose bought a car of hers [because he felt sorry for her].')
        [*non-pro > pro]
    c. **Ti ha apåpasi i   espitåt infitmerå-ña siha.*
         not AGR pay.PROG the hospital nurse-AGR   PL
        ('The hospital is not paying its nurses.') *[*inan > anim]*

(23a) is ungrammatical because a third person subject is paired with a second person possessor of the direct object. (23b) is ungrammatical because a non-pronoun subject is prepared with a third person animate pronoun that is the possessor of the direct object. (As expected, this example is licit if the pronoun has a reflexive interpretation.) (23c) suggests that in such cases, not only the possessor but the entire possessive DP matters. This clause seems to be ungrammatical because the bare possessive direct object with which the inanimate subject is paired happens to be animate. (Even though the possessor of this direct object is reflexive, the clause is not licit. Note that it is not problematic that the possessor is inanimate, since Chamorro allows inanimate possessors elsewhere.)

    Importantly, clauses with bare possessive direct objects do *not* involve externalization of the possessor as a direct object, either via movement or via initial merge. If the possessor *were* a direct object, it should pattern like a direct object for morphosyntactic purposes. When pronominal, it should be realized as a weak pronoun. When it has undergone wh-movement, the verb should be inflected for objective Wh-Agreement (see Chung 1998). But neither of these is possible.

(24) *No realization as a weak pronoun*
    a. *Ha hulus (*yu') patås-su.*
        AGR rub   me   foot-AGR
        'He rubbed my foot.'
    No objective Wh-Agreement
    b. **Håyi in-areklåm-mu   karetå-ña?*
        who?   WH[OBJ]-fix-AGR car-AGR
        ('Who did you fix a car of?')

c. *Håyi   un   arekla   karetå-ña?*
   who?   AGR   fix   car-AGR
   'Who did you fix a car of?'

These patterns reveal that the possessors in (24) are not Case-licensed by small v. The standard assumption is that they are instead Case-licensed by the D of the possessive DP. But then T's ability to probe for multiple Agree, either alone or in tandem with small v, must extend well beyond its reach for Case licensing.

8   Interaction with morphology

Third and finally, the person-animacy effects do not constrain the pairings of subject and direct object across the board. Instead, these effects are limited to transitive clauses whose subject-predicate agreement is chosen from the default agreement paradigm in (8). Clauses whose agreement has some other, more specialized morphological realization do not exhibit the effects (Chung 1998: 199-202). In particular:

(i) A few transitive psychological verbs (e.g. *ga'ña'-* 'prefer', *ga'o-* 'prefer', *gusto-* 'enjoy', and *ya-* 'like') exceptionally require their subject to be cross-referenced by possessor-noun agreement rather than subject-predicate agreement. Clauses formed from these verbs do not show person-animacy effects, as can be seen from (25).

(25) *Transitive verbs with possessor-noun agreement*
  a. *Ga'nañ-**ña** hao i   ma'estra kini håyi.*
     prefer-AGR   you the teacher than anyone
     'The teacher prefers you to anyone else.' *[3 > 2]*
  b. *Ti   ya-**ña**   hao i   nana.*
     not like-AGR   you the mother
     'The mother does not like you [because you are not suitable for her daughter].' (CD, entry for *apropósitu*) *[3 > 2]*

(ii) Although intransitive infinitives show subject-predicate agreement via the realis forms in (8), transitive infinitives do not; instead, they are inflected with the invariant infix *-um-*. Clauses formed from transitive infinitives do not show person-animacy effects.

(26) *Transitive infinitives*
  a. *Esta   o'sun   i   che'lu-hu   s**um**uguni hamyu todus*
     already AGR.bored the sibling-AGR INF.drive you.PL all
     'My brother is tired of driving all of you
     para   i   lanchu.
     To   the farm
     to the farm.' *[3 > 2]*

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b. *Para u påra si Rosa kumassi hao.*
   FUT AGR stop UNM Rosa INF.tease you
   'Rosa is going to stop teasing you.' *[3 > 2]*

(iii) When the subject of a transitive clause undergoes wh-movement, the verb is inflected for the nominative form of Wh-Agreement. Nominative Wh-Agreement is overtly realized in the realis mood, as the invariant infix *-um-*, which supersedes the normal subject-predicate agreement. When this special agreement occurs, the clause does not show person-animacy effects.

(27) *Questions of the subject with overt Wh-Agreement*
   a. *Håyi **um**-ayuda hao?*
      who? WH[NOM]-help you
      'Who helped you?' *[3 > 2]*
   b. *Håyi **bum**isita siha nigap?*
      who? WH[NOM].visit them yesterday
      'Who visited them yesterday?' *[non-pro > pro]*
   c. *Håfa **mu**-na'kåti i patgun?*
      what? WH[NOM]-make.cry the child
      'What made the child cry?' *[inan > anim]*

In contrast, nominative Wh-Agreement is not overtly realized in the irrealis mood, and the clause shows normal subject-predicate agreement. In such clauses, the person-animacy effects re-emerge.

(28) *Questions of the subject with no overt Wh-Agreement*
   a. **Håyi para u ayuda hao?*
      who? FUT AGR help you
      ('Who is going to help you?') *[*3 > 2]*
   b. **Håyi para u konni' siha para iya siha?*
      who? FUT AGR take them to LOC them
      ('Who is going to take them to their place?') *[*non-pro > pro]*
   c. **Håfa para u na'kåti i patgun?*
      what? FUT AGR make.cry the child
      ('What is going to make the child cry?') *[*inan > anim]*
   d. *Håyi para u kåcha' i niyuk?*
      who? FUT AGR husk the coconut
      'Who will husk the coconut?' (CD, entry for *kåcha'*) *[anim > inan]*
   e. *Håyi para u pula' gui'?*
      who? FUT AGR undress himself
      'Who is going to undress himself?' *[non-pro > refl pro]*

The strategy usually employed to get around the ungrammaticality of (28a-c) is to question the agent of the corresponding passive clause instead (Chung 1989).

(29) *Questions of the passive agent*
    a. *Håyi   para   un   in-ayuda?*
       who? FUT   AGR PASS-help
       'Who are you going to be helped by?'
    b. *Håyi   para   u   fan-kinenni'   siha para iya   siha?*
       who? FUT   AGR AGR-PASS.take PL   to   LOC them
       'Who are they going to be taken to their place by?'
    c. *Håfa   para   u   nina'kåti   i   patgun?*
       what? FUT   AGR PASS.make.cry the child
       'What is the child going to be made to cry by?'

The contrast between (27) and (28) is telling. In both types of questions, the subject is a wh-trace that is Case-licensed by T. But only the questions in (28)—whose subject-predicate agreement is realized in the normal way—exhibit person-animacy effects.

In short, the person-animacy effects are bled by realizations of morphological agreement that are not chosen from the default agreement paradigm. This is strong evidence that these effects should not be explained in terms of multiple Agree or any other operation(s) of narrow syntax. The operations of narrow syntax are universal, highly general, and sensitive to syntactic structure alone, so they will rule out the offending subject-object combinations *whatever their morphological realization*. The problem is that this is not the desired outcome here.

9   A morphological analysis

I conclude that a multiple Agree analysis is inappropriate for person-animacy effects in Chamorro. These effects deserve to be accounted for not in narrow syntax, but rather in the morphology. Such a conclusion is compatible with a theory in which Agree retains its original minimalist design, and what is expanded to handle this and other language-specific morphosyntactic patterns is the *morphological* toolkit.

What might a morphological analysis of the Chamorro facts look like? In the rest of this section, I sketch an analysis that implements the person-animacy effects post-syntactically, via conditions on spell-out. It comes in two versions, which take different stances on the issue of where and how the feature sharing encoded by morphological agreement occurs. (On agreement as feature sharing, see e.g. Frampton & Gutmann 2000.)

The analysis begins by making the following assumptions. First, Case licensing is accomplished via Agree in narrow syntax. Second, reflexives and other bound pronouns originate in narrow syntax as indices with no phi-features, as proposed by Kratzer (2009), Reuland (2012), and others. Third, in Chamorro the "phi-features" are [Author], [Participant], [Plural], [Pronoun], and [Animate]. Fourth, whatever the details (see below), feature sharing occurs in such a way that the feature bundles shared by different DP's with a given head are carefully

distinguished from one another (see Anderson 1992, Deal 2010, and others).

In a *morphology-only* version of the analysis, the sharing of phi-features is accomplished by morphological agreement operations that operate post-syntactically (as proposed by e.g. Bobaljik 2008). These agreement operations can apply to heads that stand in a c-command relation or in a spec-head relation (Chung, to appear), and they need not respect the locality imposed by the PIC (Legate 2005, Kramer 2009). In Chamorro, one such agreement operation causes T and the subject to share phi-features (henceforth, φ-subj). A second agreement operation causes small v and the direct object to share phi-features (φ-obj). Finally, a third agreement operation causes small v and the possessor of a bare possessive direct object to share phi-features (φ-possr).

In contrast, in a *syntax-assisted* version of the analysis, feature sharing is accomplished in narrow syntax by Agree, in the familiar way.[3] For Case licensing reasons, Agree must hold between T and the subject, and between small v and the direct object. As a consequence, T and the subject share φ-subj; small v and the direct object share φ-obj. In addition, we must assume that in Chamorro, for reasons that are unrelated to Case licensing, Agree must hold between the possessor of a bare possessive direct object and some c-commanding head (see section 7). I will assume that this c-commanding head is small v. In addition, to distinguish the possessors of bare possessives from the possessors of other DP's, I will assume that there is a higher A-bar specifier position in the functional superstructure of DP that the possessor raises to only when D is null. Once this raising occurs, small v and the possessor lie within the same phase, Agree holds, and small v and the possessor share φ-possr.[4]

(Very interestingly, Chamorro offers some independent evidence for the existence of a higher A-bar specifier position within DP. Within DP, the possessor normally occurs to the right of the possessed noun. But exactly when a bare possessive DP serves as a direct object or an intransitive subject, its possessor can appear at the left edge of DP. The left-edge possessor is underlined, and the possessive DP is enclosed in brackets, in the examples below.

(30) *Possessor at the left edge of a bare possessive DP*
    a. *Hu   li'i' [i   patgun   pinadesi-ña].*
       AGR   see   the child   suffering-AGR
       'I saw the little girl's suffering.' (CD, entry for *patcha*)
    b. *Bunitu   [i   oråriu-n   i   rilos   kulot-ña].*
       AGR.nice the hour.hand-L the watch color-AGR
       'The hour hand of the watch has a nice color.' (CD, entry for *oråriu*)

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[3] Thanks to Amy Rose Deal and Ruth Kramer for pointing out this possibility and offering detailed commentary about how the analysis could be implemented.

[4] In Chamorro, DP's headed by the null indefinite article are composed by Restrict (Chung & Ladusaw 2004). Amy Rose Deal observes that there is a parallel here with Szabolcsi's (1994) claim that a possessor must extract if the possessive DP is non-specific.

Chamorro is a language in which A-specifiers occur to the right but A-bar specifiers occur to the left. Given this, the pattern in (30) strongly suggests that there is an A-bar specifier position within DP that the possessor can occupy only when D is null. Observe further that the possessor can undergo wh-movement in Chamorro only out of bare possessive DP's that serve as direct objects or intransitive subjects. This could be taken to indicate that C can Agree with a possessor in the A-bar specifier position of DP, but cannot probe further into DP to Agree with e.g. possessors lodged in the specifier of D. Many questions must be settled, however, before this particular analytic path can be pursued with confidence. The ultimate analysis of these patterns remains a project for the future.)

Returning to the main point: In either version of the analysis, T's features include φ-subj, and small v's features include φ-obj and φ-possr, at the point when spell-out is reached. Observe now that in Chamorro, predicates that are verbs or adjectives exhibit subject-predicate agreement, but predicates that are nouns or prepositions do not.

(31) *Nominal predicate / No subject-predicate agreement*
    Para låhi i   patgon-ña si   Matt.
    FUT   man the child   UNM Matt
    'Matt's child is going to be a boy.'

Given that all clauses are projected from T, the absence of morphological agreement in (31) suggests that this agreement is spelled out not on T but rather on small v (and on the comparable functional head above predicate adjectives, i.e. small a). Further, recall from (8) that the agreement morphemes also encode mood. To handle this, I propose that feature sharing occurs between T and small v, either directly or as a consequence of morphological fusion, post-syntactic head-to-head movement, or some similar operation. The result will be that T and small v share the features [Irrealis], φ-subj, φ-obj, and φ-possr, as well as Wh-Agreement features (if any).

I now claim that the person-animacy effects are implemented in the spell-out of agreement on small v, which proceeds in several stages. First, the more specialized realizations of agreement described in Section 8 are spelled out. For instance, nominative Wh-Agreement is spelled out by the rule in (32).

(32) *Spell-out of nominative Wh-Agreement*
        v
    [*nom*Wh-Agr] → -um-
    [-Irrealis]
    [φ-subj]

Next, realization rules apply whose ultimate effect is to cancel the derivation when small v bears certain combinations of phi-features (cf. Chomsky 1995).

These are the rules that implement the person-animacy effects. I assume that these rules spell out agreement on small v as *, a diacritic that causes the derivation to abort. (For an earlier version of this analysis, see Chung 1998.)

(33) a. *Abortive spell-out: *3 > 2*

   v
   [-Participant]_{subj}   → *
   [-Author, +Participant]_{obj OR poss}

 b. *Abortive spell-out: *Non-pronoun > 3 animate pronoun*

   v
   [-Pronoun]_{subj}   → *
   [-Author, +Pronoun, +Animate]_{obj OR poss}

 c. *Abortive spell-out: *Inanimate > animate*

   v
   [-Animate]_{subj}   → *
   [-Author, +Animate]_{obj OR poss}

The fact that these rules explicitly mention [-Author] will cause them to ignore first person direct objects and first person possessors of objects.

 Third, once these realization rules have operated, minimal pronouns can inherit their phi-features from their antecedents.

 Fourth and finally, the default forms of subject-predicate agreement are realized, via spell-out rules that are straightforward.

(34) *Representative spell-out rules for subject-predicate agreement*

 a. v
   [-Author, +Participant, -Plural]_{subj} → un

 b. v
   [-Author, -Participant, -Plural, -Irrealis]_{subj} → ha
   [φ-obj]

 In overall spirit, this analysis is in line with other morphological analyses of agreement, case, and subject-object interactions, including Scancarelli (1987) on Cherokee, Wiltschko (2008) on Halkomelem Salish, and Deal (2010) on Nez Perce. It also harmonizes well with Sturgeon et al.'s (to appear) account of PCC effects in Czech in terms of linearization constraints.

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10 Conclusion

I observe without irony that the analysis of person-animacy effects just presented is stipulative. Such an analysis puts the stipulation where it belongs—in the morphology.

It should be noted that the person-animacy effects in Chamorro exhibit cross-speaker variation, in the following sense: although fluent speakers of Chamorro flawlessly adhere to these effects in natural discourse contexts, they differ in the extent to which they can violate them in elicitation. This can be seen as an effability issue (Frampton 2001). The vast majority of Chamorro speakers are bilingual in English. All the subject-object combinations that are unsayable in Chamorro are sayable in English—a fact that emerges blatantly in elicitation. The ability of individual speakers to find that they can say the unsayable in such circumstances is, I believe, more plausibly handled by a morphological account of person-animacy effects than by an account that invokes the universal operations of narrow syntax.

At the same time, the account proposed here raises further questions. In this account, the person-animacy effects result from morphological gaps in the paradigm of subject-predicate agreement: for certain combinations of features, small v simply has no legal spell-out. The question of why paradigmatic gaps arise and persist has been the subject of much recent research (notably including Albright 2012, to appear, and Daland *et al.* 2007). This research is principally concerned with gaps that are lexically arbitrary, in that they occur only for certain words of the relevant lexical category; e.g. the absence of a past participle form for *dive* in American English. The morphological gaps proposed here for Chamorro are not lexically arbitrary in this sense, since the person-animacy effects show up for all words that are transitive verbs. It is an open question whether morphological gaps of this type can be explained by approaches that have been proposed to handle the origin and persistence of lexically arbitrary gaps, e.g. the learned ineffability of Daland *et al.* This question must ultimately be addressed for the account proposed here to remain viable.

To sum up: In the conception of the minimalist program advocated here, Agree retains its minimalist design, and the syntax remains constructive. The Chamorro person-animacy effects and comparable subject-object interactions, which show considerable variation across languages (Aissen 1999), are implemented in the morphology, via destructive means.

In such a conception, morphological agreement often mirrors Agree. But this too is not surprising. We already know that e.g. in Chinese, the scope relations of quantifiers must mirror their hierarchical relations in the syntax (Huang 1982). The fact that morphological agreement often mirrors Agree can be seen as another instance in which parallelism across the different components of grammar is not only allowed, but favored.

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References

Aissen, J. 1997. On the syntax of obviation. *Language* 73.705-750.

Aissen, J. 1999. Markedness and subject choice in Optimality Theory. *Natural Language and Linguistic Theory* 17.673-711.

Albright, A. 2012. Modeling the origin and spread of morphological paradigm gaps. Paper delivered at the Parasession on Historical Phonology and Morphology, CLS 48.

Albright, A. To appear. Lexical and morphological conditioning of paradigm gaps. In *When nothing wins: Modeling ungrammaticality in OT*, ed. by C. Rice. Equinox Publishing.

Anderson, S. R. 1992. *A-Morphous Morphology*. Cambridge University Press.

Alexiadou, A., & E. Anagnostopoulou. 2006. From hierarchies to features: person splits and direct-inverse alternations. In *Agreement Systems*, ed. by C. Boeckx, 41-62. Amsterdam: John Benjamins.

Anagnostopoulou, E. 2005. Strong and weak person restrictions: a feature checking analysis. In *Clitics and Affix Combinations*, ed. by L. Heggie & F. Ordóñez, 199-235. Amsterdam: John Benjamins.

Béjar, S., & M. Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40.35-73.

Bobaljik, J. 2008. Where's phi? agreement as a post-syntactic operation. In *Phi-Theory: Phi Features across Interfaces and Modules*, ed. by D. Harbour, D. Adger, & S. Béjar, 295-328. Oxford University Press.

Bruening, B. 2005. The Algonquian inverse is syntactic: binding in Passamaquoddy. Ms., University of Delaware.

Chomsky, N. 2001. Derivation by phase. In *Ken Hale: a life in language*, ed. by M. Kenstowicz, 1- 52. Cambridge, MA: MIT Press.

Chung, S. 1984. Identifiability and null objects in Chamorro. In *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*, ed. by C. Brugman *et al*., 116-130. Berkeley, CA: Berkeley Linguistics Society.

Chung, S. 1989. On the notion "null anaphor" in Chamorro. In *The Null Subject Parameter*, ed. by O. Jaeggli & K. Safir, 143-184. Dordrecht: Kluwer.

Chung, S. 1998. *The Design of Agreement: Evidence from Chamorro*. University of Chicago Press.

Chung, S. To appear. The syntactic relations behind agreement. In *Diagnosing Syntax*, ed. by N. Corver & L. Cheng. Oxford University Press.

Chung, S., & W. A. Ladusaw. 2004. *Restriction and Saturation*. Cambridge, MA: MIT Press.

Daland, R., A. D. Sims, and J. Pierrehumbert. 2007. Much ado about nothing: A social network model of Russian paradigmatic gaps. In *Proceedings of the 45th Annual Meeting of the Association for Computational Linguistics in Prague, Czech Republic, June 24-29, 2007*.

Deal, A. R. 2010. Ergative case and the transitive subject: a view from Nez Perce. *Natural Language and Linguistic Theory* 28.73-120.

Frampton, J., & S. Gutmann. 2000. Agreement is feature sharing, version 2. Ms., Northeastern University.

Frampton, J. 2001. The *amn't* gap, ineffability, and anomalous *aren't*: against morphosyntactic competition. In *CLS37: The Panels 2001*. Proceedings from the Parasessions of the Thirty-seventh Meeting of the Chicago Linguistic Society

Volume 37-2.

Hiraiwa, K. 2000. Multiple Agree and the defective intervention constraint in Japanese. *MIT Working Papers in Linguistics* 40.67-80.

Huang, C.-T. J. 1982. *Logical Relations in Chinese and the Theory of Grammar*. Doctoral dissertation, MIT.

Kramer, R. 2009. *Definite Markers, Phi-Features, and Agreement: A Morphosyntactic Investigation of the Amharic DP*. Doctoral dissertation, University of California, Santa Cruz.

Kratzer, A. 1998. More structural analogies between pronouns and tenses. In *Proceedings of Semantics and Linguistic Theory 8*, ed. by D. Strolovitch & A. Lawson, 92-109. Ithaca, NY: CLC Publications.

Kratzer, A. 2009. Making a pronoun: fake indexicals as windows into the properties of pronouns. *Linguistic Inquiry* 40.187-237.

Legate, J. 2005. Phases and cyclic agreement. In *Perspectives on Phases*, ed. by M. McGinnis & N. Richards. MIT Working Papers in Linguistics 49.147-156.

Nevins, A. 2007. The representation of third person and its consequences for person-case effects. *Natural Language and Linguistic Theory* 25.273-313.

Nevins, A. 2011. Multiple agree with clitics: person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29.939-971.

Preminger, O. 2011. *Agreement as a Fallible Operation*. Doctoral dissertation, Massachusetts Institute of Technology, Cambridge, MA.

Reuland, E. 2012. Universals and variation: encoding anaphoric dependencies. Ms., Utrecht Institute of Linguistics OTS.

Rivero, M. L. 2004. Spanish quirky subjects, person restrictions, and the Person Case Constraint. *Linguistic Inquiry* 35.494-502.

Scancarelli, J. 1987. *Grammatical Relations and Verb Agreement in Cherokee*. Doctoral dissertation, UCLA.

Sigurðsson, H. Á. 2006. Agree in syntax, agreement in signs. In *Agreement System*s, ed. by C. Boeckx, 201-237. Amsterdam: John Benjamins.

Sturgeon, A., B. Harizanov, M. Polinsky, E. Kravtchenko, C. G. Gallo, L. Medová, & V. Koula. To appear. Revisiting the Person-Case Constraint in Czech. In *Proceedings of FASL 19*.

Szabolcsi, Anna. 1994. The noun phrase. In: *Syntax and Semantics 27: The Syntactic Structure of Hungarian*, ed. by F. Kiefer & K. E. Kiss, 179-275. New York: Academic Press.

Wagers, M., S. Chung, & M. F. Borja. 2012. Wh-Agreement and the timing of unbounded dependency formation. Paper delivered at the Timing of Grammar Workshop, GLOW 35, Potsdam, Germany.

Wiltschko, M. 2008. Person hierarchy effects without a person hierarchy. In: *Agreement Restrictions*, ed. by R. D'Alessandro, S. Fischer, & G. H. Hrafnbjargarson, 281-314. Berlin: Mouton de Gruyter.