THE MORPHOSYNTAX OF IMPERATIVE AGREEMENT IN AMHARIC: A HAPLOLOGY ANALYSIS

Ruth Kramer
Georgetown University

ABSTRACT: Discontinuous agreement has been the focus of considerable research, especially within the Afroasiatic language family. However, most previous work has focused on how discontinuous agreement is generated and has relied on data from verbs with relatively basic tense, aspect and mood. In this paper, I investigate a different kind of discontinuous agreement puzzle in an atypical kind of verb, namely, why and how the agreement prefix (but not the agreement suffix) is lacking from imperative verbs in Amharic. I argue that the agreement prefix undergoes morphological haplology because it repeats the second person features found in the imperative head. I then demonstrate how a haplology approach decides between two different analyses of discontinuous agreement: it furnishes evidence against a Linearization analysis (Harbour 2008a, 2016, this issue) and in favor of a Metathesis analysis (Hewett 2022, this issue). Overall, this paper develops a novel approach to imperative inflection, supports a Metathesis approach to discontinuous agreement, and advances our understanding of morphological haplology.

KEYWORDS: morphology, syntax, imperative, agreement, Amharic, distributed morphology

1 INTRODUCTION[1]

Some verbs in Amharic display discontinuous subject agreement (Leslau 1995:300, Girma Halefom 1994: Ch. 5, and many others). For example, in the imperfective verb in (1), a prefix *tɨ-* and a suffix *-i* simultaneously express agreement with the 2nd person feminine singular subject.[2]

(1) *tɨ-* *säbr-* *i*
2.S- break.IPFV- FSG.S
'You (fem. sg.) break, will break' (Leslau 1995:301)[3]

Discontinuous agreement poses a problem for the syntax-morphology interface: how does a single bundle of phi features surface as two separate exponents? Accordingly, discontinuous

[1] Many thanks to two reviewers and to Keffyalew Gebregziabher for extensive and beneficial comments. For helpful discussion, many thanks to Matt Hewett, Bryce Huebner, Jeff Punske, Paul Portner, Chris Reintges, Hannah Sande, Elizabeth Zsiga and audience members at NACAL 46, PLC 43, UMD College Park, the University of Göttingen, the University of Chicago, and the Workshops on Perspectives on Templatic Morphology and on Prefixes and Suffixes in Semitic. The last and most important thanks of all go to Meriem Tikue and Keffyalew Gebregziabher for their insights about the Amharic data.

[2] Strictly speaking, (1) is a bound form and requires an auxiliary or complementizer to be licit. I abstract away from this here; see Section 2.

[3] Gloss abbreviations follow the Leipzig Glossing Conventions except JUSS – jussive, .O – object marker, .S - subject agreement.

agreement across languages has been the focus of considerable research (e.g., Noyer 1992, Halle 1997, Trommer 2003, Harbour 2007, 2008ab, Campbell 2012), especially within the Afroasiatic language family (Shlonsky 1989, Girma Halefom 1994, Degif Petros Banksira 2000, Tourabi 2002, Trommer 2008, Harbour 2008ab, Hewett 2022, and the other papers in this special issue, among others).

Most previous work on discontinuous agreement has focused on how discontinuous agreement is generated and has relied on data from verbs with relatively basic tense, aspect and mood. In this paper, I investigate a different kind of puzzle in an atypical kind of verb. Specifically, this paper examines why and how the agreement prefix (but not the agreement suffix) is lacking from imperative verbs in Amharic. For example, in (2), the imperative verb lacks the 2nd person prefix *ti-* found on comparable verb forms, but it still has the feminine singular suffix *-i*.

(2) *mäskot-u-n* *sɨbär-**i*** **Addressee is Fem Sing**
window-DEF-ACC break.IMP-**FSG**.S
'Break the window!'[4]

To address this puzzle, I propose that the agreement prefix undergoes morphological haplology because it repeats the second person features found in the imperative head. I demonstrate how a haplology approach decides between two different analyses of discontinuous agreement: it furnishes evidence against a Linearization analysis (Harbour 2008a, 2016, this issue) and in favor of a Metathesis analysis (Hewett 2022, this issue). In terms of its broader implications, this paper develops a novel approach to imperative inflection, supports a Metathesis approach to discontinuous agreement and advances our understanding of morphological haplology in general (see e.g., Nevins 2012, Neeleman and van de Koot 2017).

The remainder of the paper is structured as follows. Section 2 provides some background on the theoretical framework adopted in this paper and on Amharic verbal morphology. Section 3 dives into the data on imperative agreement and develops the haplology analysis. In Section 4, I show how evidence from contextual allomorphy supports the Metathesis analysis of discontinuous agreement. Section 5 concludes.

2 BACKGROUND

This section lays out some crucial background. First, I briefly review the theoretical framework used here (Section 2.1). Then, I provide some Amharic-specific background (Section 2.2) on the morphology of discontinuous subject agreement (Section 2.2.1) and on clause structure (Section 2.2.2).

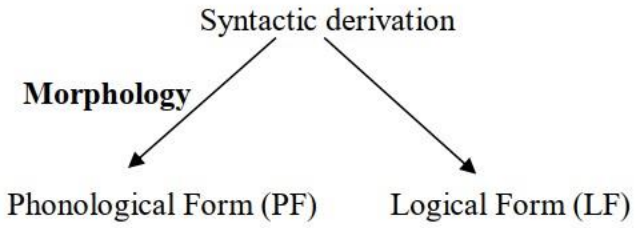
2.1 Distributed Morphology

The morphological analysis in this paper is couched in the framework of Distributed Morphology (DM henceforth; Halle and Marantz 1993, and many others). One of the main assumptions of DM is that all morphological operations occur **after** the syntax on the PF branch.

[4] All examples without a citation are from elicitation sessions conducted by the author with two native speakers of Amharic (the sessions were conducted with each speaker independently).

This is represented in the model of the grammar in Figure 1, where morphological operations are placed on the PF branch after the syntactic derivation has finished.

Figure 1: The Grammar



Morphological operations at PF include affixation and cliticization[5] as well as operations that alter the structure/features provided by the syntax: deleting features (Impoverishment), creating portmanteaux (Fusion), separating features into several nodes (Fission), and several others including the haplology operation proposed in Section 3. PF is also where linearization occurs, as detailed in Section 4.

Another key assumption of DM is that morphophonological material is not present in the syntax but instead is inserted post-syntactically (Late Insertion; see Kalin and Weisser to appear for extensive discussion). Syntactic terminal nodes are either bundles of features or category-neutral roots, and these bundles or roots are matched with morphophonological material (i.e., exponed/realized) at PF according to the Subset Principle (Halle 1997; an exponent must match all or a subset of the features on a terminal node). Following DM practice, I refer to the process of matching syntactic terminal nodes with exponents as Vocabulary Insertion and the exponents themselves as Vocabulary Items (strictly speaking, a Vocabulary Item is a pairing of morphosyntactic features and morphophonological material). Vocabulary Insertion will play a large role in the discussion of contextual allomorphy in Section 4.

That much suffices as background for this paper, but for further details about Distributed Morphology, see Halle and Marantz 1993, Harley and Noyer 1999, Embick 2015 and Bobaljik 2017, among others.

2.2 Amharic Verbal Morphology

2.2.1 Discontinuous Agreement in Amharic

Most (if not all) main verbs and many auxiliaries in Amharic display subject agreement. The features involved in agreement are person (3), number (4)a, and gender (4)b, with the typical feature values for an Ethiosemitic language (Meyer 2016). I decompose person features into [PARTICIPANT] and [AUTHOR] in order to capture certain syncretisms (see (5)) in line with much previous work on the morphology of Semitic agreement (see e.g., Halle 1997, Harbour 2008b).

(3) **Person Features**
1st person: [+PARTICIPANT][+AUTHOR]
2nd person: [+PARTICIPANT][-AUTHOR]
3rd person: [-PARTICIPANT][-AUTHOR]

[5] Affixation and cliticization may also occur in the syntactic derivation as e.g., head movement.

(4) a. **Number Features** (Kramer 2016)
Singular: [-PL]
Plural: [+PL]
b. **Gender Features** (Kramer 2015)
Masculine: [-FEM]
Feminine: [+FEM]

Like in many Semitic languages, subject agreement is prefixal/discontinuous for imperfective verbs in Amharic. The imperfective subject agreement paradigm is in Table 1; discontinuous agreement is indicated by shading.

Table 1:Amharic Simple Imperfective Subject Agreement
***säbbärä* 'break' (Leslau 1995:301)**

	Singular	**Plural**
1st pers	ɨ-säbr	ɨnnɨ-säbr
2nd pers	tɨ-säbr (m.)	tɨ-säbr-u
	tɨ-säbr-i (f.)	
3rd pers	yɨ-säbr (m.)	yɨ-säbr-u
	tɨ-säbr (f.)	

Discontinuous agreement is used for subjects that are 2nd person feminine singular, 2nd person plural and 3rd person plural. The Amharic imperfective agreement affixes are nearly identical in arrangement to other, well-studied Semitic languages like Modern Hebrew (Harbour 2008b:85) and Egyptian Arabic (Halle 1997:437). In particular, Harbour's 2008b analysis of Modern Hebrew subject agreement works well for Amharic subject agreement (see also Desalegn Workneh's 2017 analysis of Amharic subject agreement, which reaches mostly the same conclusions). Under this approach, the Vocabulary Items for imperfective subject agreement in Amharic are in (5).[6]

(5) a. ɨ ↔ [+PARTICIPANT],[+AUTHOR],[-PL] = 1st person singular
b. ɨnnɨ ↔ [+PARTICIPANT],[+AUTHOR],[+PL] = 1st person plural
c. i ↔ [-PL][+FEM] / [+PARTICIPANT][-AUTHOR] = Fem sg in 2nd person context
d. tɨ ↔ [-PL][+FEM] / [-PARTICIPANT] = Fem sg in 3rd person context
e. tɨ ↔ [+PARTICIPANT],[-AUTHOR] = 2nd person
f. yɨ ↔ [-PARTICIPANT],[-AUTHOR] = 3rd person
g. u ↔ [+PL] = Plural

The Vocabulary Items that play a large role later in the paper are the following: (5)e *tɨ* for 2nd person, (5)c *i* for feminine singular in a 2nd person context, and (5)g *u* for plural.

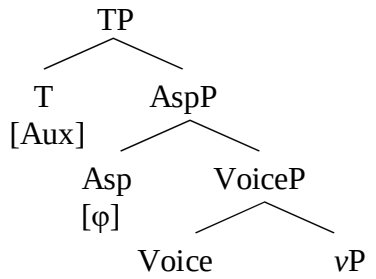
[6] Following Harbour 2008b, I treat the feminine singular *tɨ* (5)d and 2nd person *tɨ* (5)e as accidentally homophonous. Note also that the Vocabulary Items are not specified for prefix/suffix status, anticipating the analyses of discontinuous agreement discussed in Section 4. Finally, the *-ɨ* in *tɨ-* and *yɨ-* is likely epenthetic but it is included here for clarity.

2.2.2 Amharic Clause Structure

There has been a substantial amount of research on Amharic clause structure (see e.g., Girma Halefom 1994, Girma Demeke 2003, Baye Yimam 2004, 2006, Baker 2012ab, Baker and Kramer 2014, Baker 2014, Kramer 2014, Mulusew Asratie Wondem 2014, Desalegn Workneh 2020, 2022, to appear). This research has converged on the following results. First, subject agreement is on (high) Aspect (see e.g., Girma Demeke 2003:45). This is because aspect (imperfective vs. perfective) is the main conditioning factor for subject agreement.[7] Second, auxiliaries are in T because they mostly are used to convey tense (see e.g., Goldenberg 1964, Girma Demeke 2003, Baye Yimam 2006, Meyer 2016). Finally, VoiceP is fairly low (Desalegn Workneh 2020) for two reasons: voice morphology is retained in some non-finite forms (Leslau 1995:394) and voice morphology is closer to the root than subject agreement (Leslau 1995:468).

Putting all of these observations together, we arrive at (6), with auxiliaries in T, subject agreement on Asp, and VoiceP above the verbalizing projection *v*P:

(6)



I assume that (6) is correct henceforth and take it is a starting point for the discussion of the syntax of imperatives in the remainder of the paper.

One final and crucial observation is that verbal terminal nodes generally combine into one complex head in Amharic up to and including any complementizers (Baker and Kramer 2014). For example, in the embedded clause in (7), the verbal stem *mät't'a* includes the root, the subject agreement on Asp (null for this verb), as well as *v* and Voice (I do not take a stand on what functional head the vocalic pattern corresponds to in Amharic, but it is likely *v* and/or Voice). Importantly, the complementizer *ɨndä-* is also attached to the verbal stem.

(7) *[tɨnantɨnna bet-at/tʃ-ɨn **ɨndä**-mät't'a-∅] awk'-allä-hu*
yesterday house-our-ACC **COMP**-come.PFV-3MSG.S know.IPFV-AUX-1SG.S
'I know that he came to our house yesterday.' (Leslau 1995:743)

The attachment of the complementizer to the verbal stem respects the Head Movement Constraint: C does not attach to the verbal stem if there is an overt Aux in T (Baker and Kramer 2014:158).

Overall in Section 2.2, I have shown that Amharic has prefixal/discontinuous subject agreement in imperfective verbs, the Vocabulary Items for prefixal/discontinuous agreement are similar to other Semitic languages (5), the basic clause structure of Amharic is as in (6), and the verbal terminal nodes typically conglomerate into one complex head including complementizers.

[7] I also follow Girma Demeke in assuming that agreement is not discontinuous in the syntax; see Section 4.

3 IMPERATIVES: THE DISAPPEARING PREFIX

In Amharic imperatives, part of the discontinuous agreement goes missing, and in this section, I develop a haplology analysis of this "disappearance." Section 3.1 contains the key facts and identifies the puzzle. The next sections focus on analysis: Section 3.2 rules out a potential alternative analysis and Section 3.3 develops and presents evidence for the morphological haplology approach. Section 3.4 concludes.

3.1 Key Facts and the Puzzle

Imperatives in Amharic are formed by combining a consonantal root with the pattern associated with jussive verbs, i.e., [CCäC] for a typical triconsonantal verb (Bender and Hailu Fulass 1978:42-43, Leslau 1995:353).[8] Jussive verbs display prefixal/discontinuous agreement similar to imperfective verbs (Section 2.2.1), and they are used for hortatives and a few other mood-related contexts like deontic modality in questions (see Leslau 1995:347-353, Lehmann to appear). An example with a jussive verb is in (8).

(8) *mäskot-u-n* *lɨ-sbär* **Jussive**
window-DEF-ACC 1SG.S-break.JUSS
'Let me break the window / Should I break the window?'[9]

An example with an imperative verb is in (9), where the same pattern is used (along with an epenthetic vowel /ɨ/ to break up the initial consonant cluster; this is a regular phonological process in Amharic (Hudson 2001)):

(9) *mäskot-u-n* *sɨbär-∅!* **Addressee is Masc Sing**
window-DEF-ACC break.IMP-**MSG.S**
'Break the window!'

As (9) indicates, subject agreement is marked by suffixes in imperatives. If the subject is masculine singular, the agreement marker is null, if the subject is feminine singular it is *-i* ((10)a) and if the subject is plural it is *-u* ((10)b).

(10) a. *mäskot-u-n* *sɨbär-**i**!* **Addressee is Fem Sing**
window-DEF-ACC break.IMP-**FSG**.S
'Break the window!'

[8] Jussives and imperatives are in complementary distribution depending on the person of the subject: a 2nd person subject leads to an imperative, whereas a 1st or 3rd person subject leads to a jussive. Since they also use the same pattern/template, imperatives and jussives could be analyzed together as a single paradigm (cf. Bender and Hailu Fulass 1978, Meyer 2011, Lehmann to appear). However, I do not pursue this analysis here because there are many unanswered questions about the syntax/semantics of jussives and about the relationship between jussives and imperatives that would take us too far afield to investigate (e.g., it is unclear why the jussive is used in certain mood-related contexts, why 2nd person affirmative jussives are ineffable even in non-command contexts, etc.).
[9] Rising intonation is necessary for the question interpretation.

b. *mäskot-u-n* *sɨbär-u!* **Addressee is Plural**
window-DEF-ACC break.IMP-**PL**.S
'Break the window!'

The agreement markers on imperatives are identical to the second person subject agreement suffixes on imperfective verbs (Table 2).

Table 2: Imperative vs. Imperfective 2nd Pers Agreement for *säbbärä* 'break' (Leslau 1995)

	Sg		**Pl**
	M	**F**	
Imperative	sɨbär-∅	sɨbär-**i**	sɨbär-**u**
Imperfective	tɨ-säbr-∅	tɨ-säbr-**i**	tɨ-säbr-**u**

However, unlike in imperfective verbs, the 2nd person subject agreement prefix *tɨ-* is ungrammatical in imperatives, (11):

(11) a. **mäskot-u-n* *tɨ-sbär-∅!*
window-DEF-ACC 2.S-break.IMP-MSG.S
Intended: 'Break the window!'
b. **mäskot-u-n* *tɨ-sbär-i!*
window-DEF-ACC 2.S-break.IMP-FSG.S
Intended: 'Break the window!'
c. **mäskot-u-n* *tɨ-sbär-u!*
window-DEF-ACC 2.S-break.IMP-PL.S
Intended: 'Break the window!'

The agreement prefix remains ungrammatical even if the imperative has an overt 2nd person subject, (12):

(12) *antä* *mäskot-u-n* *(*tɨ-)sɨbär-∅!*
you.MSG window-DEF-ACC (*2.S-)break.IMP-MSG.S
'You break the window!'

This 'disappearance' of the agreement prefix in imperatives, especially in contrast to the 'retention' of the agreement suffix, is the central puzzle of this paper.

While it is well known that imperatives tend to have less inflection than other verbs (see e.g., Zanuttini 2008:189, Zhang 1990:151, van der Wurff 2007:41-42 for cross-linguistic perspectives; Hale 1973 on Warlpiri, Bat-El 2002, Faust and Berrebi 2022 on Hebrew; Soltan 2007 on Modern Standard Arabic), the morphology of imperatives is an underdeveloped area of inquiry (van der Wurff 2007), especially compared to the syntax/semantics of imperatives. Among other goals, this paper aims to help deepen our morphological understanding of imperative structure by focusing on why and how agreement prefixes in Amharic imperatives are prohibited. First, I rule out a potential syntactic analysis of this effect in Section 3.2.

3.2 A False Start: Subject Clitic Analysis

One of the hallmarks of imperatives across languages is that they have null subjects (see e.g., Zhang 1990, Zanuttini 2008). In Amharic, then, a reasonable hypothesis would be that the agreement prefix **is** in fact the subject in the sense that it is a DP that serves as the external argument of the predicate. Therefore, the "agreement prefix" would be lacking from Amharic imperatives for the same reason that DP subjects are null in imperatives generally. This analysis is suggested in Girma Halefom 1994 (Chapter 5).

However, it is unlikely that agreement prefixes are DP subjects generally because they co-occur with overt DP subjects, including second person subjects like in the embedded clause in (13).

(13) *[**antä*** *~~i~~ndämm~~i~~-**tt~~i~~**-l-äw]* *astfäggari* *näw?*
you.MSG COMP-**2.S**-say.IPFV-3MSG.O difficult is.it
'Is it as difficult as you say it is?' (Leslau 1995:783)

Even if it is granted that agreement prefixes are not DP subjects, could they actually be subject clitics, doubling the DP subject? This is also unlikely, since they behave quite differently from object markers which have been argued to be doubled clitics (Kramer 2014). Kramer shows that the distribution of the object markers is clitic-like in that it is semantically conditioned, there is no default form (see Preminger 2009 on this diagnostic), object markers are morphologically invariable with respect to verbal categories (aspect, mood, tense, etc.; see Nevins 2011 on this diagnostic), and the object markers are syncretic with determiners and other D-elements along multiple dimensions like object clitics in e.g., Romance languages. The subject prefixes behave differently in every respect. First, they are obligatory in all contexts (except the imperative), i.e., they are not semantically conditioned. This is shown for a jussive verb in (14).

(14) **mäskot-u-n* *s~~i~~bär* **Jussive**
window-DEF-ACC break.JUSS
Intended: 'Let me break the window. / Should I break the window?'

Also, the agreement prefixes have an overt default form, 3rd person masculine singular, used for e.g., weather predicates and expletive subjects, as in (15):

(15) ***y~~i~~**-zänb* ***y~~i~~**-mäsl-all*
3.S-rain.IPFV 3.s-seem.IPFV-AUX.3MSG.S
'It seems that it will rain.' (Leslau 1995:307)

The agreement prefixes also vary depending on verbal inflectional features. For example, the first singular prefix has different allomorphs in the imperfective (16)a and in the jussive (16)b.

(16) a. ***~~i~~**-säbr*
1SG.S-break.IPFV
'I break, will break'

b. ***li**-sbär*
1SG.S-break.JUSS
'Let me break'

Finally, the subject prefixes do not formally resemble any D elements, as shown in (17). Syncretisms across all the D elements are bolded, and across object clitics and possessive pronouns are underlined.

(17) a. Subject prefixes: *i, lɨ-, ɨnnɨ-, tɨ-, yɨ-*
b. D elements
i. Definite determiners: ***-u, -wa***
ii. Object clitics: *-ñ, -h/-ʃ,* ***-u****, -at, -n, -atʃtʃɨhu, -atʃtʃäw*
ii. Possessive pronouns: *ñ, -h/-ʃ,* ***-u, -wa****, -atʃtʃɨn, -atʃtʃɨhu, -atʃtʃäw*

Among the D elements, the 1st person singular *-ñ*, 2nd person singular *-h/-ʃ*, 2nd person plural *-atʃtʃɨhu* and 3rd person plural *-atʃtʃäw* are identical for both object clitics and possessive pronouns. The definite determiners, object clitics and possessive pronouns all are realized as *-u* when they are (3rd person) masculine singular, and the definite determiner and possessive pronoun are *-wa* when they are (3rd person) feminine singular. However, with the potential exception of 1st person plural object clitics (*-n*), subject prefixes are not syncretic with any of these D elements. Therefore, there is little morphological evidence that subject prefixes have the category D, as they would if they were subject clitics.

Overall, since there is not much support for the idea that subject prefixes are full DP arguments or doubled clitics, I set aside this explanation for their 'disappearance' in imperatives and consider a different, morphological approach in Section 3.3.

3.3 More Promising: Morphological Haplology Analysis

In much of the previous work on imperatives, the head which carries imperative meaning has second-person features that license a null subject (see e.g., Jensen 2003, Soltan 2007, Zanuttini 2008, Zanuttini, Pak and Portner 2012, Isac 2015). The intuition I pursue here is that**,** since the imperative head has second person features, the 2nd person agreement prefix is deleted to avoid the repetition of person features. In other words, haplology occurs because there are two instances of 2nd person feature(s) in a row.

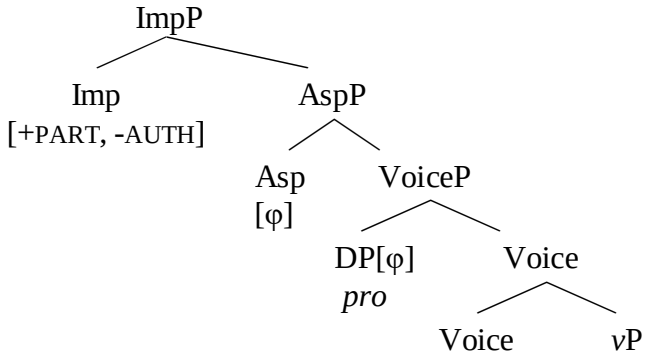
It is well-known that the grammar can disallow two instances of the same morphosyntactic feature(s) in a particular domain even if those two instances are not phonologically identical (see e.g., Stemberger 1981, van Riemsdijk 2008, Nevins 2012, Arregi and Nevins 2012, Neeleman and van de Koot 2017, Salzmann 2019, Oxford 2019, Yuan 2020). When this operation/effect results in the deletion of one of the heads bearing the features, it is often referred to as morphological haplology. In the remainder of this section, I develop a morphological haplology analysis of the "disappearance" of the subject prefix in imperatives in Amharic. In Section 3.3.1, I provide a basic syntactic structure for Amharic imperatives, and specify the details of the haplology operation. In Section 3.3.2, I demonstrate that the imperative head and the prefix must be adjacent in order for haplology to occur. Finally, in Sections 3.3.3 and 3.3.4, I present some additional evidence in favor of a haplology approach from polite imperatives and from other deletion phenomena in Amharic.

3.3.1 Morphological Haplology: Details

In order to understand the morphology of imperative verbs, we need to start with an account of the syntax of imperative clauses. I assume that Amharic imperatives contain a functional head in the C domain which carries the imperative meaning; I also assume that this head has 2nd person features and licenses the null subject (see e.g., Rivero and Terzi 1995, Han 1999, van der Wurff 2007:20-21, Norris 2016). I refer to this head henceforth as Imp. When these standard

assumptions about imperative syntax are combined with the basic clause structure of Amharic in (6), the result is (18):

(18)



From the middle upwards, (18) contains a 2nd person DP *pro* introduced in Spec,VoiceP (the external argument of the predicate). The Aspect head and DP *pro* agree in phi features, like in all Amharic finite clauses. I assume there is no TP because there are no auxiliaries in imperatives in Amharic.[10] Finally, the Imp head high in the C domain has second person features.

Recall that, in typical Amharic clauses, the heads on the verbal spine conglomerate into a single complex head including the complementizer (Section 2). In the resulting complex head, the complementizer is adjacent to the agreement prefix. For example, in (19), the complementizer *li-* is adjacent to the second person agreement prefix (underlined), but is separated from the plural agreement suffix (also underlined) by the verb stem.

(19)	*mannɨññ-atʃtʃɨhu*	*[kä-ɨne*	*gar*	***lɨ-ttɨ-hed-u]$_{CP}$***	*tɨ-fällɨg-all-atʃtʃɨhu*
	which-2PL	[with-me	with	**COMP-**2.S-go.IPFV-PL]	2.S-want.IPFV-AUX-2PL.S

'Which one of you wants to go with me?' (Leslau 1995:56)[11]

I assume head movement also occurs in imperatives, with the result that, by/during PF, the Imp head (= C) and the agreement prefix are part of the same complex head and are linearly adjacent.

At this point, combining well-established facts about the syntax of imperatives with basic facts about Amharic morphosyntax has resulted in a plausible context for 2nd person feature haplology: the derivation of an Amharic imperative gives rise to two elements with 2nd person features (the imperative head and the second person prefix) adjacent to one another. Therefore, I propose the morphological haplology operation in (20) to account for the 'disappearance' of the prefix in Amharic imperatives:

[10] This was tested with respect to grammars (no obvious examples of imperatives with auxiliaries) and in elicitation. Imperatives across languages have been analyzed as lacking TP (van der Wurff 2007:21).

[11] The agreement prefix here and in some examples below is *ttɨ-* (not *tɨ-*) because agreement prefixes geminate when they co-occur with certain other prefixes. See Leslau 1995:303,348-349.

(20) **Morphological Haplology Operation: 2nd Person Features**

[…A_1	*	A_2…]$_{C0}$	→	[A_1]
[+PART]		[+PART]		[+PART]
[-AUTH]		[-AUTH]		[-AUTH]

(20) states that, when two terminal nodes A_1 and A_2 are both contained within a complex head C^0, A_1 immediately precedes A_2, and both A_1 and A_2 have [+PART][-AUTH] features, delete A_2.[12] (20) is likely a kind of Obliteration, a postsyntactic operation that deletes an entire terminal node and which is often seen as a logical extension of the feature-deleting operation Impoverishment (on Obliteration, see Calabrese 2011, Arregi and Nevins 2012, Martinović 2017, Kouneli 2021). Obliteration and Impoverishment are commonly used to capture morphological dissimilation and haplology in DM (see e.g., Arregi and Nevins 2012, Nevins 2012, Oxford 2019).

An example of (20) in action is given in (21), building on the syntactic analysis from (18). Note that (21) begins after subject agreement has become discontinuous (see Section 4), with the result that the agreement head Asp corresponds to two nodes: Asp_1 (the person prefix) and Asp_2 (the number/gender suffix).

(21) **Morphological Haplology Operation: Example**

[Imp	*	Asp_1	*	Voice+*v*+√	*	$Asp_2]_{Imp}$	→	(20)
[+PART]		[+PART]				[+FEM]		
[-AUTH]		[-AUTH]				[-PL]		

[Imp	*	Voice+*v*+√	*	$Asp_2]_{Imp}$	→	*sɨbär-i* ‘Break! (fem. sg.)’
[+PART]				[+FEM]		
[-AUTH]				[-PL]		
∅-		*sɨbär*		*-i*		

In (21), the terminal nodes Imp and Asp_1 start out as part of the same complex head, they both have second person features, and they are linearly adjacent. This causes (20) to apply, resulting in the deletion of Asp_1. Vocabulary Insertion then occurs (see Section 4.1 for evidence for this ordering), and the imperative verb as a whole surfaces without an agreement prefix since Asp_1 has been deleted.

In the remainder of this section, I further develop and present evidence in favor of this analysis. In Section 3.3.2, I demonstrate that the Imp head and the agreement prefix must be adjacent for (20) to apply. I then show how the haplology analysis correctly predicts the behavior of polite imperatives (Section 3.3.3), and briefly discuss how morphological haplology is independently attested in Amharic (Section 3.3.4).

3.3.2 The Adjacency Requirement

For the haplology operation in (20) to occur, the two terminal nodes with second person features must be adjacent. In this section, I show how the adjacency requirement correctly predicts the

[12] It is clear that A_1 and A_2 must be in the same complex head because an independent second person pronoun and a second person prefix can be linearly adjacent without any haplology:

(i) ***antä*** ***tɨ-****tʃɨl-all-äh*
you.MSG **2.S**-be.able.IPFV-AUX-2MSG.S
‘You can!’ (title of YouTube video: https://www.youtube.com/watch?v=64Lqe9FRUVg)

distribution of agreement prefixes in Amharic imperatives across a variety of contexts. Specifically, I test the prediction in (22):

(22) Intervention Prediction: if any terminal node linearly intervenes between Imp and Asp_1, then haplology will not occur.

(22) is borne out in negative imperatives (as first observed in Alemayehu Haile 1991). In general in Amharic, negative marking appears between complementizers and agreement prefixes. For example, in (23), the negation marker *a-* surfaces between the complementizer *ɨndämm-* and the agreement prefix *ttɨ-*.

(23) *mɨnɨmm gize lä-wäladʒ-otʃtʃ-ɨh ʃäkɨm **ɨndämm-a-ttɨ-**hon täsfa allä-ññ*
no time to-parent-PL-your burden **COMP-NEG- 2.S-**be.IPFV hope have-1SG.S
'I hope that you will never be a burden to your parents.' (Leslau 1995:693

NegP is thus below C but above AspP, so Neg will intervene between Imp and Asp. (22) then predicts that the agreement prefix should be grammatical in negative imperatives, and this prediction is correct, as shown in (24):

(24) a. *a-ttɨ-sbär-∅*
NEG-2.S-break.IMP-MSG.S
'Don't break (masc. sg.)!'
(Leslau 1995:349, 353)

b. *a-ttɨ-sbär-i*
NEG-2.S-break.IMP-FSG.S
'Don't break (fem. sg.)!'

c. *a-ttɨ-sbär-u*
NEG-2.S-break.IMP-PL.S
'Don't break (pl.)!'

In negative imperatives like those in (24), the agreement prefix is licit because Imp and Asp are not linearly adjacent.[13]

A skeptic might inquire whether the presence of **any** additional prefixes on an imperative allows for the agreement prefix to surface. In fact, it must be the case that the additional prefix intervenes between Imp and Asp, as per (22). For example, consider the causative prefix *as-*, shown in a non-imperative context in (25).

(25) *mäs'haf-u-n bɨzu gize **as**-ayyä-hu-t*
book-DEF-ACC several time **CAUS**-see.PFV-1SG.S-3MSG.O
'I showed him the book several times.' (Leslau 1995:127)

[13] A reviewer asks how this analysis relates to the incompatibility between negation and imperatives in many languages. The haplology analysis in general is not intended to capture this incompatibility, and there are various other explanations for it available (see e.g., Zanuttini 1997, Han 2001, Bošković 2013, Ausín 2013, Zeijlstra 2013). Granted, a haplology analysis combined with one of these approaches will yield certain predictions about agreement marking. But I think the ultimate explanation for the incompatibility of negation and imperatives is unrelated to morphological haplology for person features.

Also, it would take us too far afield to explore how Amharic fits in to the vast literature on the incompatibility of negation and imperatives. But note that (unlike, say, imperatives in Spanish) it is **not** the case that Amharic negative imperatives use a different verbal stem/paradigm than affirmative imperatives. I therefore assume as a reasonable starting point that both affirmative and negative imperatives have an Imp head, which suffices to derive the observed effects. Hopefully future work on the syntax of mood in Amharic will look into this question in more detail.

Desalegn Workneh (2020) demonstrates that the causative prefix *as-* is the realization of a Voice head with a causative feature. Because *as-* realizes Voice, it is below Asp (see (18)) and thus it does not intervene between Imp and Asp. Therefore, (22) predicts that imperatives with causative *as-* will undergo haplology since Imp and Asp will be linearly adjacent, and this is correct, (26):

(26) *ɨski* *mättawäk'iya* *wäräk'ät-ɨh-ɨn* ***as*-ayyä-ññ**
please identification paper-your-ACC **CAUS**-see.IMP-1SG.O
'Please show me your identification card!' (Leslau 1995:902)

In (26), the imperative has a causative prefix but lacks an agreement prefix since the conditions for haplology (20) are met.

Similarly, Amharic has another causative prefix, *a-*, which is used mostly for intransitive verbs. It is also low in the clausal functional hierarchy: it is either a flavor of *v* with causative meaning or the head of a CausP directly above *v*P (Desalegn Workneh 2020). Either way, this causative prefix does not intervene between Imp and Asp, so a haplology approach again predicts that the agreement prefix should be absent. (27) shows that this is borne out.

(27) *mɨsɨkkɨr-ot/tʃ* *k-all-u-h,* ***a*-k'rɨb-at/tʃäw**
witness-PL if-be-3PL.S-2MSG.O, **CAUS**-come.forward.IMP-3PL.O
'If you have any witnesses, bring them forward.' (Leslau 1995:120)

In (27), the imperative verb again has a causative prefix but not the agreement prefix.

Overall, the haplology analysis makes correct predictions about the distribution of the agreement prefix in imperatives. It is absent whenever Imp and Asp are linearly adjacent (e.g., in simple imperatives and causative imperatives), but it is present when an element intervenes linearly between them (e.g., a negative marker).

3.3.3 Evidence in Favor of a Haplology Analysis: Polite Imperatives

Polite imperatives furnish additional evidence in favor of a haplology approach. Amharic has a rich system of politeness marking, and imperatives are no exception. The most interesting characteristic of polite imperatives for the purposes of this paper is that they have 3rd plural subject agreement, including a 3rd person agreement prefix. Some examples are in (28), with the agreement prefix bolded and underlined.

(28) a. ***yi*-hid-u**
3.S-go.IMP-PL.S
'Go, please!'
(Leslau 1995:351)

b. ***yi*-gb-u**
3.S-enter.IMP-PL.S
'Enter, please!'

c. ***yɨ*-bl-u**
3.S-eat.IMP-PL.S
'Eat, please!'

This is predicted by the haplology analysis with the addition of a few fairly basic assumptions. However, I set aside the fact that polite subject agreement is always plural. While it is common for polite pronouns to trigger plural agreement across languages, it is controversial how to analyze this effect (see e.g., Wechsler 2011, Despić 2017, Puškar-Gallien 2019). Moreover, in Amharic, the plural agreement suffix in polite imperatives does not seem to behave differently

from plural suffixes in regular imperatives, so I simply treat it the same as other agreement suffixes.

Amharic has an overt second person polite pronoun *ɨrswo/ɨsswo* 'you (pol.)' (Leslau 1995:46), and I assume the null pronominal subject in a polite imperative is a null version of this pronoun. Therefore, the subject of polite imperatives minimally has the features in (29), where [POLITE] represents whatever feature distinguishes polite pronouns from regular pronouns:

(29) **Subject of Polite Imperatives**
pro [+PARTICIPANT], [-AUTHOR], [POLITE]

When Asp agrees with (29), I assume it acquires the feature [POLITE]. I further propose that Asp with the feature [POLITE] undergoes Impoverishment for person at PF. Specifically, the feature [+PARTICIPANT] is deleted and then the unmarked value ([-]) is inserted.[14]

(30) **Polite Impoverishment**

[+PARTICIPANT]	→	**[-PARTICIPANT]**
[-AUTHOR]		[-AUTHOR]
[POLITE]		[POLITE]

This renders the person features on Asp now identical to 3rd person. (30) is independently necessary in Amharic since 2nd person polite arguments generally trigger 3rd person agreement across many different agreement paradigms (perfective verbs, imperfective verbs, gerunds, etc.). The use of 3rd person agreement markers for 2nd person polite arguments is thus a metasyncretism in Amharic, and metasyncretisms are typically captured in DM using Impoverishment operations like (30) (see e.g., Bobaljik 2002, Kramer to appear).

Returning to imperatives, all that remains to be said is that (30) Polite Impoverishment precedes (20) Morphological Haplology. (31) shows an intermediate stage of the derivation of (28) after Polite Impoverishment has occurred.

(31) **After Polite Impoverishment: (28)a**[15]

[Imp	*	Asp_1	Voice+*v*+√	*	$Asp_2]_{Imp}$	→	*yɨ-hid-u* 'Please, go!'
[+PART]		**[-PART]**			[+PL]		
[-AUTH]		[-AUTH]					
[POLITE]		[POLITE]					
∅-		*yɨ-*	*hid*		*-u*		

At this point, the Imp head and Asp_1 have different values for the participant feature. Therefore, Morphological Haplology (= (20)) cannot occur and the imperative surfaces with a 3rd person agreement prefix. In other words, Polite Impoverishment bleeds Morphological Haplology.

To summarize, Asp in polite imperatives undergoes Polite Impoverishment (30), and this renders Asp sufficiently different from Imp so as not to trigger morphological haplology. Polite

[14] See similar operations in e.g., Noyer 1998, Harbour 2003, Calabrese 2011, Arregi and Nevins 2012, 2018
[15] I assume Imp also has a [POLITE] feature since it licenses the null subject, but nothing hinges on this.

Impoverishment is independently necessary to account for third person agreement markers appearing with second person polite arguments across agreement contexts in Amharic.[16]

3.3.4 Haplology is Independently Necessary in Amharic

Previous work on Amharic has argued that other phenomena in the language undergo morphological haplology including agreement markers, D elements, and case markers (Kramer 2009, 2010, 2014, Baker and Kramer 2014). Morphological haplology thus seems to be a common strategy in Amharic for reducing featural complexity and/or markedness, so it is not surprising to find in imperatives. There is unfortunately not space to describe all of these morphological haplology operations here, but I describe one in more detail, namely, D-haplology.

In Amharic, when a DP is definite and contains a relative clause, the definite determiner attaches to the verb within the relative clause, as shown in (32) (see Kramer 2010 for an analysis of the placement of the determiner):

(32) *[lɨbs yä-särräk'-ä-**w**]* *lɨdʒ*
clothes COMP-steal.PFV-3MSG.S-**DEF** child
'the child who stole the clothes' (Leslau 1995:86)

However, if the verb in the relative clause has an object marker, there is no determiner, even if the DP as a whole is interpreted as definite, (33).

(33) *[wäre-w-ɨn yä-näggär-**at**]* *lɨdʒ*
news-DEF-ACC COMP-tell.PFV.3MSG.S-**3FSG.O** child
'the child who told her the news' (Leslau 1995:85)

Kramer 2014 argues that this is an instance of morphological haplology. The determiner attaches to the relative clause verb post-syntactically, after the object marker has attached (Kramer 2010), and both the determiner and object marker have the same category: D. This results in the configuration in (34):

(34) [Verb-Stem * D-Object-Marker * D-Determiner]

(34) triggers morphological haplology because there are two D elements in a row, and the determiner is deleted, resulting in (33).

In both the 2nd-person Morphological Haplology operation in (20) and D-haplology, it is the linearly second element that is deleted, as shown in (35). For D-haplology, it's the determiner; for 2nd person haplology, it's Asp_1.

[16] There is another way to form polite commands in Amharic: the complementizer *ɨndɨ-* is attached to an imperfective verb that has 2nd person agreement prefixes (see Hailu Fulass 1980, Leslau 1995:692). Leslau (1995:692) characterizes this construction as being used for "attenuated commands" or "polite requests." It is unclear whether this construction includes an imperative projection. If not, haplology is (correctly) predicted not to occur. Even if an imperative projection is present, though, it may be that the complementizer *ɨndɨ-* intervenes between Imp and Asp, and thus haplology would still be blocked. For future work, it might be fruitful to compare these constructions to subjunctive verbs (and other embedded clause verbal forms) being used for imperatives in other languages, but I set this aside here for purposes of space.

(35) a. [Verb * D-Object-Marker * ~~**D-Determiner**~~]
b. [Imp * ~~**Asp$_1$**~~ * Verb]
[-AUTH] ~~**[-AUTH]**~~
[+PART] ~~**[+PART]**~~

Other kinds of haplology in Amharic also delete the linearly second element (Kramer 2009, 2010, Baker and Kramer 2014), and future work will hopefully focus on how to capture this generalization (see Section 5). For now, the main point is that morphological haplology is independently necessary in Amharic, so invoking it to explain the "disappearance" of the agreement prefix does not add significant complexity or extra machinery to the grammar of Amharic.

3.4 Summary

Overall in this section, I have shown that agreement prefixes are illicit in Amharic imperatives (Section 3.1) but not because the prefix itself is the DP subject of the imperative (Section 3.2). Instead, I argued that the prefix is deleted due to morphological haplology (Section 3.3), where the Imp head and the agreement prefix are adjacent and both have second person features. The haplology analysis successfully predicts the distribution of the prefix in negative imperatives, causative imperatives and polite imperatives, and morphological haplology is independently attested in Amharic.

In the next section, I change the focus from the properties of the haplology analysis itself to its consequences for other parts of the grammar. Specifically, I investigate the implications of adopting a haplology analysis for the analysis of discontinuous agreement in Amharic.

4 THE TIMING OF HAPLOLOGY: EVIDENCE FOR METATHESIS

The haplology operation in (20) alters the morphological structure of the imperative verb: it eliminates the agreement prefix, and makes the imperative head adjacent to the verbal stem. Amharic has several instances of contextual allomorphy that are sensitive to these changes, and in Section 4.1, I show how they reveal that morphological haplology must precede Vocabulary Insertion. In Section 4.2, I argue that this result has significant consequences for the analysis of discontinuous agreement: it is incompatible with a Linearization analysis of discontinuous agreement (Harbour 2008a, 2016, this issue), but connects easily with a Metathesis analysis (Hewett 2022, this issue). Overall, then, the haplology approach to imperatives provides novel evidence in favor of a Metathesis approach to discontinuous agreement.[17]

4.1 Allomorphy in Imperatives

Two morphemes in Amharic display contextual allomorphy that is sensitive to the presence of an agreement prefix. In the imperative, both of these morphemes are realized by the allomorph

[17] I assume that discontinuous agreement is generated at PF, not in the syntax (e.g., not by separate projections for each phi-feature; Shlonsky 1989, Martinović 2019, Shlonsky this issue). See Hewett 2022 for evidence against a syntactic approach.

inserted when the agreement prefix is absent. Assuming that allomorph selection is accomplished via Vocabulary Insertion (as is standard in DM), then the agreement prefix in imperatives must be deleted before Vocabulary Insertion, i.e., Morphological Haplology (20) must precede Vocabulary Insertion. In this subsection, I walk through this argument, first for the nonactive Voice prefix *tä-* (4.1.1) and then for the verb *mät't'a* 'come' (4.1.2). 4.1.3 contains an interim summary.

4.1.1 The Voice Prefix *tä-*

The prefix *tä-* on Amharic verbs generally reduces valence/detransitivizes, leading to passive, anticausative, and reflexive interpretations, among others (see e.g., Bender and Hailu Fulass 1978, Mengistu Amberber 2002, Desalegn Workneh 2020). For example, the verb in (36) has the *tä-* prefix, and it can be interpreted as anticausative or passive.

(36) *bärr-u* ***tä****-käffätä-∅*
door-DEF NACT-open.PFV-3MSG.S
'The door opened/was opened.' (Amberber 2002:15)

I follow Desalegn Workneh (2020) in analyzing the *tä-* prefix as a nonactive Voice head, glossed as NACT 'nonactive.'

The nonactive Voice prefix has two allomorphs: (i) *tä-* (36) and (ii) gemination of the initial consonant of the verb stem, (37).

(37) *yɨ-****f****-fälläg*
3.s-NACT-want.IPFV
'he is sought/wanted' (Leslau 1995:468)

The distribution of these allomorphs is determined not by phonological properties (Leslau 1995:468), but instead by the surrounding morphological environment. Specifically, the gemination allomorph only occurs in the context of certain (other) prefixes, including agreement prefixes as in (37) and the verbal noun/infinitive prefix as in (38).

(38) *mä-****f****-fäläg*
INF-NACT-want.INF
'to be wanted/sought' (Leslau 1995:468)

The *tä-* allomorph is inserted elsewhere, namely, when the verb stem has no (other) prefix, (36), and when there is any prefix/proclitic besides subject agreement or the verbal noun prefix. For example, *tä-* is used when there is a negation prefix/proclitic (39) and when there is a prefixal/proclitic complementizer (40).

(39) *ɨsk-ahun* *and-aṭ/ṭ/äw-ɨmm* *al-****tä****-mälläs-u* **Neg Marker**
up.to-now some-them-PCLE NEG-**NACT**- return.PFV-3PL.S
'None of them have yet come back.' (Leslau 1995:123)

(40) yä-**<u>tä</u>**-säbässäbä-w hɨzb **Complementizer**
C-**<u>NACT</u>** -gather.PFV.3MSG.S-DEF people
'the people who were gathered' (Leslau 1995:433)

I propose that *tä-* and the gemination allomorph are suppletive allomorphs of Voice[NACT].[18] Allomorph selection for Voice[NACT] is determined by Vocabulary Insertion as per (41):

(41) **Vocabulary Items for Voice[NACT]**
a. [Voice],[NACT] ↔ μ / Asp __
VerbalNoun __
b. [Voice],[NACT] ↔ *tä-*
c.

For concreteness, I assume the gemination allomorph is a mora whose placement and realization are determined phonologically (following Wallace's (2013) approach to gemination in Semitic). The gemination allomorph is inserted when nonactive Voice is preceded by an Asp head or by a verbal noun marker (I do not attempt to generalize across these two environments; it does not matter for the present analysis). Elsewhere, *tä-* is inserted.

The key question now is: which of the allomorphs in (41) is inserted in imperatives? Recall that Voice is below Asp ((6), (18)), so Voice does not intervene between Imp and Asp. Therefore, haplology is predicted to occur in imperatives with Voice[NACT], and this allows for the precise timing of haplology and Vocabulary Insertion to be determined. If haplology occurs before Vocabulary Insertion, then (41)b will be inserted because Asp will no longer be present. However, if haplology occurs after Vocabulary Insertion, then (41)a will be inserted because at the time of allomorph selection Asp is still there.

In fact, (41)b *tä-* is inserted, as shown in (42) and (43):

(42) a. ***<u>tä</u>****-fäläg-∅*
<u>NACT</u>-want.IMP-MSG.S
'Be sought/wanted!'
(Leslau 1995:468)

b. ***<u>tä</u>****-get'-∅*
NACT-adorn.IMP-MSG.S
'Be adorned!'
(Leslau 1995:546)

(43) *bä-kokakola* ***<u>tä</u>****-dässät-u*
via-Cocacola NACT-enjoy.IMP-PL.S
'Enjoy Cocacola!' (Bezza Tesfaw Ayalew 2006:92)

Since the allomorph *tä-* is found in imperatives, I conclude that the agreement prefix is not present when Vocabulary Insertion occurs.[19] Therefore, Morphological Haplology (20) occurs

[18] Broselow (1984) develops an alternative, phonological analysis of this alternation, adopting an autosegmental approach to root and pattern morphology. She proposes that the nonactive Voice prefix consists of an empty C slot. In verbal nouns, the prefix is adjacent to a root consonant and that root consonant geminates to fill the prefixal C slot. In perfective verbs, Broselow claims that the prefix is not adjacent to a consonant, so there is no gemination; however, it is unclear why this holds since the perfective template begins with a consonant (Broselow 1984:22). Moreover, this approach does not explain the presence of gemination in imperfective verbs (i.e., verbs with prefixal subject agreement). I leave the pursuit of a phonological explanation for this alternation to future work.

[19] A reviewer points out that the *tä-* allomorph seems similar to the Hebrew verbal prefix *n-*; both are associated with nonactive interpretations and seem to be used in only part of the relevant paradigms. I explain the distribution of *tä-* via contextual allomorphy, but Faust (this issue) argues that the complex distribution of *n-* in Modern Hebrew

before Vocabulary Insertion. Before exploring the impact of this result on analyses of discontinuous agreement, I show how the same conclusion is reached looking at the allomorphy of a different kind of morpheme.

4.1.2 The Root for *mät't'a* 'come'

The verb *mät't'a* 'come' mostly behaves like a typical verb of its class, with perfective and imperfective forms as in (44)ab, and jussive forms as in (44)c.

(44) a. *mät't'a-∅*
come.PFV-3MSG.S
'He came'
(Leslau 1995:509, 516)

b. *yi-mät'-u*
3.s-come.IPFV-PL.S
'They come, will come'

c. *yi-mt'a*
3.s-come.JUSS
'Let him come!'

However, *mät't'a* behaves differently in the imperative, as shown in Table 3:[20]

Table 3: *mät't'a* in the Imperative: 'Come!'

	Attested Form	**Expected Form**
Masculine singular	na-∅	*mɨt'a-∅
Feminine singular	näy	*mɨʧ'-i
Plural	n-u	*mɨt'-u

Table 3 compares the attested form of the imperative for 'come' to the expected form. Instead of the expected forms, there are suppletive forms attested across all number and gender combinations: masculine singular (*na*), feminine singular (*näy*) and plural (*nu*). I assume this is suppletion of the verbal root, which has an allomorph comprised at least of √N in an imperative context.[21]

Interestingly, the suppletive forms have a very limited distribution. They are only found in particular kinds of imperatives. For example, they are **not** used for negative imperatives; in (45), the expected form must be used.

is best explained if it is limited to realis contexts. Faust's explanation cannot be easily extended to Amharic since the nonactive Voice prefix *tä-* is licit in irrealis contexts like imperatives ((42)**Error! Reference source not found.**, (43)); hopefully future work can further elucidate the similarities and differences between these prefixes.

[20] The attested forms are from Leslau 1995 (p. 516) and I generated the expected forms according to regular morphological and phonological processes in Amharic. The masculine singular expected form is attested in older varieties of Amharic, according to Kane 1990 (Vol. 1, p. 348), although I place the epenthetic vowel after [m] and not before, following Leslau 1995 for similar verbs.

[21] The suppletive root may be √NL because a few other irregular verbs have similar-looking feminine singular imperatives (*bäy* 'speak! (f. sg.),' and *täy* 'leave! (f. sg.),' Leslau 1995: 570, 579) and they have a final *-l* in their other imperative forms (e.g., *bäl* 'speak!' (m.sg.), *bäl-u* 'speak!' (pl.)). It is unclear to me why the /l/ would not be pronounced in the masculine singular and plural for the imperative of 'come,' but in any case, the exact phonological value of the suppletive allomorph of the root for 'come' does not matter for present purposes, as long as it is different from the non-suppletive form.

(45) a. *a-tt-mt'a-∅*
NEG-2.S-come.IMP-MSG.S
'Don't come!'
(Kane 1990:348)

b. **a-tt-na-∅*
NEG-2.s-come.IMP-MSG.S
Intended: 'Don't come!'

They are also ungrammatical in polite imperatives, (46):

(46) a. *y-mt'-u*
3-come.IMP-PL.S
'Please come!'

b. **y-n-u*
3-come.IMP-PL.S
Intended: 'Please come!'

Finally, they are not found in causative imperatives, (47):

(47) a. *kot-e-n* *a-mt'a-∅-ll-ñ*
coat-my-ACC CAUS-come.IMP-MSG.S-BEN-1SG.O
'Bring my coat to me!' (Leslau 1995:354)

b. **kot-e-n* *a-na-∅-ll-ññ*
coat-my-ACC CAUS-come.IMP-MSG.S-BEN-1SG.O
'Bring my coat to me!'

In the imperatives in (45)-(47), some Vocabulary Item intervenes between the left edge of the root and the left edge of the verbal complex: negation and the agreement prefix in (45), the agreement prefix in (46), and the causative prefix in (47). In an imperative, the item at the leftmost edge of the verbal complex is always the imperative head itself ((18)). Therefore, I propose that the root for 'come' and the Imperative head must be linearly adjacent in order for the suppletive form of the root to be inserted. This is reflected in the Vocabulary Items in (48).[22]

(48) **Vocabulary Items for √542 'come'**
a. √542 ↔ n / Imp __
b. √542 ↔ mt'a[23]

This predicts that the suppletive allomorph will still be inserted if there are any suffixes on the verbal stem, and this is correct.

(49) *na-∅-ll-ñ*
come.IMP-MSG.S-BEN-1SG.S
'Come to me!'

In (49), the benefactive marker and the object marker are licit with the suppletive root allomorph.

This allomorphic alternation now allows for the timing of haplology and Vocabulary Insertion to be determined. If haplology occurs before Vocabulary Insertion, it is predicted that

[22] I assume that any null verbal functional heads between Imp and the root are pruned so that they no longer intervene between Imp and the root (Embick 2010). However, this requires those null functional heads to undergo Vocabulary Insertion before the root does, which goes against the standard DM assumption that Vocabulary Insertion occurs from the bottommost node upward. I leave this timing puzzle for future research.
[23] I include the vowel /a/ as part of the root here following Hudson 1985.

the suppletive allomorph (48)a will be inserted (i.e., the root and the Imp will be adjacent at Vocabulary Insertion). However, if haplology occurs after Vocabulary Insertion, it is predicted that the default form (48)b will be inserted (i.e., the root and Imp will **not** be adjacent at Vocabulary Insertion because the agreement prefix will intervene between them). In fact, (48)a is inserted, as the attested forms in Table 3 demonstrate. Therefore, just as in Section 4.1.1, it can be concluded that Morphological Haplology (20) must precede Vocabulary Insertion.

4.1.3 Interim Summary

In sections 4.1.1 and 4.1.2, the same conclusion was reached across two unrelated cases of contextual allomorphy. When allomorph selection depends on the absence of an agreement prefix, the allomorph used in imperatives is the one selected when an agreement prefix is absent. Therefore, the agreement prefix must be 'absented' before Vocabulary Insertion, i.e., haplology precedes Vocabulary Insertion. In the next section, I explore the implications of this result for the analysis of discontinuous agreement in general.

4.2 Implications for the Analysis of Discontinuous Agreement: Evidence for Metathesis

In this section, I compare two PF-based approaches to the analysis of discontinuous agreement: the Linearization approach (Harbour 2008a, 2016, this issue) and the Metathesis approach (Hewett 2022, this issue). The conclusion of Section 4.1, namely, that haplology precedes Vocabulary Insertion, allows the two approaches to be distinguished. In Section 4.2.1, I show how this result is difficult to model in the Linearization approach and, in Section 4.2.2, how it is straightforward in the Metathesis approach. A haplology approach to Amharic imperatives thus provides clear support for a Metathesis approach to discontinuous agreement.

4.2.1 Linearization Approach to Discontinuous Agreement

In the Linearization approach to discontinuous agreement (Harbour 2008a, 2016, this issue), phi feature bundles have hierarchical structure. Languages with discontinuous agreement are distinguished from other languages in that they have Vocabulary Items that realize only part of the hierarchical structure. Constraints on linearization then lead those Vocabulary Items to be linearized flanking a stem, i.e., discontinuously.

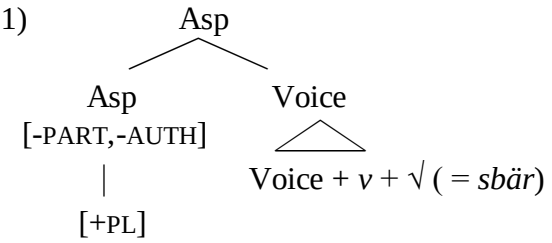
It is easiest to see how the analysis works with an example (certain details have been simplified; see Harbour 2008a, 2016, this issue for a fuller explication). Consider the Amharic jussive verb in (50):

(50) *yɨ-sbär-u*
3.S-break.JUSS-PL.S
'Let them break!' (Leslau 1995:348)

(50) has discontinuous agreement, with a person-marking agreement prefix and a number-marking agreement suffix. Harbour 2008a adopts the traditional hierarchical structure of phi features where person ranks over both number and gender (as in e.g., Harley 1994, Harley and Ritter 2002).[24] In this approach, the complex head structure of (50) (omitting the jussive-related projection for simplicity) is as in (51):

[24] In more recent work, Harbour (2016, this issue) argues that number/gender instead dominates person. Because this work also adopts Mirror Theory (Brody 2000, Brody and Szabolcsi 2003), the linearization of the structure is

(51)



The Asp head consists of the person features [-PART] and [-AUTH] dominating the number feature [+PL].

When it is time to realize the terminal node Asp in (51), the Vocabulary Items in (52) come into play (repeated from (5)).

(52) **Vocabulary Items Potentially Insertable at Asp**

a. i ↔ [+PARTICIPANT],[+AUTHOR],[-PL]	= 1st person singular
b. inni ↔ [+PARTICIPANT],[+AUTHOR],[+PL]	= 1st person plural
c. i ↔ [-PL][+FEM] / [+PARTICIPANT]/[-AUTHOR]	= Fem sg in 2nd person context
d. ti ↔ [-PL][+FEM] / [-PARTICIPANT]	= Fem sg in 3rd person context
e. ti ↔ [+PARTICIPANT],[-AUTHOR]	= 2nd person
f. yi ↔ [-PARTICIPANT],[-AUTHOR]	**= 3rd person**
g. u ↔ [+PL]	**= Plural**

No single VI matches all the features in Asp, but (52)f can be inserted at the person node and (52)g can be inserted at the number node, resulting in (53).

(53) [yi * sbär]
|
u

Linearization and Vocabulary Insertion occur at the same time (Harbour 2008a:189), so (53) also reflects the linear precedence of Asp before the rest of the verbal stem. However, (53) is not fully linear since it retains the hierarchical structure of the phi features in Asp. The question then is: how should the linearization be completed?

In the Linearization approach, two constraints on linearization effectively force the agreement markers to 'flank' the verbal stem and thus create discontinuous agreement. First, in Harbour 2008a, if one node dominates the other, it must precede it linearly. Therefore, since the person marker *yi-* dominates the number marker *–u*, *yi-* must precede *–u*. This rules out the potential linearization [**u-yi-sbär*]. Second, the immediate precedence relation between the person marker *yi-* and the verbal stem in (53) must be maintained, and this rules out the potential linearization: [**yi-u-sbär*]. Given these two constraints, the only remaining option is for the agreement markers to "flank" the verb stem, leading to discontinuous agreement: [*yi-sbär-u*]. This allows for *yi-* to both precede *-u* and to immediately precede the verb stem. Thus, discontinuous agreement is generated by a combination of assumptions: phi features are

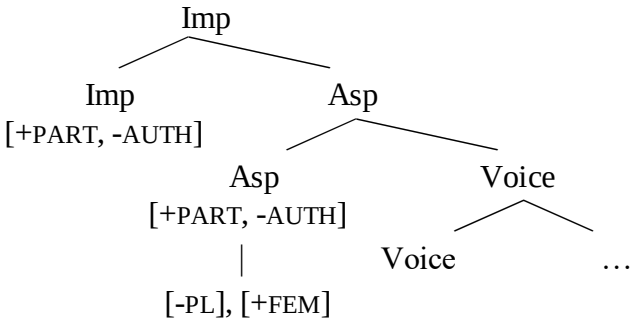
the same as when person dominates number. I continue to use the person-over-number hierarchy in the main text because it does not materially affect the argument here and it is likely more familiar to most readers.

hierarchically structured, Vocabulary Items can realize a subpart of that structure, and constraints on linearization result in 'flanking' of the verb by the agreement markers.

I turn now to a Linearization analysis of imperatives. Consider the feminine singular imperative in (54) with the structure in (55).

(54) *mäskot-u-n* *sɨbär-**i**!*
window-DEF-ACC break.IMP-**FSG**.S
'Break the window!'

(55)



The phi features on Asp are hierarchically arranged, with the person features dominating the number and gender features. Vocabulary Insertion and Linearization occur, resulting in (56):

(56) [tɨ * sbär]
|
i

However, haplology must occur before Vocabulary Insertion (Section 4.1), and this leads to a problem. Specifically, if haplology occurs before Vocabulary Insertion, it must operate on either the hierarchical structure in (55) or the linearized version of (55) in (57):

(57) **Linearized Form of (55)**

[Imp * Asp[+PART,-AUTH] * Voice-*v*-√]
[+PART] |
[-AUTH] [-PL][+FEM]

No matter which structure is used, though, there are two incorrect outcomes: (i) the entire Asp head is deleted, which would falsely predict no agreement at all in imperatives, or (ii) a non-constituent of Asp (the topmost node alone) is deleted, contrary to previous constraints on deletion in feature hierarchies (i.e., delinking; see e.g., Harley 1994).[25] What is needed is for the person and number features to 'flank' and then for haplology to occur; however, under the Linearization approach, 'flanking' is motivated by the insertion of multiple exponents for Asp

[25] Even if the topmost node alone could exceptionally be deleted, another problem arises. If the number node is left on its own, it will be linearized before the verb and is predicted to surface as a prefix, contrary to fact. Many thanks to a reviewer whose questions spurred significant development of this discussion in general.

(see a particularly clear statement of this in Harbour 2016:161). In other words, it is the presence of a second exponent that leads to 'flanking' around the verb. A paradox thus emerges: the results of this paper indicate that the order of operations must be 1) flanking, 2) haplology 3) Vocabulary Insertion, but in the Linearization approach, Vocabulary Insertion must precede flanking.

I conclude that a Linearization approach is incompatible with a haplology analysis, and I proceed to consider an alternative approach to discontinuous agreement: Metathesis (Hewett 2022, this issue).

4.2.2 The Metathesis Approach to Discontinuous Agreement

In the Metathesis approach, two main operations lead to discontinuous agreement: Fission, which splits Asp into two nodes, and Metathesis, which moves one of the Asp nodes before the verb stem. Both operations are triggered by morphotactic constraints: the constraint triggering Fission rules out the co-occurrence of certain phi features, and the constraint triggering Metathesis requires an Asp node to be initial within a complex Asp head. I refer to this approach as the Metathesis approach; Hewett (2022, this issue) argues that Fission also occurs in purely suffixal agreement in Semitic languages, so it is Metathesis that truly generates discontinuous agreement.

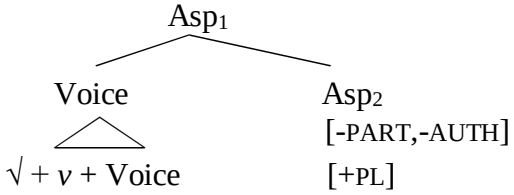
The Metathesis approach builds on a long tradition of using Fission to model discontinuous agreement (see e.g., Noyer 1992, Halle 1997), and it is also rooted in work on Generalized Reduplication operations in Distributed Morphology (Harris and Halle 2005, Arregi and Nevins 2018). On the empirical side, it was developed to apply to all Semitic languages with discontinuous agreement. For space reasons, then, I cannot do justice to all of its empirical coverage and theoretical grounding, but a basic sketch of the analysis suffices to show that it is compatible with haplology occurring before Vocabulary Insertion in Amharic.

To start, I demonstrate how the analysis works with a jussive example. Consider the same jussive verb that was used to illustrate the Linearization analysis, repeated below as (58).

(58) *yɨ-sbär-u*
3.S-break.JUSS-PL.S
'Let them break!' (Leslau 1995:348)

In order for a Metathesis approach to get off the ground, it must be assumed that the root raises to Asp. There is good evidence the root raises to Asp (or T) in other Semitic languages (see e.g., Shlonsky 1997, Benmamoun 2000, and other citations in Hewett 2022:18), and it is at least plausible for Amharic as well since the verbal terminal nodes typically surface as a single complex morphological object (Section 2). So, I assume the root raises to Asp during the derivation of (58), as shown in (59).

(59)



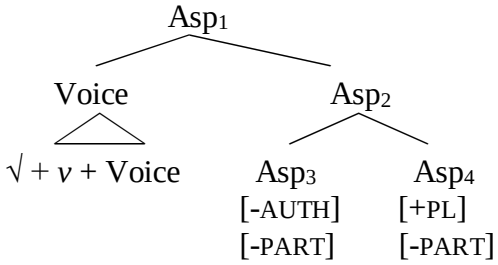
Note that the terminal node Asp (Asp_2) has third person features and a plural feature.

Hewett (2022, this issue) proposes that there is a morphotactic constraint in Semitic that prevents phi feature bundles from containing both [-AUTHOR] and a number feature, (60):

(60) **Morphotactic Constraint: Non-Author**
*[-AUTHOR],[αPL]

In (59), Asp_2 violates (60), so Fission is performed as a repair. It splits Asp_2 into two sub-nodes, as shown in (61).

(61) **Fission, applied to (59)**



Any features that are not targeted by (60) are present in both fissioned nodes, so [-PART] is found in both Asp_3 and Asp_4.

Next, Linearization occurs, the details of which I skip for the purposes of space (see Hewett 2022:18-19). The main aspect of Linearization that is relevant here is that the fissioned nodes Asp_3 and Asp_4 are linearized according to a feature hierarchy of [person > number] with the result that Asp_3, which contains only person features, precedes Asp_4. The linearized version of (61) is in (62).

(62) $[\sqrt{} + v + \text{Voice} * Asp_3 * Asp_4]_{Asp1}$

At this point, another cross-Semitic morphotactic constraint comes into play: an imperfective Asp node must be initial within imperfective Asp^{0max}:

(63) **Morphotactic Constraint: Asp Initiality**[26]
Terminal Asp[IPFV] is initial within Asp^{0max}

This constraint is existential in that it is satisfied if any single Asp node is initial; so, if there are multiple Asp nodes within Asp^{0max} only one is required to be initial.

The linearized string in (62) violates (63) because no Asp node is initial within Asp^{0max}, i.e., Asp_1. Therefore, Metathesis is performed as a repair. For present purposes, Metathesis comprises a handful of steps, laid out in (64) (see Harris and Halle 2005, Arregi and Nevins 2018, Hewett 2022 for the details; in these sources, Metathesis involves copying and then deletion since it is related to reduplication, but I gloss over that here):

[26] In Semitic languages where agreement is tense-based, this constraint is based on T[-PAST] (Hewett 2022).

(64) **Simplified Metathesis, Applied to the Jussive** (based on Hewett 2022, (45))
a. Identify a linearized string in a particular domain: [√ v Voice Asp_3]$_{Asp0max}$
b. Identify two subparts of the string:
i. [√ v Voice]
ii. [Asp_3]
c. Metathesize the subparts

When Metathesis is applied to (62), it results in Asp_3 becoming initial in the complex head, (65).

(65) **Metathesis, applied to (62)**

[Asp_3	*	Voice+*v*+√	*	Asp_4]$_{Asp0max}$
[-PART]				[-PART]
[-AUTH]				[+PL]

Finally, Vocabulary Insertion occurs. The following Vocabulary Items are potentially insertable at the Asp nodes (repeated from (5)):

(66) a. i̵ ↔ [+PARTICIPANT],[+AUTHOR],[-PL] = 1st person singular
b. i̵nni̵ ↔ [+PARTICIPANT],[+AUTHOR],[+PL] = 1st person plural
c. i ↔ [-PL][+FEM] / [+PARTICIPANT]/[-AUTHOR] = Fem sg in 2nd person context
d. ti̵ ↔ [-PL][+FEM] / [-PARTICIPANT] = Fem sg in 3rd person context
e. ti̵ ↔ [+PARTICIPANT],[-AUTHOR] = 2nd person
f. yi̵ ↔ [-PARTICIPANT],[-AUTHOR] **= 3rd person**
g. u ↔ [+PL] **= Plural**

(66)f matches Asp_3 perfectly and is inserted; this is the third person prefix. (66)f partially matches Asp_4 in [-PART], but it cannot be inserted since it also has [-AUTH] and this is not found on Asp_4 (see Section 2 on the Subset Principle). In fact, the only Vocabulary Item that can be inserted at Asp_4 is (66)g, the plural suffix. After Vocabulary Insertion occurs for the rest of the verbal complex, the result is (67), as desired:

(67) *yi̵-* *sbär-* *u*
Asp_3 Voice-*v*-√ Asp_4
'Let them break!' (Leslau 1995:348)

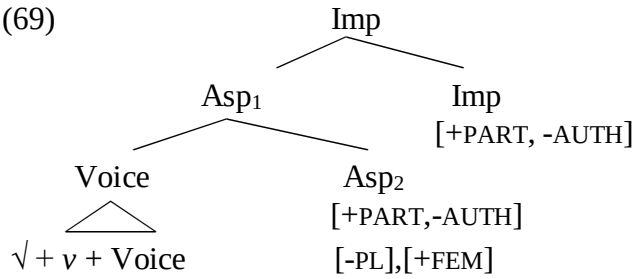
Overall, in the Metathesis approach, discontinuous agreement results from separating the Asp node into two nodes (Fission), and then moving one of the nodes to the initial position in the complex head Asp (Metathesis).

Having derived a jussive verb with discontinuous agreement, I return now to imperative verbs, and walk through how the Metathesis analysis would derive the feminine singular imperative in (68).

(68) *mäskot-u-n* *si̵bär-**i**!*
window-DEF-ACC break.IMP-**FSG**.S
'Break the window!'

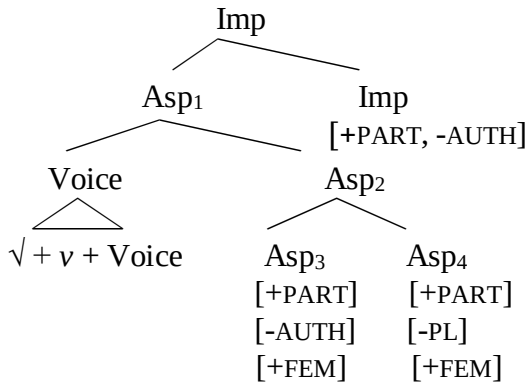
Recall that, across Semitic languages, the root raises to Asp, and that in Amharic in particular, the resulting complex verbal head also includes any complementizers (Section 2). Therefore, I assume that the root raises to Imp in imperatives. This is shown in (69).

(69)



In (69), Asp_2 violates the Non-Author Constraint in (60), so Fission is performed as a repair. The result is shown in (70).

(70)



The structure is then linearized as in (71) (only relevant brackets are represented):

(71) $[[\sqrt{} + v + \text{Voice} * Asp_3 * Asp_4]_{Asp1} * Imp]_{Imp}$

(71) violates Asp Initiality (repeated in (72)), so Metathesis is performed as a repair.

(72) **Morphotactic Constraint: Asp Initiality**
Terminal Asp[IPFV] is initial within Asp^{0max}

The result of Metathesis is in (73), where Asp_3 is now initial within the complex head Asp (= Asp_1).

(73) **After Asp Metathesis**

$[[Asp_3$	*	$\sqrt{} + v + \text{Voice}$	*	$Asp_4]_{Asp1}$	*	$Imp]_{Imp}$
[+PART]				[+PART]		
[-AUTH]				[-PL]		
[+FEM]				[+FEM]		

However, note that Imp is linearized last in the verbal complex in (73), whereas prefixal/proclitic complementizers are always initial in the verbal complex in Amharic. Therefore, I propose a morphotactic constraint that any C elements (including Imp) must be initial in the C(/Imp) complex head.[27]

(74) **Morphotactic Constraint: C/Imp Initiality**
Terminal C/Imp is initial within C/Imp^{0max}

I assume that a Metathesis operation results in Imp being initial in the Imp domain, as shown in the linear order in (75):

(75) **After Imp Metathesis**

[Imp	*	[Asp_3	*	√ + *v* + Voice	*	$Asp_4]_{Asp1}]_{Imp}$
[+PART]		[+PART]				[+PART]
[-AUTH]		[-AUTH]				[-PL]
		[+FEM]				[+FEM]

At this point, two nodes with second person features are linearly adjacent, haplology (20) applies, and Asp_3 is deleted, (76):

(76) **After Haplology**

[Imp	*	[√ + *v* + Voice	*	$Asp_4]_{Asp1}]_{Imp}$
[+PART]				[+PART]
[-AUTH]				[-PL]
				[+FEM]

Finally, Vocabulary Insertion occurs, and (77)c is inserted for Asp_4.[28]

(77) **Vocabulary Items Potentially Insertable at Asp (= (5))**

a. i ↔ [+PARTICIPANT],[+AUTHOR],[-PL]	= 1st person singular
b. inni ↔ [+PARTICIPANT],[+AUTHOR],[+PL]	= 1st person plural
c. i ↔ [-PL][+FEM] / [+PARTICIPANT]	**= 2nd person fem sg**
d. ti ↔ [-PL][+FEM] / [-PARTICIPANT]	= Fem sg in 3rd person context
e. ti ↔ [+PARTICIPANT],[-AUTHOR]	= 2nd person
f. yi ↔ [-PARTICIPANT],[-AUTHOR]	= 3rd person
g. u ↔ [+PL]	= Plural

After the verbal complex undergoes Vocabulary Insertion, this gives the desired result of (78):

[27] In Amharic, some C-like elements are freestanding words and thus do not form a complex head with the verbal functional morphemes (e.g., *zänd* 'in order that,' Leslau 1995:67). I assume that the root does not move all the way to C when one of these C-like elements is present, perhaps because these elements lack the feature that triggers head-raising (e.g., [+M] in Harizanov and Gribanova 2018). I assume Imp behaves like a prefixal/proclitic C and has this feature, unlike a freestanding complementizer..

[28] Because Asp_4 contains [+PART], there is no longer a need to treat the participant feature as a contextual restriction on the insertion of the 2nd person feminine singular Vocabulary Item. The Vocabulary Item can simply be associated with the features [+PL][-FEM][+PART]. See Hewett 2022 for discussion of this implication.

(78) *sɨbär-i*
√+*v*+Voice-Asp$_4$
'Break (f. sg.)!'

Overall, the Metathesis approach successfully derives (78), with haplology occurring after Metathesis and before Vocabulary Insertion.

Hewett (2022) shows that, in a variety of Semitic languages, discontinuous agreement markers display allomorphy that is sensitive only to their position **after** Metathesis (and never before). He concludes that Metathesis must occur before Vocabulary Insertion. Metathesis is what places the agreement prefix and the imperative head in the right positions for haplology to occur, so in a Metathesis approach, haplology can easily be 'slotted in' after Metathesis and before Vocabulary Insertion. This ordering is shown in (79).

(79) Order of Operations at PF in Metathesis Approach[29]
Metathesis > Haplology > Vocabulary Insertion

This correctly results in imperatives lacking agreement prefixes, but retaining agreement suffixes.

4.3 Section Summary

In Section 4.1, I argued that the haplology operation must precede Vocabulary Insertion using evidence from contextual allomorphy. In Section 4.2, I showed how this result supports the Metathesis approach to discontinuous agreement, but does not support a Linearization approach. Essentially, the Linearization approach generates discontinuous agreement at the same time as Vocabulary Insertion, so haplology (which is fed by the creation of discontinuous agreement) can never occur before Vocabulary Insertion, contra the results of Section 4.1. In contrast, the Metathesis approach generates discontinuous agreement before Vocabulary Insertion, allowing some derivational space, so to speak, for haplology to occur before Vocabulary Insertion as well.

5 CONCLUSION

The central puzzle of this paper is that the agreement prefix "disappears" in Amharic imperatives. I have argued that it is deleted due to morphological haplology: the Imperative head has second person features, the agreement prefix has second person features, and they are linearly adjacent. Because there are two heads with second person features in a row, the second head (the agreement prefix) is deleted. I showed how the haplology analysis predicts the distribution of the agreement prefix across different kinds of imperatives and how haplology operations are independently necessary in Amharic. I also argued that the haplology operation must occur before Vocabulary Insertion because the allomorphy of surrounding morphemes behaves as if the prefix were not there, and I showed how this result is compatible with the Metathesis analysis of discontinuous agreement, but not the Linearization approach.

In terms of its broader implications, this work also provides evidence about the timing of morphological haplology during PF: it occurs fairly late, after Fission, Linearization and Metathesis, but before Vocabulary Insertion. Hopefully future work will investigate whether this

[29] The full order is Head Movement > Fission > Linearization > Metathesis > Haplology > Vocabulary Insertion. Polite Impoverishment (Section 3) presumably occurs sometime after Head Movement and before Haplology.

is a universal property of morphological haplology and will also connect up the specific haplology operation here to more general explorations of haplology operations at PF (see e.g., Nevins 2012, Neeleman and van de Koot 2017). In particular, two nodes within the same complex head having the same person features seems to be dispreferred across languages (see e.g., Nevins 2012, Sandalo 2016, Oxford 2019 and perhaps even Kinyalolo's Constraint: Kinyalolo 1991, Carstens 2003, 2005, Tyler and Kastner 2022). However, it is still an open question whether the morphological haplology operation is specific to second person features (as formulated in (20)) or generalized across all/a subset of morphosyntactic features since haplology occurs in a variety of contexts in Amharic (Kramer 2009, 2010, Baker and Kramer 2014). These questions are left for later work that is focused on the properties of morphological operations.

Another goal of this work was to highlight the connection between inherently-person-marked imperatives and a lack of person agreement markers (van der Wurff 2007:42). Similar phenomena to the Amharic 'disappearing' prefix, where only a person marker is deleted from an imperative verb, are attested at least in Warlpiri (Hale 1973) as well as some (other) Semitic languages (Standard Modern Hebrew:[30] Bat-El 2002, Faust and Berrebi 2022, Modern Standard Arabic: Benmamoun 2000, Soltan 2007, LeTourneau 2021). Whether all of these phenomena are due to morphological haplology remains to be determined (see e.g., Harris 1998 for a contextual allomorphy analysis of the lack of agreement in some Spanish imperatives). Hale (1973) proposes a kind of haplology analysis, but Bat-El 2002 develops a phonological truncation account and Soltan (2007) bases his account in the syntactic relation Agree. Future work will hopefully adjudicate between these approaches, enriching the modest literature on the morphology of imperatives in general (see e.g., Harris 1998, Norris 2016, Arregi and Nevins 2018).

REFERENCES

Alemayehu Haile. 1991. The morphological structure of the imperative stem in Amharic. *The Ethiopian Journal of Education* 12. 61-76.

Ariel, Chanan. 2019. Why did the future form of the verb displace the imperative form in the informal register of Modern Hebrew? In Edit Doron et al., eds. *Linguistic Contact, Continuity and Change in the Genesis of Modern Hebrew.* Amsterdam: John Benjamins. 117-142.

Arregi, Karlos and Andrew Nevins. 2012. *Morphotactics: Basque Auxiliaries and the Structure of Spellout*. New York: Springer.

Arregi, Karlos and Andrew Nevins. 2018. Beware Occam's syntactic razor: morphotactic analysis and Spanish mesoclisis. *Linguistic Inquiry* 49. 625-683.

[30] Spoken Modern Hebrew has an additional, alternative form for imperatives: a future tense verb stem with prefixal agreement markers (see e.g., Bolozky 1979, 2009, Ariel 2019, Faust and Berrebi 2022). In this form, there is a 2nd person subject agreement prefix, i.e., haplology does not occur. To explain this, I tentatively suggest that there is no Imp projection in the syntax and the imperative interpretation is derived through some other means, similar to subjunctives used for (negative) imperatives in other languages. Since these forms lack an Imp head with 2nd person features, haplology will not be triggered and the agreement prefix is predicted to surface. Possible support for this approach is that prefixal imperatives in Spoken Hebrew are seen as more neutral and less rude/commanding (Bolozky 1979:18, Faust and Berrebi 2022:299), which might follow if they lack an Imp head and thus only make a request indirectly. However, this analysis is very speculative and remains to be (dis)confirmed by closer study of the Hebrew verbal system.

Ausín, Adolfo. 2013. A morphological approach to the lack of negative imperatives in Spanish. In Chad Howe et al., eds. *Selected Proceedings of the 15th Hispanic Linguistics Symposium*. Somerville, MA: Cascadilla. 281-296.
Baker, Mark C. 2012a. On the relationship of object agreement and accusative case: evidence from Amharic. *Linguistic Inquiry* 43. 255-274.
Baker, Mark C. 2012b. "Obliqueness" as a component of argument structure in Amharic. In Maria Cristina Cuervo and Yves Roberge, eds. *The End of Argument Structure?* Bingley: Emerald. 43-74.
Baker, Mark and Ruth Kramer. 2014. Rethinking Amharic prepositions as case markers inserted at PF. *Lingua* 145. 141-172.
Bat-El, Outi. 2002. True truncation in Colloquial Hebrew imperatives. *Language* 651-683.
Baye Yimam. 1997. The verb to have in Amharic. In K. Fukui, E. Kurimoto, and M. Shigeta, eds., *Ethiopia in Broader Perspective.* Volume I. 12-17. Kyoto: Shocked.
Baye Yimam. 2004. Agreement phenomena in Amharic. In V. Böll, ed. *Studia Aethiopica.* Wiesbaden: Harrassowitz. 319-336.
Baye Yimam. 2006. The interaction of tense, aspect and agreement in Amharic syntax. In John Mugane et al., eds., *Proceedings of ACAL 35*. Somerville: Cascadilla Press. 193-202.
Benmamoun, Elabbas. 2000. *The Feature Structure of Functional Categories: A Comparative Study of Arabic Dialects.* Oxford: Oxford University Press.
Bender, M. Lionel and Hailu Fulass. 1978. *Amharic Verbal Morphology.* East Lansing, MI: African Studies Center, Michigan State University.
Bezza Tesfaw Ayalew. 2006. *Amharic Learners' Reference Grammar.* Madison, Wisconsin: National African Language Resource Center.
Bobaljik, Jonathan David. 2002. Syncretism without paradigms: remarks on Williams 1981, 1994. In Geert Booij and Jaap van Marle, eds. *Yearbook of Morphology 2001*. Dordrecht: Foris. 53-85.
Bobaljik, Jonathan David. 2017. Distributed Morphology. In Mark Aronoff, ed. *Oxford Research Encyclopedia in Linguistics*. Retrieved 25 May. 2018, from http://linguistics.oxfordre.com/view/10.1093/acrefore/9780199384655.001.0001/acrefore-9780199384655-e-131.
Bolozky, Shmuel. 1979. On the new imperative in colloquial Hebrew. *Hebrew Annual Review* 3. 17–24.
Bolozky, Shmuel. 2009. Colloquial Hebrew imperatives revisited. *Language Sciences* 31. 136-143.
Bošković, Zeljko. 2013. When are negative imperatives banned? In Maja Markovi and Tanja Miliev, eds. *Selected Papers from SinFonIJA 3*. Cambridge: Cambridge Scholars. 6-17.
Brody, Michael. 2000. Mirror Theory: syntactic representation in perfect syntax. *Linguistic Inquiry* 31. 29-56.
Brody, Michael and Anna Szabolcsi. 2003. Overt scope in Hungarian. *Syntax* 6. 19-51.
Broselow, Ellen. 1984. Default consonants in Amharic morphology. In M. Speas and R. Sproat, eds., *MIT Working Papers in Linguistics*: 15-32.
Calabrese, Andrea. 2011. Investigations on markedness, syncretism and zero exponence in morphology. *Morphology* 21. 283-325.
Campbell, Amy. 2012. The morphosyntax of discontinuous exponence. Doctoral dissertation, University of California, Berkeley.
Carstens, Vicki. 2003. Rethinking complementizer agreement. *Linguistic Inquiry* 34.3:393-412.

Carstens, Vicki. 2005. Agree and EPP in Bantu. *Natural Language and Linguistic Theory* 23. 219-279.
Degif Petros Banksira. 2000. *Sound Mutations: The Morphophonology of Chaha.* Amsterdam: Benjamins.
Desalegn Workneh. 2017. Grammatical aspect and agreement in Amharic: a brief overview. Ms., University of Tromsø. Available on LingBuzz: lingbuzz/005527
Desalegn Workneh. 2020. The voice system of Amharic. Doctoral dissertation, University of Tromsø.
Desalegn Workneh. 2022. Negation is discontinuous not in Amharic. Ms., University of Tromsø. Available on LingBuzz: lingbuzz/006628.
Desalegn Workneh. To appear. Competition for case and agreement -- a study on the causee and indirect objects of Amharic. *Rivista di Grammatica Generativa.* Available on LingBuzz: lingbuzz/006512
Despić, Miloje. 2017. Investigations on mixed agreement: polite plurals, hybrid nouns and coordinate structures. *Morphology* 27. 253-310.
Embick, David. 2010. *Localism versus Globalism in Morphology and Phonology.* Cambridge: MIT Press.
Embick, David. 2015. *The Morpheme: A Theoretical Introduction.* Amsterdam: Mouton.
Faust, Noam and Si Berrebi. 2022. To the future and back: new aspects of Modern Hebrew imperative truncation. *Radical: A Journal of Phonology* 4. 293-298.
Faust, Noam. This issue. Nifʕal – A verbal class which is two. In Ruth Kramer and Ur Shlonsky, eds. *Brill's Journal of Afroasiatic Languages and Linguistics* (Special issue).
Girma A. Demeke. 2003. The clausal syntax of Ethio-Semitic. Doctoral dissertation, University of Tromsø.
Girma Halefom. 1994. The syntax of functional categories: a study of Amharic. Doctoral dissertation, University of Quebec at Montreal.
Goldenberg, Gideon. 1964. On the Amharic tense system. *Journal of Semitic* 9. 47-49.
Hailu Fulass. 1980. On imperatives. *Journal of Ethiopian Studies* 14. 87-96.
Hale, Kenneth. 1973. Person marking in Walbiri. In Stephen R. Anderson and Paul Kiparsky, eds. *A Festschrift for Morris Halle.* New York: Holt, Rinehart and Winston. 308-344.
Halle, Morris. 1997. Distributed morphology: impoverishment and fission. In Benjamin Bruening, et al., eds., *MIT Working Papers in Linguistics 30: Papers at the Interface.* Cambridge: MITWPL. 425-449.
Halle, Morris and Alec Marantz. 1993. Distributed morphology and the pieces of inflection. In Ken Hale and Samuel Jay Keyser, eds. *The View from Building 20*. Cambridge: MIT Press. 111-176.
Han, Chung-hye. 1999. Cross-linguistic variation in the compatibility of negation and imperatives. *Proceedings of the 17th West Coast Conference on Formal Linguistics* (WCCFL 17). CSLI, Stanford, 265-279
Han, Chung-hye. 2001. Force, negation and imperatives. *The Linguistic Review* 18. 289–325.
Harbour, Daniel. 2003. The Kiowa case for feature insertion. *Natural Language and Linguistic Theory* 21. 543-578.
Harbour, Daniel. 2007. Against PersonP. *Syntax* 10. 223-242.
Harbour, Daniel. 2008a. Discontinuous agreement and the syntax-morphology interface. In Daniel Harbour, David Adger, and Susana Béjar, eds. *Phi Theory*. Oxford: OUP. 185-220.

Harbour, Daniel. 2008b. On homophony and methodology in morphology. *Morphology* 18. 75-92.
Harbour, Daniel. 2016. *Impossible Persons.* Cambridge, MA: MIT.
Harbour, Daniel. This issue. Discontinuous agreement: Nine birds, two stones. In Ruth Kramer & Ur Shlonsky, eds. *Brill's Journal of Afroasiatic Languages and Linguistics* Special issue.
Harizanov, Boris and Vera Gribanova. 2018. Whither head movement. *Natural Language and Linguistic Theory* 37. 461-522.
Harley, Heidi. 1994. Hug a tree: Deriving the morphosyntactic feature hierarchy. In Andrew Carnie and Heidi Harley, eds., *MIT Working Papers in Linguistics 21.* 289-320.
Harley, Heidi and Rolf Noyer. 1999. Distributed morphology (State-of-the-Article). *Glot International* 4. 3-9.
Harley, Heidi and Elizabeth Ritter. 2002. Person and number in pronouns: a feature-geometric analysis. *Language* 78. 482-526.
Harris, James. 1998. Spanish imperatives: syntax meets morphology. *Journal of Linguistics* 34. 27-52.
Harris, James and Morris Halle. 2005. Unexpected plural inflections in Spanish: reduplication and metathesis. *Linguistic Inquiry* 36. 195-222.
Hewett, Matthew. 2022. Allomorphy in Semitic discontinuous agreement: evidence for a modular approach to postsyntax. *Natural Language and Linguistic Theory*. https://doi.org/10.1007/s11049-022-09559-w
Hewett, Matthew. This issue. Discontinuous first person agreement in Semitic and postsyntactic modularity. In Ruth Kramer and Ur Shlonsky, eds. *Brill's Journal of Afroasiatic Languages and Linguistics* (Special issue).
Hudson, Grover. 1985. The principled grammar of Amharic verb stems. *Journal of African Languages and Linguistics* 7. 39-58.
Hudson, Grover. 2001. Amharic epenthesis. In Andrzej Zaborski, ed. *New Data and New Methods in Afroasiatic Linguistics: Robert Hetzron in Memoriam.* Wiesbaden: Harrassowitz. 65-75.
Isac, Daniela. 2015. *The Morphosyntax of Imperatives.* Oxford: OUP.
Jensen, Britta. 2003. Syntax and semantics of imperative subjects. *Nordlyd* 31. 150-164.
Kalin, Laura and Philipp Weisser. To appear. Minimalism and morphology. *Cambridge Handbook on Minimalism.* Cambridge: CUP.
Kane, Thomas Leiper. 1990. *Amharic-English Dictionary.* Wiesbaden: Harrassowitz.
Kinyalolo, Kasangati K.W. 1991. Syntactic dependencies and the spec-head agreement hypothesis in Kilega. Doctoral dissertation, UCLA.
Kouneli, Maria. 2021. Number-based noun classification: the view from Kipsigis. *Natural Language and Linguistic Theory* 39. 1195-1251.
Kramer, Ruth. 2009. Definite markers, phi-features, and agreement: a morphosyntactic investigation of the Amharic DP. Doctoral dissertation, UC Santa Cruz.
Kramer, Ruth. 2010. The Amharic definite marker and the syntax-morphology interface. *Syntax* 13. 196-240.
Kramer, Ruth. 2014. Clitic doubling or object agreement: the view from Amharic. *Natural Language and Linguistic Theory* 32. 593-634.
Kramer, Ruth. 2015. *The Morphosyntax of Gender.* Oxford Studies in Theoretical Linguistics 58. Oxford: Oxford University Press.

Kramer, Ruth. 2016. A split analysis of plurality: evidence from Amharic. *Linguistic Inquiry* 47. 527-559.
Kramer, Ruth. To appear. Syncretism in Distributed Morphology. In Artemis Alexiadou et al., *Cambridge Handbook of Distributed Morphology*. Cambridge: CUP.
Lehmann, Christian. To appear. Speech act participants in modality. Paper presented at the International Conference on Discourse and Grammar, Ghent, 2008. Available at https://www.christianlehmann.eu/?open=schriftenverzeichnis
Leslau, Wolf. 1995. *Reference Grammar of Amharic.* Wiesbaden: Harrassowitz.
LeTourneau, Mark S. 2021. Polarity allomorphy in Arabic imperatives. *Al-ʻArabiyya* 54. 1-35.
Martinović, Martina. 2017. Wolof wh-movement at the syntax-morphology interface. *Natural Language and Linguistic Theory* 35. 205-256.
Martinović, Martina. 2019. Interleaving syntax and postsyntax: Spellout before syntactic movement. *Syntax* 22:4. 378-418.
Mengistu Amberber. 2002. *Verb Classes and Transitivity in Amharic*. Münich: Lincom.
Meyer, Ronny. 2016. Tense and aspect in Ethiosemitic languages. In Lutz Edzard, ed. *The Morpho-Syntactic Encoding of Tense and Aspect in Semitic Languages.* Wiesbaden: Harrassowitz. 159-239.
Mulusew Asratie Wondem. 2014. The syntax of non-verbal predication in Amharic and Ge'ez. Doctoral dissertation, Universiteit Utrecht.
Neeleman, Ad and Hans van de Koot. 2017. Syntactic haplology. In Martin Everaert and Henk V. van Riemsdijk, eds. *The Wiley Blackwell Companion to Syntax*. 2nd ed. London: Wiley. 4377-4407.
Nevins, Andrew. 2011. Marked targets versus marked triggers and impoverishment of the dual. *Linguistic Inquiry* 42. 413-444.
Nevins, Andrew. 2012. Haplological dissimilation at distinct stages of exponence. In Jochen Trommer, ed. *The Morphology and Phonology of Exponence.* Oxford: OUP. 84-116.
Norris, Mark. 2016. Unifying subject agreement across clause types in Estonian. *Finno-Ugric Languages and Linguistics* 5. 3-37.
Noyer, Rolf. 1992. Features, positions, and affixes in autonomous morphological structure. Doctoral dissertation, MIT.
Noyer, Rolf. 1998. Impoverishment theory and morphosyntactic markedness. In Steven G. LaPointe et al., eds. *Morphology and its Relation to Phonology and Syntax.* Stanford, CA: CSLI. 264-285.
Oxford, Will 2019. Inverse marking and Multiple Agree in Algonquin: complementarity and variability. *Natural Language and Linguistic Theory* 37. 995-996.
Puškar-Gallien, Zorica. 2019. Resolving polite conflicts in predicate agreement. *Glossa* 4. 1-25.
Riemsdijk, Henk C. van. 2008. Identity avoidance: OCP-effects in Swiss relatives. In Robert Freidin, Carlos P. Otero & Maria Luisa Zubizarreta, eds. *Foundational Issues in Linguistic Theory. Essays in Honor of Jean-Roger Vergnaud*. Cambridge, MA: MIT Press. 227-250. https://doi.org/10.7551/mitpress/9780262062787.003.0010
Rivero, Maria-Luisa and Arhonto Terzi. 1995. Imperatives, V-Movement and logical mood. *Journal of Linguistics* 31. 301-332.
Salzmann, Martin. 2019. Displaced morphology in German verb clusters: an argument for post-syntactic morphology. *Journal of Comparative Germanic Linguistics* 22. 1-53.
Sandalo, Filomena. 2016. The relational morpheme of Brazilian languages as an impoverished agreement marker. In Emily Sadlier-Brown, Erin Guntly, and Natalie Weber, eds.

Workshop on Structure and Constituency in the Languages of the Americas (WSCLA) 20. UBCWPL 43. 82–88.
Shlonsky, Ur. 1989. The hierarchical representation of subject verb agreement. Ms., Haifa University.
Shlonsky, Ur. 1997. *Clause Structure and Word Order in Hebrew and Arabic: An Essay in Comparative Semitic Syntax.* Oxford: Oxford University Press.
Shlonsky, Ur. This issue. Rescaffolding the Bundle in Afroasiatic inflection: Tamazight and Hebrew. In Ruth Kramer and Ur Shlonsky, eds. *Brill's Journal of Afroasiatic Languages and Linguistics* (Special issue).
Soltan, Usama. 2007. On formal feature licensing in minimalism: aspects of Standard Arabic morphosyntax. Doctoral dissertation, University of Maryland, College Park.
Stemberger, Joseph Paul. 1981. Morphological haplology. *Language* 57. 791-817.
Tourabi, Abderrezzak. 2000. Arabic subject-verb agreement affixes: morphology, specification and spell-out. *MIT Working Papers in Linguistics* 42. 329-356.
Trommer, Jochen. 2003. The interaction of syntax and morphology in affix order. *Yearbook of Morphology* 2002. 283-324.
Trommer, Jochen. 2008. A feature-geometric approach to Amharic verb classes. In Asaf Bachrach and Andrew Nevins, eds. *Inflectional Identity.* Oxford: OUP. 206-236.
Tyler, Matthew and Itamar Kastner. 2022. Serial verb constructions and the syntax-prosody interface. *Natural Language and Linguistic Theory* 40. 285-306.
Wallace, Katherine. 2013. A concatenative approach to Semitic templatic morphology. Ms., New York University. Available at https://ling.auf.net/lingbuzz/002299.
Wechsler, Stephen. 2011. Mixed agreement, the person feature, and the index/concord distinction. *Natural Language and Linguistic Theory* 29. 999-1031.
van der Wurff, Wim. 2007. Imperative clauses in generative grammar: an introduction. In Wim van der Wurff, ed. *Imperative Clauses in Generative Grammar.* Amsterdam: Benjamins. 1-94.
Yuan, Michelle. 2020. Dependent case and clitic dissimilation in Yimas. *Natural Language and Linguistic Theory* 38. 937-985.
Zanuttini, Rafaella. 1997. *Negation and clausal structure. A comparative study of Romance languages.* New York: Oxford University Press.
Zanuttini, Rafaella. 2008. Encoding the addressee in the syntax: Evidence from English imperative subjects. *Natural Language and Linguistic Theory* 26. 185-218.
Zanuttini, Rafaella, Miok Pak, and Paul Portner. 2012. A syntactic analysis of interpretive restrictions on imperative, promissive, and exhortative subjects. *Natural Language and Linguistic Theory* 30. 1231-1274.
Zeijlstra, Hedde. 2013. Not in the first place. *Natural Language and Linguistic Theory* 31. 865-900.
Zhang, Shi. 1990. The status of imperatives in theories of language. Doctoral dissertation, U. of Arizona.