

Constraining Agree: A unified account of basic and inverse agreement in Georgian

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Abstract

This paper presents a novel analysis of verbal agreement in Georgian, using a simple Agree mechanism whereby a probe searches only once and agrees with a single goal. The Georgian agreement system has been used to argue for the mechanisms of Cyclic Agree (Béjar & Rizac 2009) and Multiple Agree (Nevins 2011), but I show that neither proposal fully captures the data, and furthermore, that re-analyzing the structure of Georgian transitive clauses allows us to do away with the need for complex Agree mechanisms in the language altogether.

1 Introduction

Georgian has a complex system of verbal agreement that has given rise to several analyses in recent years (e.g., Béjar & Rizac 2009; Nevins 2011; Lomashvili & Harley 2011; Foley 2017; Blix 2021; Bondarenko & Zoppi 2021; Thivierge 2021). Much of this work has focused on two properties of the language's agreement system: (1) person complementarity effects, whereby the person features of subjects and objects dictate which argument's features are exponed on the verb, and (2) omnivorous number effects, whereby plural agreement on the verb may cross-reference the subject or the object.

Special, non-standard agreement mechanisms have been proposed to capture these patterns. The most well-known of these are Cyclic Agree (Béjar & Rizac 2009; see also Clem 2022,

Keine & Dash 2022) and Multiple Agree (Nevins 2011), the former of which was put forth to account for the person complementarity effects, while the latter aimed to capture both person complementarity and omnivorous number effects. Georgian was one of the languages that initially motivated both of these proposals. However, I will argue that neither mechanism is actually necessary to account for the pattern in Georgian, and that, in fact, Georgian provides evidence against both. I present a novel analysis of Georgian agreement that is based on a simple Agree mechanism in which a probe only ever enters into an Agree relation with a single goal. This work of re-analyzing a complex agreement system with a simpler set of tools helps point us toward a more restrictive theory of Agree.

One of the main challenges for existing proposals is the fact that Georgian has two agreement paradigms for transitive verbs—one for “direct” or “basic” verbs, and another for “inverse” verbs, which are a class of primarily psych verbs. The latter category are labeled “inverse” because the agreement markers associated with subjects and objects are, for the most part, inverted from the basic paradigm—the morphemes that cross-reference subjects in basic verbs are, in inverse verbs, associated with objects, and vice versa. An example of a basic and an inverse construction are given in (1) and (2) (data from Melikishvili 2008). In all examples in this paper, boxes indicate the relevant agreement slots on the verb. For presentational consistency, I will include the three boxes in every example, even when there is no morpheme in a particular slot.

(1) me shen g-itsnob-∅- .
 1SG.NOM 2SG.ACC **2**-know-**1PRES**-
 “I know you.” (Basic)

(2) me shen m-i-q'var-xar- .
 1SG.DAT 2SG.NOM **1SG-VER-love-2INV.PRES**-
 “I love you.” (Inverse)

Accounting for both paradigms has proven difficult because the two agreement patterns are almost—but not completely—mirrored (see e.g., Lomashvili & Harley 2011, Nevins 2011). As a result, many analyses of Georgian agreement cannot account for the entire paradigm.

In this paper, I propose a new analysis of the agreement system in Georgian that handles the historically problematic corners of the paradigm and does not require the mechanisms of Cyclic Agree or Multiple Agree. The two core components of my proposal are as follows. First, I argue that person complementarity effects in Georgian arise from competition between the exponents of two separate instances of agreement, a Merge feature on v that constitutes an EPP requirement, and a downward-looking person probe. Second, I propose that this person probe triggers movement of a D element in the form of clitic doubling, and that this movement feeds number agreement, yielding the omnivorous number pattern.

The paper is laid out as follows: Section 2 introduces basic and inverse clause types in Georgian. Section 3 lays out the patterns of person complementarity and omnivorous number patterns, as well as the Cyclic Agree and Multiple Agree accounts of these phenomena. Section 4 presents my analysis, showing how it accounts for the full set of patterns. Section 5 examines the relationship between inverse constructions and ditransitives, showing how the present analysis correctly predicts Person Case Constraint (PCC) effects in the latter. Section 6 summarizes the proposal.

2 Basic and inverse clauses

In this section, I will lay out the syntactic structure I assume for basic and inverse clauses in Georgian.

2.1 The basic paradigm

The basic verb paradigm in Georgian appears with canonical transitive verbs—those with a subject and an object. Basic clauses show aspect-based split-ergativity in the case marking on nominals; in the past tense, they have ergative-absolutive alignment (3), and in the present, they have nominative-accusative alignment (4). This variability in the case marking of nominals does not affect the agreement pattern, the focus here. For further discussion of

split-ergativity in Georgian, see Melikishvili (2008), Nash (2017).

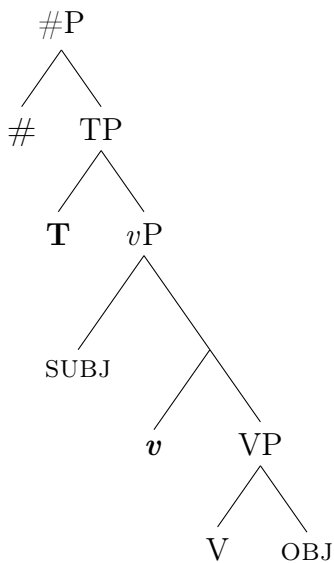
- (3) k'ats-ma saxl-i a- \emptyset -a-shen-**a**- \square .
 man-ERG house-NOM PVB-**3**-VER-build-**3SG.PST**-
 “The man built a house.”

- (4) k'ats-i saxl-s \square -a-sheneb-**s**- \square .
 man-NOM house-ACC **3**-VER-build.PRES-**3SG.PRES**-
 “The man builds a house.”

(Melikishvili 2008)

The structure I am assuming for basic clauses is shown in (5). The agent is in the specifier of vP , and there is a number head above T.

- (5) *Basic*



2.2 The inverse paradigm

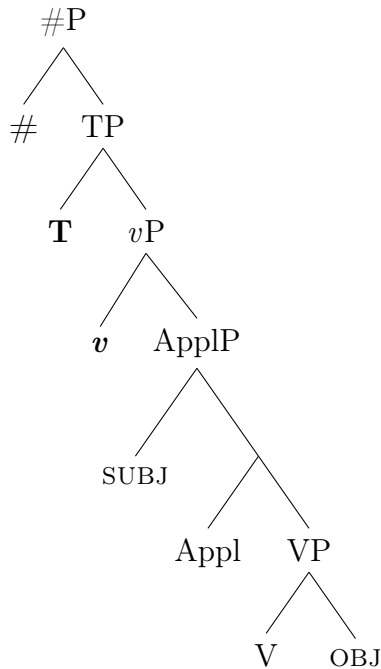
In inverse constructions, the subject appears with dative case while the object appears with nominative case (6), in both past and present tense.¹

¹Georgian is a pro-drop language, but for purposes of clarity, the examples in this paper will include the pronouns.

- (6) me shen **m**-i-q'var-**xar**-.
 1SG.DAT 2SG.NOM **1SG-VER-love-2INV.PRES-**
 “I love you.”

Previous work has shown that the dative arguments in inverse constructions pass subjecthood diagnostics and are indeed true subjects (Harris 1981; McGinnis 1995; McGinnis 1997). I assume, following Thivierge (2021), that inverse clauses have an applicative phrase in whose specifier the dative subject is merged, and that nothing is generated in Spec,*v*P. The structure is schematized in (7).

- (7) *Inverse*



Notice that there is an inner prefix *i-* in (6). This slot is filled in all inverse verbs and tracks the dative subject (*i-* for 1st/2nd person, *u-* for third person). In the literature on Georgian, the morphemes in this slot are called versionizers; I follow Thivierge (2021) in assuming that these morphemes are the result of spec-head agreement between the applicative head and the subject.

There is a further difference difference between basic and inverse constructions, namely

that inverse constructions allow movement of the object to the otherwise empty specifier of *vP* (Béjar 2000; Thivierge 2021). I will briefly discuss the evidence for object shift in the inverse, building on insights from Béjar (2000). See Thivierge (2021) for discussion of parallels between the this phenomenon and Rezac (2008)'s *absolute displacement*.

The first piece of evidence that (at least some) inverse objects can move to the specifier of *vP* comes from binding and word order facts. Inverse clauses seem to show freer word order of the subject and object than basic clauses. Compare the basic sentences in (8-9) to the inverse sentences in (10-11), from Béjar (2000). The only difference between the basic and inverse versions is the verb in the embedded clause: *naxos* is a regular transitive verb that appears in the basic pattern, while *achuenos* is a psych verb that uses the inverse pattern. In the basic pattern, the object of the embedded clause cannot surface before a preverbal subject (9). In the inverse, however, this ordering is possible (11). This pattern is consistent with the availability of object movement to the specifier of *vP* in the inverse.

(8) **Basic, subject > object**

Nino-*s_i* unda [rom Lali-*m_j* naxos **tavisi tavi**_{**i*/*j*} televisor-shi].
 Nino-DAT wants that Lali-ERG see.OPT self-NOM television-on

“Nino wants Lali to see herself on TV.” BUT *“Nino wants Lali to see Nino on TV.”

(9) **Basic, object > subject**

*Nino-*s* unda [rom **tavisi tavi** Lali-*m* naxos televisor-shi].
 Nino-DAT wants that self-NOM Lali-ERG see.OPT television-on

“Nino wants Lali to see herself on TV.”

(10) **Inverse, subject > object**

Nino-*s_i* unda [rom Lali-*s_j* achuenos **tavisi tavi**_{*i*/*j*} televisor-shi].
 Nino-DAT wants that Lali-DAT watch.OPT self-NOM television-on

“Nino wants Lali to watch herself on TV.” OR “Nino wants Lali to watch Nino on TV.”

(11) **Inverse, object > subject**

Nino-s_i unda [rom **tavisi tavi**_{i/j} Lali-s_j achuenos televizor-shi].
Nino-DAT wants that self-NOM Lali-DAT watch.OPT television-on

“Nino wants Lali to watch herself on TV.” OR “Nino wants Lali to watch Nino on TV.”

In addition to the word order asymmetries above, there is also an asymmetry in the binding patterns of basic versus inverse constructions. In the basic sentence in (8), the embedded object cannot be bound by the matrix subject, whereas it can in the inverse (10-11). The two possible readings of the inverse sentence suggest that the object may be bound either in its base position or its moved position. Béjar (2000) proposes that there is an empty specifier position in the inverse, to which objects can move, though she pursues a different analysis of the agreement paradigm.

The inverse paradigm mostly mirrors the basic paradigm when it comes to which arguments trigger which agreement morphemes. In general, where the basic paradigm shows object agreement, the inverse paradigm shows subject agreement, and where the basic paradigm shows subject agreement, the inverse paradigm shows object agreement. In the following sections, I show how the differences in structure between the basic and inverse paradigms account for the imperfect mirroring of the two paradigms, including an explanation of why object shift in the inverse is optional for 3rd person objects and obligatory for participant objects.

3 Patterns to account for

This section presents the patterns of person complementarity and omnivorous number in Georgian, as well as a brief summary of how the Cyclic Agree and Multiple Agree proposals handle the patterns. Tables containing the full paradigm are given in the Appendix.

3.1 Person complementarity

Georgian verbs have a prefix slot that expones features of either the subject or the object. There are two sets of morphemes that can appear in this position. When there is a 1st or 2nd person object, then a Set 1 morpheme appears, reflecting agreement with the object (12). Otherwise, a Set 2 morpheme appears, reflecting agreement with the subject (13). The morphemes in each set are given in Table 1 and Table 2. Note that 3rd person Set 1 markers and 2nd person Set 2 markers are usually null, but have non-null variants for a few particular verbs.

- (12) me shen $\boxed{\mathbf{g}}$ -itsnob- $\boxed{\emptyset}$ - $\boxed{}$.
 1SG.NOM 2SG.ACC **2**-know-1PRES-
 “I know you.”

- (13) me mas $\boxed{\mathbf{v}}$ -itsnob- $\boxed{\emptyset}$ - $\boxed{}$.
 1SG.NOM 3SG.ACC **1**-know-1PRES-
 “I know him/her.”

Table 1: Set 1 (object-referencing)

1ST.SG	<i>m-</i>
1ST.PL	<i>gv-</i>
2ND	<i>g-</i>
3RD	$\emptyset/s/h$

Table 2: Set 2 (subject-referencing)

1ST	<i>v-</i>
2ND	\emptyset/x
3RD	\emptyset

3.2 Omnivorous number

The relevant number pattern in Georgian shows up in the final suffix on the verb, where the plural marker *-t* lives. If this slot is filled, then it is filled by *-t*; there are no other possible morphemes. The behavior of *-t* is generally characterized as omnivorous—that is, it (almost always) appears when either the subject or the object is plural. Thus, for example, the verbs

in (14) and (15) have the same form, despite that the subject is plural in (14), and the object is plural in (15).²

(14) **PLURAL SUBJECT:**

chven shen da-g-p'at'ij-e-t.
 1PL.ERG 2SG.NOM PVB-2-invite-PART.PST-PL

“We invited you(SG).”

(15) **PLURAL OBJECT:**

me tkven da-g-p'at'ij-e-t.
 1SG.ERG 2PL.NOM PVB-2-invite-PART.PST-PL

“I invited you(PL).”

3.3 Cyclic Agree

Béjar & Rezac (2009)’s Cyclic Agree model provides an account of person complementarity effects in languages with a preference for agreeing with the internal argument of a transitive clause, such as Georgian, Basque, Mohawk, and Karok.

Under the Cyclic Agree model, transitive clauses in languages like Georgian have a person probe on *v*. This probe initiates its search by looking downward, entering into an Agree relation with the internal argument. The probe has person feature requirements that may or may not be satisfied by the internal argument. This constitutes the “first cycle” of agreement. If the first probe is not satisfied, then when the external argument is merged, *a second probe is added*, agreeing with this second argument. This is the “second cycle” of agreement. The person features of the arguments thus determine which argument’s features get spelled out on the verb.

However, as the authors note, Georgian differs from several other languages that they investigate in two significant ways. First, Georgian, unlike most of the other languages

²There is an additional effect of animacy on plural marking in Georgian. In general, inanimate arguments cannot trigger a plural affix. I leave this topic to future work and focus here on the pattern with animate arguments.

considered, has a separate set of morphemes for each of the “cycles” of agreement, shown in Table 1 and Table 2. Second, while languages like Mohawk and Basque spell out the added probe in their agreement morphology, according to the authors, Georgian does not. They write, “Nothing forces overt spell-out of any probe or Case: Georgian is like Basque in terms of syntax, but it does not spell out the added probe.” Neither of the facts listed above is particularly troubling on its own, though if an alternative proposal can account for them, that would be an advantage over Cyclic Agree. In Section 4, I will argue that my analysis does account for these facts.

Another potential difficulty for Cyclic Agree comes from intransitives. In some intransitive clauses, both unergative and unaccusative, the subject (which is the only argument in the sentence) is cross-referenced by a “second cycle” prefix.

(16) **Unaccusative**

me $\boxed{\mathbf{v}}$ -i-malebi.
1SG.NOM **1-VER**-hide

“I am hiding.”

(Makharoblidze 2012: 76)

(17) **Unergative**

me $\boxed{\mathbf{v}}$ -t'iri.
1SG.NOM **1-cry**

“I cry.”

(Makharoblidze 2012: 83)

For Béjar & Rezac (2009), the first probe on *v* is associated with the merging of VP, while the second probe is associated with the merging of the external argument. The fact that we see second cycle morphology in unaccusatives as well as unergatives casts doubt on this proposal, given the subject is only an external argument in the latter.³

³It should be noted that there are also some intransitive-looking verbs that have a “first cycle” prefix (1), and that this is consistent with the predicted behavior of Cyclic Agree.

(1) me $\boxed{\mathbf{m}}$ -dzinav- $\boxed{\mathbf{s}}$ - $\boxed{}$.
1SG.NOM 1-sleep-**DEFAULT.PRES**-
“I’m sleeping.”

“He/she knows you.” 3 > [+PART]

(20) me shen g-itsnob-∅- .
 1SG.NOM 2SG.ACC **2**-know-**1PRES**-

“I know you.” [+PART] > [+PART]

Unlike Cyclic Agree, Multiple Agree explicitly sets out to handle the omnivorous number phenomenon. Under Multiple Agree, a probe looking for [PLURAL] agrees with all accessible plural arguments. According to Nevins (2011), number features are syntactically privative—that is, [PLURAL] is a feature in the syntax, but singular is not syntactically specified. So, whereas with person features, an argument could intervene for a probe by having the wrong value of a particular feature, there is no such possibility with number features. Since there is no [-PLURAL] feature, there can be no intervener for a probe that is looking for a [PLURAL] feature. As a result, a Multiple Agree number probe will always successfully agree with an accessible plural argument.

There is both an empirical and a conceptual problem with this approach. I begin with the empirical problem. Nevins argues that full DPs are valued KPs, whereas pronominal clitics are deficient because they lack case, and only the latter can participate in Multiple Agree. The argument relies on data from the basic paradigm, where only 1st and 2nd person arguments trigger the plural suffix *-t*. Multiple Agree works for the basic paradigm; 3rd person arguments are KPs (not clitics), and so they do not participate in Multiple Agree. In inverse constructions, however, 3rd person arguments do yield the plural suffix *-t* in one particular configuration: 3rd person plural subjects trigger *-t* when the object is also 3rd person (21). This is incompatible with Multiple Agree being limited to clitics.

(21) mat is ∅-u-q'var-d-a-t.
 3PL.DAT 3SG.NOM 3-VER-love-TAM-DEFAULT.PST-**PL**

“They loved him/her.”

Moving now to the conceptual problem, Nevins claims that when there are two plural arguments in an omnivorous number configuration (22), the plural agreement marker (the

suffix *-t* in Georgian) reflects agreement with both of them. However, it is not clear that this is the case. It is equally plausible that the plural marker reflects agreement with only one of the arguments; in Georgian, at least, we have no way of knowing a priori. If the number probe is in fact agreeing with only one of the arguments, then Multiple Agree is not necessary to account for the phenomenon.

- (22) chven tkven da-g-p'at'ij-e-t.
 1PL.ERG 2PL.NOM PVB-2-invite-PART.PST-PL
 “We invited you(PL).”

In the next section, I will propose an analysis of Georgian agreement that does not use Cyclic Agree or Multiple Agree, and which I will argue is conceptually simpler. I will show that the proposal naturally handles the entire paradigm, including those parts that have historically caused difficulties, and furthermore that it explains seemingly unrelated phenomena such as object shift in inverse constructions.

4 Proposal

This section presents my analysis of Georgian agreement. I begin with an overview of the main ingredients of the proposal, then discuss how it works in detail for each slot on the verb.

4.1 Overview

Following Foley (2017) and Thivierge (2021), I take there to be three relevant heads in both the direct and the inverse (v , T , and $\#$), one associated with each affix slot. The prefix comes from v ; the inner suffix comes from T , and the outer suffix comes a number head at or above the level of T .

- (23) v° -VERB- T° - $\#^\circ$
 Slot1 Slot2 Slot3

I assume a simple Agree mechanism whereby a phi-probe that is looking for a feature f searches downward and establishes a relation with a goal bearing f . The feature f is then copied back onto the probe. Probing stops when either (1) the probe has found a goal bearing the relevant feature, or (2) the probe has looked at every available goal in its search domain. The failure of a probe to agree does not cause the derivation to crash (Preminger 2014).

My proposal differs from existing accounts in that I analyze the morphemes in the prefix slot as coming from two different sources. I propose that agreement with a phi-probe on v causes movement of a D element in the form of clitic doubling *if there exists a clitic form with the correct person features*, and that these clitics constitute the Set 1 morphemes for participant arguments. All of the Set 2 morphemes, on the other hand, are true agreement markers, generated by spec-head agreement with an EPP feature on v . Here I follow work arguing that agreement morphology can come from feature sharing between a head and its specifier (see Wiltschko 2006; Coon 2017; Coon et al. 2021 for similar proposals for other languages). I argue that this EPP feature is responsible for object shift in inverse constructions, and I show that EPP-driven movement and clitic movement can co-occur, which serves as evidence that the two mechanisms are distinct. Finally, I show that given this analysis, we get the number agreement pattern for free, as plural marking appears on the verb in exactly those configurations where a plural argument ends up in the search domain of the $\#$ head. In the remainder of this section, I will lay out the details of the proposal, showing derivations for the full paradigm.

4.2 v agreement: the prefix

The two sets of morphemes that can occupy the prefix slot are repeated in Tables 3 and 4. As previewed above, I analyze the participant Set 1 markers as clitics. I argue that participant arguments get special treatment in Georgian precisely because it is these arguments that have associated clitic forms in the language.

One reason we might think a priori that the participant Set 1 markers are clitics has to do

with Preminger (2011)’s notion of “featural coarseness” in clitics, which says that all of the features on a DP can be copied to generate a clitic, whereas with agreement morphology, only those features that can value the probe are copied back. Notice that all of the prefixes reflect only person features, with one exception. Among the Set 1 proclitics, there is a distinction between 1SG and 1PL; *gv-* is the only morpheme that expresses number as well as person features. The fact that a clitic expresses person *and* number features is consistent with this idea of featural coarseness in clitics.⁴ Another reason that the participant Set 1 markers look like clitics is that, like clitics generally, they do not have allomorphs.

However, given that cliticization is a syntactic mechanism, we should rely not just on clues in the surface morphology, but also examine what predictions are made about the rest of the Georgian agreement system when we treat the participant Set 1 morphemes as clitics. In the subsequent sections, I will show that a clitic analysis renders exactly the right elements visible to the high number probe. First, however, let us return to the topic of deriving the prefixes.

Table 3: Set 1 proclitics

1ST.SG	<i>m-</i>
1ST.PL	<i>gv-</i>
2ND	<i>g-</i>

Table 4: Set 2 agreement morphemes

1ST	<i>v-</i>
2ND	\emptyset/x
3RD	\emptyset

To explain the distribution of the two sets of prefixes, I adopt elements of a recent analysis by Longenbaugh (2019), with further insights from Newman (2021). Under this analysis, *v* has Merge features as well as the more widely-accepted Agree features.

Longenbaugh (2019), building on Müller (2010), proposes that a head with an EPP property in a particular language has, in addition to agreement probes, Merge features that can be equally satisfied by external or internal Merge. In the case of *v*, external Merge refers

⁴The 1PL clitic *gv-* appears to be composed of the 2ND person marker *g-* and the 1ST person marker *v-*. In Old Georgian, the distinction between *m-* and *gv-* was not one of number, but rather of clusivity (Tuite 1998). The morpheme *m-* was used for exclusive 1ST person (i.e. not including the addressee), whether singular or plural. In contrast, *gv-* was used for inclusive 1ST person (i.e. including the addressee).

to the introduction of the external argument in vP 's specifier position, and internal Merge is movement of the internal argument to vP 's specifier position. Longenbaugh (2019) shows how past-participle agreement in Romance languages can be captured under this model. He defines the following economy condition:

- (24) **Feature Maximality:** Given a head H with features $[F_1] \dots [F_n]$, if XP discharges $[F_i]$, XP must also discharge each $[F_j]$ that it is capable of.

This condition means that if an argument checks some feature on a head, then the argument will necessarily check all remaining features that it can satisfy. At the same time, it leaves open the possibility of variation in the order of operations. For example, a language may choose to merge the external argument before agreeing with the object, or vice versa. One such possibility, which I will posit for Georgian, is that v has a Merge feature and a phi-probe that is relativized to person features:

- (25) – $[\bullet D \bullet]$: for introducing the external argument
 – $[\pi]$: a person probe that triggers clitic doubling of the internal argument when the relevant clitic form exists⁵

I assume that $[\bullet D \bullet]$ comes with an unvalued phi-feature, which allows feature sharing between the specifier and the head of vP as part of the Merge process. Thus the Merge feature triggers spec-head agreement (see Wiltschko 2006; Coon 2017; Coon et al. 2021 for analyses that make use of the same assumption). I propose the following order of operations for Georgian:

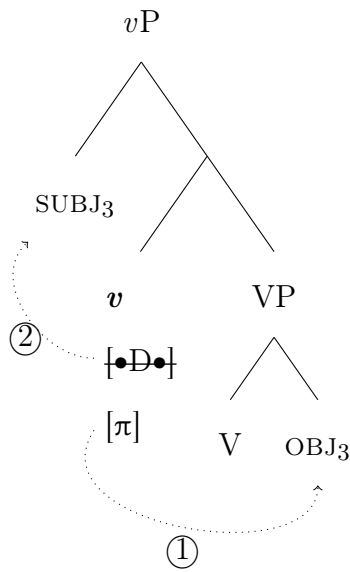
- (26) 1. $[\pi]$ searches downward to the object. If the object is 1st or 2nd person, then a clitic is generated and attaches to v . The presence of a clitic in the prefix slot on the verb prevents any spell-out of $[\bullet D \bullet]$ later on.

⁵I follow recent work (e.g., Anagnostopoulou 2003; Arregi & Nevins 2012; Preminger 2019) in proposing that clitics are moved D heads whose movement is triggered by an Agree operation between a probe and a goal DP.

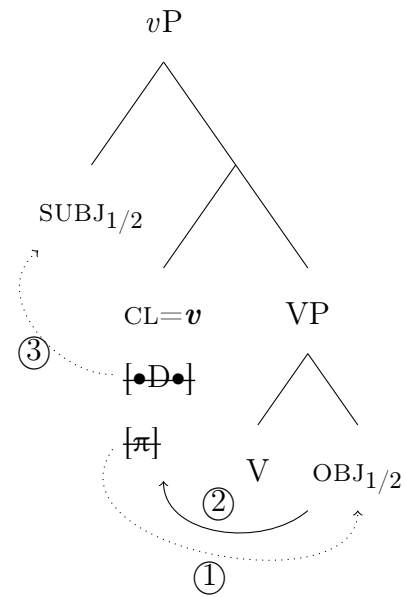
2. The subject (external argument) merges, and the Merge feature [**•D•**] agrees with it. Because this occurs after cliticization, we only see agreement morphology here if there is no clitic in the slot.

Examples are shown for two different argument configurations in (27) and (28), where dotted lines represent that a DP is accessible for potential agreement, and solid lines represent cliticization. The clitic movement in (28) will feed number agreement by rendering exactly the right arguments visible to the number probe, to be shown below.

(27) *Basic, 3 > 3*



(28) *Basic, 1/2 > 1/2*



(29) man isini
 3SG.ERG 3PL.NOM
 da- \emptyset -p'at'ij- a - \square .
 PVB-**3**-invite-3PST-
 “He/she invited them.” (Thivierge
 2019)

(30) me shen g -itsnob- \emptyset - \square .
 1SG.NOM 2SG.ACC **2**-know-1PRES-
 “I know you.”

By adopting this treatment of *v* in Georgian, we get a natural explanation for the two sets of prefixes. The participant Set 1 prefixes are moved clitics triggered by agreement with

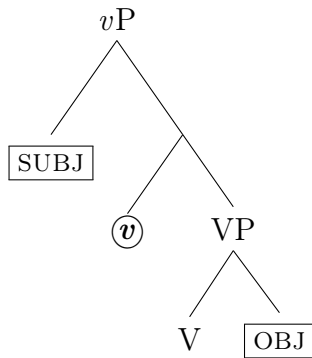
the downward-looking probe on v . The Set 2 prefixes reflect that the Merge feature [\bullet D \bullet] has been satisfied. These latter morphemes are only pronounced in the absence of a clitic. To account for the fact that clitics win the competition for the single prefix slot, I appeal to Preminger (2014)’s condition about morphological competition in agreement slots, based on data from Kichean and given in (31). In Georgian, the clitic competes with person agreement morphology.

(31) *Morphological competition in the Kichean absolutive agreement slot*

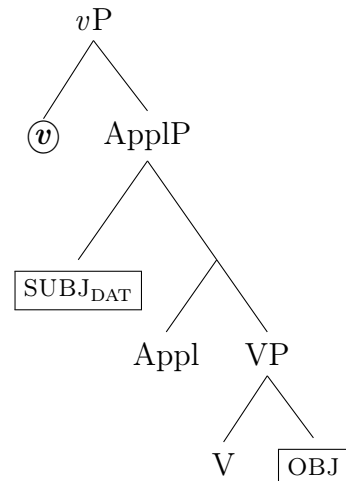
- a. The overt exponents of π^0 , $\#^0$, and any clitics adjoined to them, all compete for a single morphological slot.
- b. A clitic will always beat out other competing morphological material.

Let us now consider inverse constructions. Recall that the basic and inverse constructions differ in the positions of the subject and object relative to v (shown in (32) and (33)).

(32) *Basic*



(33) *Inverse*



The distribution of the prefix in the basic paradigm is perfectly mirrored in the inverse paradigm, with Set 1 morphemes associated with the dative subject, and Set 2 morphemes associated with the nominative object. Thus, if the subject is 1st or 2nd person, we see a Set 1 morpheme, regardless of the object’s person features (34). If the subject is 3rd person,

then we get a Set 2 morpheme (35).

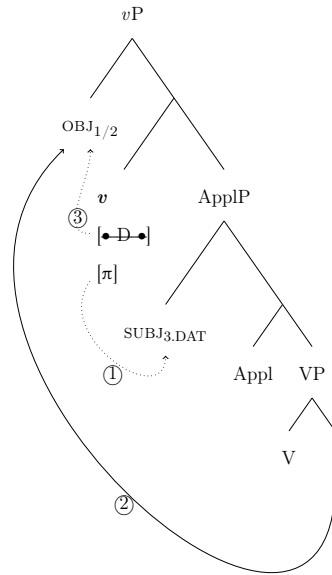
(34) shen me $\boxed{\mathbf{g}}$ -i-q'var- $\boxed{\text{var}}$ - \square .
 2SG.DAT 1SG.NOM **2**-VER-love-1INV.PRES-
 “You love me.”

(35) mas me $\boxed{\mathbf{v}}$ -u-q'var- $\boxed{\text{var}}$ - \square .
 3SG.DAT 1SG.NOM **1**-VER-love-1INV.PRES-
 “He/she loves me.”

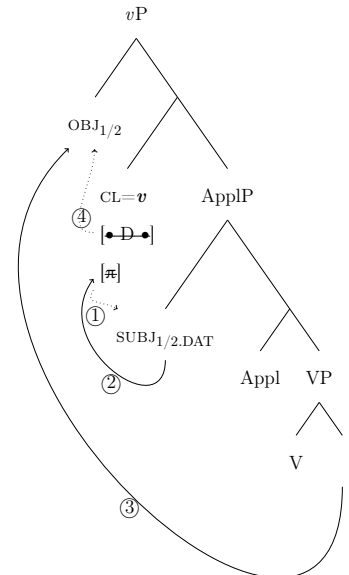
I propose that in inverse constructions, where no argument is generated in the specifier of *v*P, the EPP feature causes an argument to move to that position. As I will discuss in Section 4.4, there is some variation in whether it is the subject or the object that moves to satisfy the EPP; however, in configurations with a participant object, it is always the object that moves. I propose that this is because there would otherwise be a *Person Licensing Condition* (PLC) violation. The PLC requires participant arguments to be licensed by entering into an Agree relation with a functional head (Béjar & Rezac 2003). Since objects in inverse constructions are base-generated too low to be agreed with, they must move to a higher position. In this respect, Georgian inverse clauses resemble so-called *raising applicatives*, which involve an applicative argument that is base-generated low and then raised to some higher position for licensing purposes (e.g., Georgala 2012, Nie 2019). The EPP feature thus gives us an explanation for the object shift discussed in Section 2.

Below are trees for the different combinations of person features on each argument. Dotted lines represent that a particular DP is an accessible target of agreement, and solid lines represent movement. Checkmarks indicate that spec-head agreement has taken place. (36) and (37) have participant objects, which obligatorily undergo object shift. In these configurations, the person probe first looks downward to the dative subject; if the subject is 1st or second person, a clitic is generated. The Merge feature is then satisfied by the moved object and engages in spec-head agreement with it.

(36) *Inverse, 3 > 1/2*



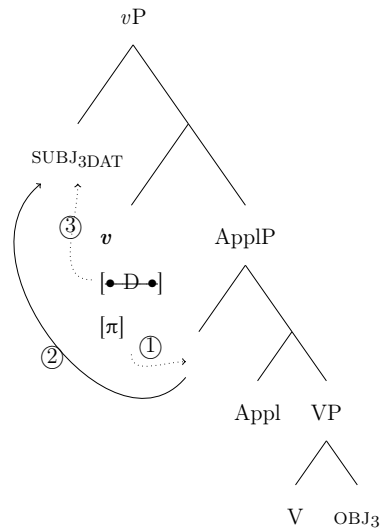
(37) *Inverse, 1/2 > 1/2*



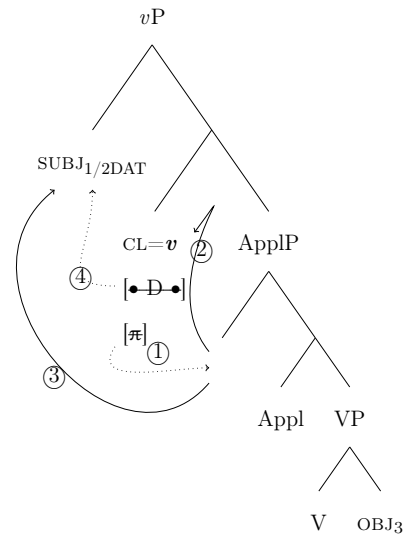
(38) mas me
 3SG.DAT 1SG.NOM
 [v]-u-q'var-[var]-[].
 1-VER-love-1INV.PRES-
 "He/she loves me."

(39) me shen
 1SG.DAT 2SG.NOM
 [m]-i-q'var-[xar]-[].
 1SG-VER-love-2INV.PRES-
 "I love you."

(40) *Inverse, 3 > 3*



(41) *Inverse, 1/2 > 3*



(42) mat is
 3PL.DAT 3SG.NOM
 [∅]-u-q'var-d-a-t.
 3-VER-love-TAM-DEFAULT.PST-PL
 “They loved him/her.”

(43) shen is
 2SG.DAT 3PL.NOM
 [g]-i-q'var-s-
 2-VER-love-DEFAULT.PRES-
 “You love him/her.”

This approach gives us several explanatory advantages over Cyclic Agree. First, it means that clitic movement and object shift can co-occur. If there were a single probing mechanism, we would not expect to see two separate instances of movement. Second, it explains why Set 1 and Set 2 morphemes are distinct, which is not the case in many other person hierarchy languages. Third, it explains the lack of any morphology spelling out cyclic expansion (i.e., the added probe in second-cycle agreement) in Georgian. Finally, it offers a natural explanation for the intransitive data in (44) and (45), repeated from Section 3.3. Under the Merge feature analysis, *v* has the feature [•D•] even if there is no external argument, so it should be possible to see the same pattern of agreement with the subject in intransitives as we do in transitive clauses, and this is in fact what we see. Under Cyclic Agree, second-cycle probing is only predicted to happen when there is an external argument.

(44) **Unaccusative**

me v-i-malebi.
1SG.NOM 1-VER-hide

“I am hiding.”

(Makharoblidze 2012: 76)

(45) **Unergative**

me v-t'iri.
1SG.NOM 1-cry

“I cry.”

(Makharoblidze 2012: 83)

To summarize what happens in the inverse, I propose that *v* first clitic doubles a participant subject. Then, either the subject or object moves to satisfy the EPP feature. If the object has a participant feature, then it is the object that moves. The Merge feature agrees with the moved argument. Like in the basic paradigm, the presence of a clitic prevents the spell-out of Agreement with the Merge feature. My analysis adopts one of the main insights from Béjar & Rezac (2009)—namely, that the person probe in Georgian clauses is housed on *v*—but I argue that the mechanism of Cyclic Agree is not actually needed for Georgian.

4.3 T agreement: the inner suffix

Before moving on to how my proposal accounts for the omnivorous number pattern in the outer suffix, I will show how it cleanly accounts for the pattern in the inner suffix. While neither Cyclic Agree nor Multiple Agree concern themselves with the inner suffix, I believe it is useful to demonstrate that my analysis captures the full agreement paradigm, as an argument in favor of adopting it.

The inner suffix turns out to reveal a great deal about how the agreement system works in Georgian, but has received less attention than the prefix and the outer suffix. Following previous work (e.g., Lomashvili & Harley 2011; Bondarenko & Zompì 2021; Thivierge 2021), I analyze this slot as reflecting agreement with a probe on T. In this section I will show that

if we assume the movement operations described above, the pattern of T agreement falls out very simply.

The morphemes that occupy the inner suffix slot are given in Table 5. These morphemes vary with tense.

Table 5: Inner suffixes, Basic

	Past	Present
1ST	<i>-e</i>	$-\emptyset$
2ND	<i>-e</i>	$-\emptyset$
3RD.SG	<i>-a</i>	<i>-s</i>
3RD.PL	<i>-es</i>	<i>-en</i>

In the basic paradigm, the inner suffix always agrees with the subject. In both past and present tense, there are three possible morphemes, depending on the ϕ -features of the subject: one for 1st/2nd person, one for 3rd person singular, and one for 3rd person plural. This pattern is parallel in the two tenses. Examples of basic verbs with this slot filled are given in (46) and (47).

- (46) is shen \boxed{g} -itsnob- \boxed{s} - \square .
 3SG.NOM 2SG.ACC 2-know-**3SG.PRES**-
 “He/she knows you.”

- (47) isini shen \boxed{g} -itsnob- \boxed{en} - \square .
 3PL.NOM 2SG.ACC 2-know-**3PL.PRES**-
 “They know you.”

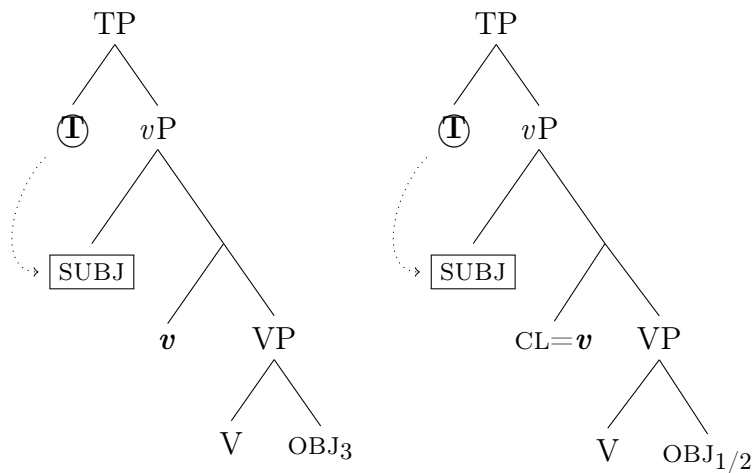
I take the inner suffix to be a reflex of agreement with a probe on T. This probe is a case-discriminating ϕ -probe that can be satisfied by any non-oblique DP bearing any set of ϕ -features. In the basic paradigm, shown in (48) and (49) for different combinations of arguments, the closest DP is always the subject, so T always agrees with it. Nothing additional needs to be said to derive the inner prefix pattern in the basic paradigm.

Table 6: Inner suffixes, Inverse

	Past	Present
1ST	<i>-di</i>	<i>-var</i>
2ND	<i>-di</i>	<i>-xar</i>
DEFAULT	<i>-da</i>	<i>-s</i>

(48) *Basic, $X > 3$*

(49) *Basic, $X > 1/2$*



Unlike the prefixes discussed above, the morphemes in the inner suffix slot have different forms in the basic and inverse paradigms. The inverse morphemes are given in Table 6. Notice that I have labeled *-da* and *-s* as default markers, and that they resemble the 3RD.SG markers from the basic paradigm. I will show that these morphemes appear precisely when T has not agreed with anything, since the structure of the inverse makes it so that 3rd person arguments (subject or object) are never visible to T. This is because 3rd person subjects are dative, and 3rd person objects are too low to be accessible.

While the inner suffix reflects agreement with the subject in the basic paradigm, it reflects agreement with the object in the inverse. However, unlike in the basic paradigm, the inner suffix only reflects agreement with 1st and 2nd person arguments in the inverse. Recall that in the basic paradigm, the morphemes in this slot distinguished between 3rd person singular and 3rd person plural. In the inverse, on the other hand, whenever there is a 3rd person

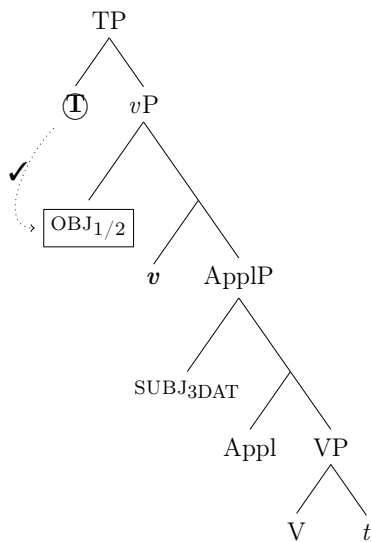
object, we see the default marker (which resembles the 3rd person singular marker from the basic paradigm). The relevant contrast is shown in (50) and (51).

(50) shen is \boxed{g} -i-q'var- \boxed{s} - $\boxed{}$.
 2SG.DAT 3PL.NOM 2-VER-love-DEFAULT.PRES-
 “You love him/her.”

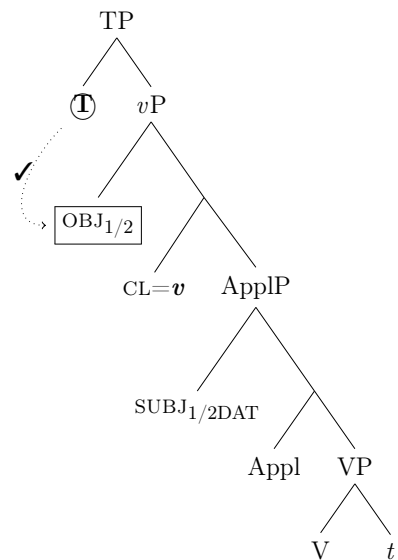
(51) shen isini \boxed{g} -i-q'var- \boxed{s} - $\boxed{}$.
 2SG.DAT 3PL.NOM 2-VER-love-DEFAULT.PRES-
 “You love them.”

Like in the basic paradigm, the inner suffix is a reflex of agreement with an unspecified ϕ -probe on T. Since T is a case-discriminating probe, the dative subjects in the inverse are not accessible to it. As discussed previously, 1st and 2nd person objects in the inverse undergo object shift to the specifier of v P. When this happens, the object is the closest argument to T, so T agrees with it. This is shown in (52) and (53).

(52) *Inverse, 3 > 1/2*



(53) *Inverse, 1/2 > 1/2*

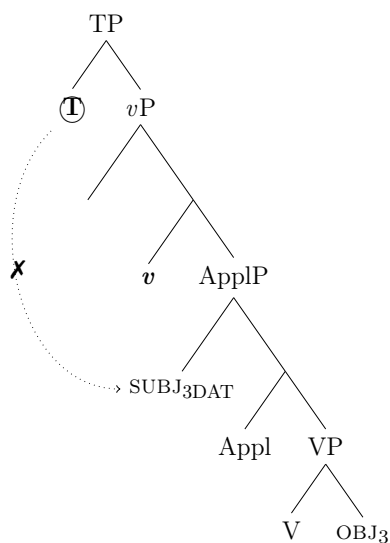


(54) mas me
 3SG.DAT 1SG.NOM
 [v]-u-q'var-[var]-[]
 1-VER-love-**1INV.PRES-**
 “He/she loves me.”

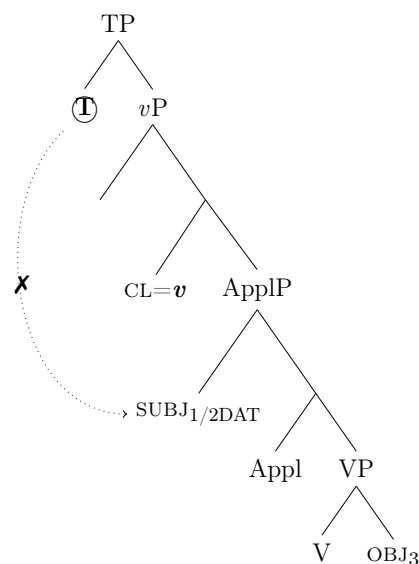
(55) me shen
 1SG.DAT 2SG.NOM
 [m]-i-q'var-[xar]-[]
 1SG-VER-love-**2INV.PRES-**
 “I love you.”

Now let us consider the case when the object is 3rd person and thus does not undergo object shift. In this configuration, the dative subject is closest to T. Note that this is true regardless of whether the subject has been cliticized on v (shown in (56) and (57)). Here we see default agreement, with no distinction based on the number features of the object (58-61). This is because the probe on T is case-discriminating, so the dative argument cannot serve as a target of agreement, and furthermore acts as an intervener for agreement with anything lower. This explains why we don't see the 3rd singular versus 3rd plural distinction in T-agreement in the inverse: in these contexts, we are seeing *default* agreement, since T is not agreeing with anything.

(56) *Inverse, 3 > 3*



(57) *Inverse, 1/2 > 3*



- (58) shen is [g]-i-q'var-[s]-[].
 2SG.DAT 3PL.NOM 2-VER-love-DEFAULT.PRES-
 “You love him/her.”
- (59) shen isini [g]-i-q'var-[s]-[].
 2SG.DAT 3PL.NOM 2-VER-love-DEFAULT.PRES-
 “You love them.”
- (60) mas is [∅]-u-q'var-[s]-[].
 3SG.DAT 3SG.NOM 3-VER-love-DEFAULT.PRES-
 “He/she loves him/her.”
- (61) mas isini [∅]-u-q'var-[s]-[].
 3SG.DAT 3PL.NOM 3-VER-love-DEFAULT.PRES-
 “He/she loves them.”

T agreement even provides further evidence for displacement of participant objects in inverse constructions, which I proposed was the result of an EPP feature on *v*. The evidence comes from the fact that auxiliary verbs appear in inverse constructions in the present tense, in exactly those configurations with participant objects. In (62) and (63), the inner suffix on the verb takes the form of the auxiliary verb meaning *to be*, conjugated in its 1st and 2nd person forms (*-var* and *-xar* respectively). Assuming that these auxiliaries are evidence of an interaction with T, these data give evidence that participant objects are in a position visible to T.

- (62) mas me [v]-u-q'var-[var]-[].
 3SG.DAT 1SG.NOM 1-VER-love-1INV.PRES-
 “He/she loves me.”
- (63) mas shen [∅]-u-q'var-[xar]-[].
 3SG.DAT 2SG.NOM 2-VER-love-2INV.PRES-
 “He/she loves you.”

Below are examples of *-var* and *-xar* used as genuine auxiliaries.

- (64) me [v]-dge **var**.
 1SG.NOM 1-stand **be.1SG**
 “I am standing.”

- (65) me \square -dge **xar**.
 1SG.NOM 2-stand **be.2SG**
 “You are standing.”

Compare this with the inverse construction in (66), which has a 3rd person object. In (66), there is no auxiliary, just the default marker.

- (66) \square -u-q'var-**s**- \square .
 3-VER-love-**DEFAULT.PRES**
 “He/she loves them.” (Tuite 1998: 126)

Thus the distribution of the inner suffix, like that of the prefix, can be explained with a unified mechanism for the basic and the inverse paradigms. Furthermore, the movement operations I proposed in the *v* domain create the configurations that yield successful agreement versus default agreement with T.

4.4 # agreement: the outer suffix

This section sketches how my proposal handles omnivorous number in Georgian. I take the outer suffix to be generated by a probe that has an unvalued plural feature, and which is situated at least as high as T. For the purposes of clarity, I have placed a #P projection above TP, but my analysis would work the same way if the number probe were simply a second probe on T. I remain agnostic as to whether *-t* is a clitic, as argued by Nevins (2011); its status is not crucial to this proposal.

The number probe searches downward to the accessible DPs—i.e., those in its search domain. Here, the search domain is everything outside the complement of *v*, according to the *Phase Impenetrability Condition* (PIC) (Chomsky 2000). The PIC states that items in the complement of a phase head are invisible to higher probes. I assume that transitive *v*Ps are phases.

- (67) *Phase Impenetrability Condition* (Chomsky 2000)

In phase α with head H, the domain of H is not accessible to operations outside α , but only H and its edge.

In the basic paradigm, *-t* behaves omnivorously, i.e. it can agree with the subject or the object. However, *-t* does *not* appear when the only plural argument is a 3rd person object. Recall from Section 4.2 that 3rd person objects are the only objects that do not get cliticized on *v*. Since these objects remain in the complement of *v*, they are inaccessible to the high number probe. We can state the following generalization.

- (68) **Generalization:** *-t* appears when there is an argument that is both plural and accessible to #.

There is a class of exceptions to this generalization, which can be characterized as follows:

- (69) **General condition for the absence of *-t*:** *-t* fails to appear when a number feature is realized elsewhere on the verb.

The two cases in which this can occur are given below.

- (70) *The first exception.* If the only plural argument is a 1st person plural object, then *-t* does not appear.

- (71) *The second exception.* If the subject is 3rd person plural, then *-t* does not appear.

The environment in (70) is the exact configuration where we get the proclitic *gv-*, the one preverbal morpheme that spells out number alongside person features (72). On the other hand, (71) describes the only scenario where the inner suffix (from T agreeing with the subject) spells out a plural feature (73). This latter situation arises because there is a number distinction for the inner suffix for 3rd person.

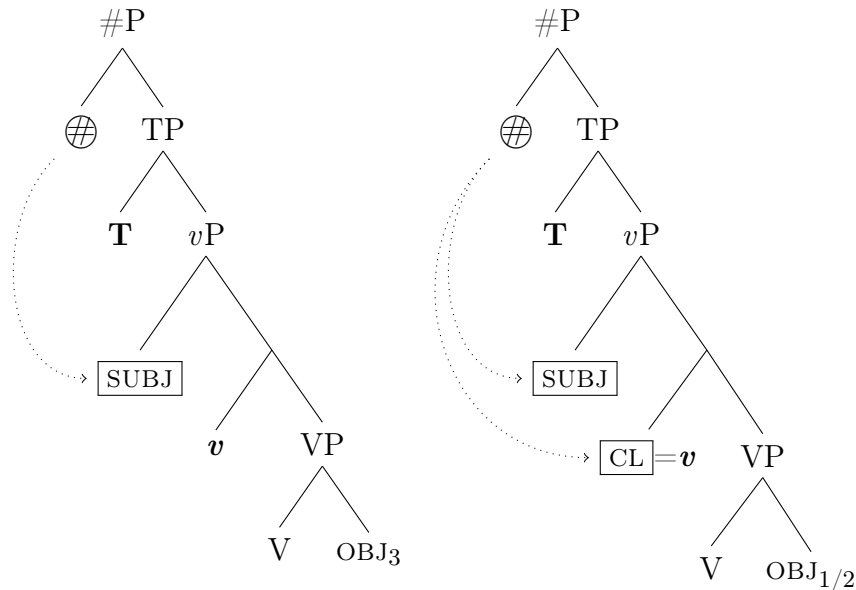
- (72) shen chven da-gv-p'at'ij-e- .
 2SG.ERG 1PL.NOM PVB-**1PL**-invite-PART.PST-
 “You(SG) invited us.”

- (73) mat tkven da-g-p'at'ij-es-
 3PL.ERG 2PL.NOM PVB-2-invite-**3PL.PST**-
 “They invited you(PL).”

I take the absence of *-t* in these configurations to have morphological explanations, which I will discuss in Section 4.6. Crucially, I do not take these absences to indicate any structural anomalies in the clauses where they occur.

I will now show derivations for the different possible configurations of arguments. There are two configurations to consider in the basic paradigm: **(i)** when the object is 3rd person, in which case it remains low (74), and **(ii)** when the object is 1st or 2nd person, in which case it cliticizes to *v* (75). In the first case, we see the outer suffix tracking the subject only. In the second case, the outer suffix can track the subject and the object (there is a single *-t* no matter whether one or both arguments are plural). In the basic paradigm, the subject is always in the specifier of *vP*, so it is always accessible to the number probe.⁶

- (74) *Basic, X > 3* (75) *Basic, X > 1/2*



⁶In a configuration like (75) in which both arguments are plural, my proposal does not require the lower plural feature to be agreed with. Agreement with a single plural feature is enough to generate *-t*. In this respect it differs from Multiple Agree.

Note that the $\#$ -probe must be able to see number features on a clitic, even if the form of the clitic does not make reference to number. I argue that the clitic retains all of its phi-features, and that this is due to the “featural coarseness” of clitics (Preminger 2011), discussed in Section 4.2. We have seen that one of the Georgian clitics (*gv-*) makes reference to a plural feature, so even though the 2nd person clitic *g-* is not pronounced with a number distinction, I assume that number features are still present on the moved D element.

My analysis also provides an explanation for certain sentences in the basic paradigm that involve a focused 3rd person plural object. In such sentences, exemplified by (76) below, the focused object triggers the plural suffix *-t*. Assuming that the focused object has moved to a high focus position, my analysis predicts that it should be accessible to the number probe.

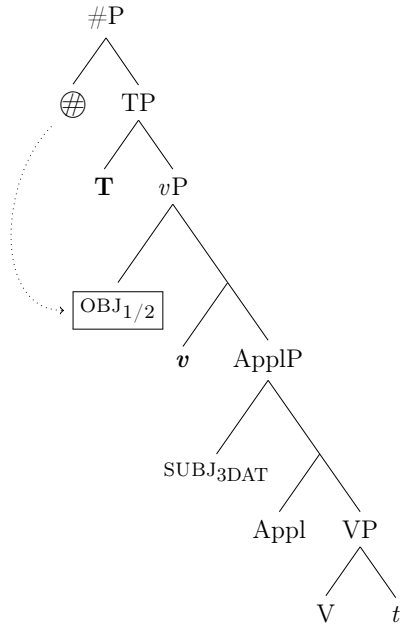
- (76) mesame seri-is nak’vt-eb-s saerto punkcia $\boxed{\emptyset}$ -a-ertianeb- $\boxed{}$ - \boxed{t} .
 third series-GEN form-PL-DAT common function-NOM 3-PVB-unite-3-PL

“A common function unites **the forms of the third series.**” (Gogolashvili 1984: 14)

Moving now to the inverse paradigm, we can describe the distribution of *-t* with the exact same generalization as in the basic paradigm: the outer suffix *-t* appears whenever there is a plural argument outside of the complement of *v*. The pattern can be derived exactly as in the basic paradigm: there is a probe searching for a plural feature, which and agreement with this probe generates *-t*.

In the inverse, there are four possible configurations. Let us first consider the two configurations that involve a participant object: **(i)** when the subject is 3rd person (77), and **(ii)** when the subject is 1st/2nd person (78). In the former, the outer suffix tracks the object the object (the subject in the specifier of ApplP is inaccessible). In the latter, both arguments are accessible; the probe agrees with the highest one that has a plural feature.

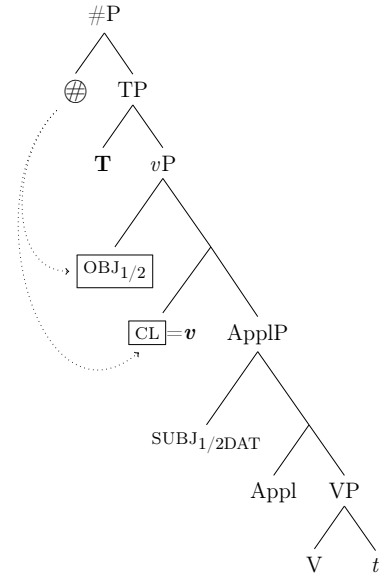
(77) *Inverse, 3 > 1/2*



(79) \emptyset -u-q'var-xar-t.
 2-VER-love-2INV.PRES-PL
 "He/she loves **you(pl)**."

(80) \emptyset -u-q'var-xar- \square .
 2-VER-love-2INV.PRES-
 "**They** love you(sg)."

(78) *Inverse, 1/2 > 1/2*

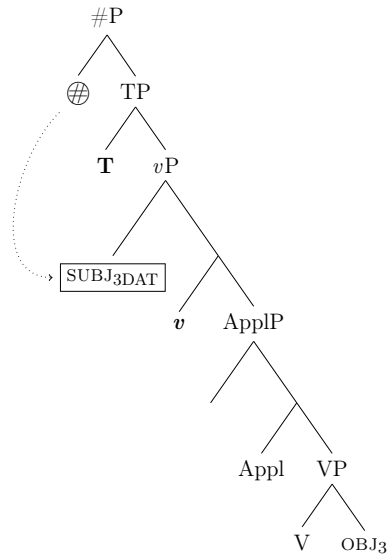


(81) g-i-q'var-var-t.
 2-VER-love-1INV.PRES-PL
 "**You(pl)** love me."

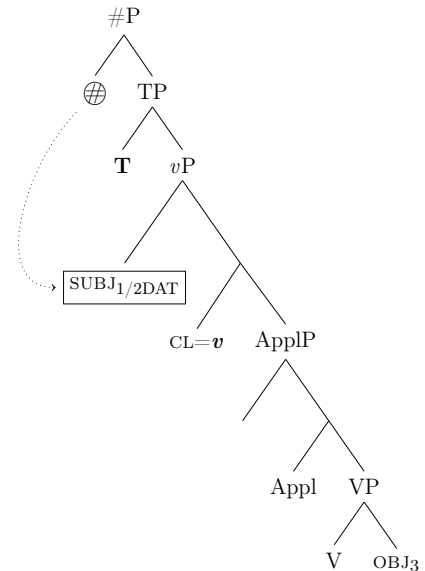
(82) g-i-q'var-var-t.
 2-VER-love-1INV.PRES-PL
 "You(sg) love **us**."

Finally, there are the two cases that involve 3rd person objects: **(i)** when the subject is 3rd person (83), and **(ii)** when the subject is 1st or 2nd person (84). In both configurations, the subject has moved to Spec,vP to satisfy the EPP feature, and is therefore accessible to the number probe. The object, which remains low, is inaccessible.

(83) *Inverse, 3 > 3*



(84) *Inverse, 1/2 > 3*



(85) \emptyset -u-q'var-d-a-t.

3-VER-love-TAM-DEFAULT.PST-PL

“**They** loved him/her.”

(87) g-i-q'var-d-a-t.

2-VER-love-TAM-DEFAULT.PST-PL

“**You(pl)** loved him/her.”

(86) \emptyset -u-q'var-d-a- \square .

3-VER-love-TAM-DEFAULT.PST-

“He/she loved **them**.”

(88) g-i-q'var-d-a- \square .

2-VER-love-TAM-DEFAULT.PST-

“You(sg) loved **them**.”

(83) is the only configuration across either paradigm in which the 3rd person plural dative subject triggers number agreement. The ability for a 3rd person argument to participate in number agreement is a significant data point, revealing that omnivorous number is not restricted to participant arguments, as some authors have suggested (e.g., Lomashvili & Harley 2011, Nevins 2011). In particular, Nevins (2011)’s Multiple Agree analysis explicitly argues that Multiple Agree only targets clitics, while also arguing that Georgian does not have 3rd person clitics. This makes the wrong prediction about (83), where *-t* tracks a 3rd person argument that has not been cliticized. The movement-based analysis I have proposed does not require omnivorous number marking to rely on whether something is a clitic.

A recent proposal that shares several elements in common with mine is Thivierge (2021). We both analyze *v* as having an EPP feature that is responsible for object shift in the inverse. However, our analyses differ in that I link this EPP feature to Set 2 morphology in the prefix slot, whereas Thivierge adopts a Cyclic Agree analysis of *v*.

Another major difference between our proposals regards whether the phi-probe on *v* triggers movement of the internal argument; I propose that it does, and that this movement feeds number agreement. This distinction is important for sentences like (89), in which a 2nd person object is the only plural argument. In this sentence, Thivierge has to stipulate that *g...-t* is a circumfix (the only one in the paradigm) generated by the person probe, since the plural argument is not high enough to be seen by the number probe. This leaves the rather unsatisfying state of affairs that there are two kinds of plural-marking *-t* suffix. Under my analysis, *v*-triggered movement puts the plural argument in a place visible to the number probe, meaning that we do not have to posit more than one kind of *-t* suffix.

- (89) man tkven da-g-p'at'ij-a-t
 3SG.ERG 2PL.NOM PVB-2-invite-3SG.PST-PL
 “He/she invited you(PL).”

4.5 Converging evidence from diachronic change

Now that I have laid out the full proposal, I will briefly discuss a piece of converging evidence for the movement-based approach: a diachronic change regarding which argument satisfies the EPP feature on *v*. I have proposed that in inverse clauses, the dative subject moves to Spec,*v*P to satisfy the EPP, unless there would be a PLC violation, in which case the object undergoes this movement. I will first present some historical evidence showing that it used to be the object that moved to satisfy the EPP in all cases. Recall that the inner suffix in modern Georgian agrees with the raised participant object in the inverse, and that otherwise, there is default agreement. In Early Old Georgian, T agreed with 3rd person objects in inverse constructions (90), as well as participant objects. Thus, all inverse objects

participated in T agreement.

(90) [x]-u-q'war-[an]-[].

3-VER-love-3PL.PRES-

“He/she loves **them**.” (Tuite 1998: 126)

The modern Georgian equivalent of (90) is (91), where we get default agreement.

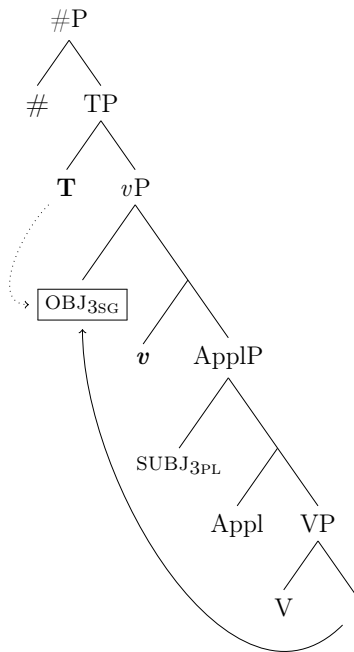
(91) [∅]-u-q'var-[s]-[].

3-VER-love-DEFAULT

“He/she loves **them**.” (Tuite 1998: 126)

These data strongly suggest that in Early Old Georgian, all inverse objects moved to the specifier of *vP*. This predicts that 3rd person *subjects* in inverse 3 > 3 configurations would *not* trigger the plural suffix *-t*, since they would remain low and inaccessible to the number probe. This is exactly what we find (93).

(92) *Early Old Georgian inverse, 3PL > 3SG*



(93) [x]-u-q'war-[s]-[].

3-VER-love-3SG-

“**They** love him/her.” (Tuite 1998: 126)

Compare this to the modern Georgian version in (94), in which the object remains low and the subject moves to the empty specifier position, where it is accessible for number agreement. Thus there is a correlation between the inner suffix and the outer suffix, in the exact manner my analysis predicts.

(94) [∅]-u-q'var-[]-[t].

3-VER-love-DEFAULT.PRES-PL

“**They** love him/her.” (Tuite 1998: 126)

In modern Standard Georgian, only participant objects obligatorily raise to the specifier position. However, there is some optionality in whether 3rd person objects can raise, perhaps as a relic of the older system. Some inverse verbs allow two conjugation patterns, as in (95) and (96).

(95) mat isini she-[∅]-u-q'var-[da]-[t].

3PL.DAT 3PL.NOM PVB- -VER-love-DEFAULT-PL

“They fell in love with them.” (Tuite 1998: 128)

(96) mat isini she-[∅]-u-q'var-[dnen]-[].

3PL.DAT 3PL.NOM PVB- -VER-love-3PL.INV-

“They fell in love with them.” (Tuite 1998: 128)

In (95), we see the standard agreement pattern. The default marker in the inner suffix tells us that the probe on T cannot see any non-dative argument, which means that the object has remained low. The subject has moved into the empty specifier position, where it is visible to the number probe. In (96), on the other hand, we see the 3PL morpheme in the T-agreement slot. Since T cannot agree with datives, it follows that the 3rd person object has moved up to the specifier of *v*P, where it is visible to T. The absence of *-t* here is

analogous to the pattern in the basic, where a plural feature that is spelled out in the inner suffix prevents the exponing of the outer plural suffix (Section 4.6). My analysis predicts that if a 3rd person object is able to undergo object shift in some inverse configuration, then T should be able to agree with it, and we should get a plural inner suffix.

4.6 Morphological quirks

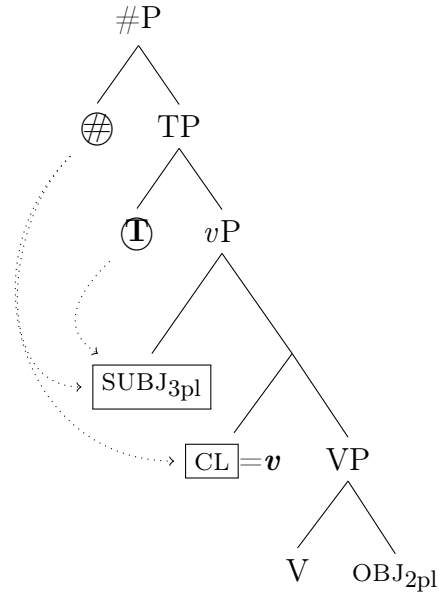
This section discusses morphological operations that affect whether the plural suffix *-t* surfaces on a verb, as previewed in Section 4.4.

4.6.1 Impoverishment

In the basic paradigm, the T-agreement inner suffix can take the 3rd person plural form *-es* (past) or *-en* (present). When this happens (i.e., when the subject is 3PL), the outer suffix slot remains empty, even though we would expect *-t* given that the subject is accessible to the probe on $\#$. This is exemplified in (97), which has the structure in (98).

- (97) mat tkven da-g-p'at'ij-es-
 3PL.ERG 2PL.NOM PVB-2-invite-**3PL.PST**-
 “They invited you(PL).”

- (98) *Basic*, 3PL > 2PL



Importantly, the plural suffix *-t* fails to appear even when there is a second plural argument, different from the one cross-referenced by the inner suffix. I propose that this restriction is due to *impoverishment*: when adjacent heads agree with identical features, the features are then deleted from one of the heads (see Nevins 2007 for Spanish; Oxford 2019 for Algonquin).

We can apply this to the Georgian example in (97). In this configuration, the probe on T agrees with the argument in the specifier of *vP* and copies back the feature set [PERS, PL] from the 3rd person plural argument. Then the number probe, which sees this same argument first, copies back the same features. Since the feature sets match, the features on the number probe are deleted, and the *-t* suffix is not spelled out (99). This explains the lack of a *-t* suffix in 3PL > 2PL and 3PL > 3PL configurations.

- (99) mat tkven da-g-p'at'ij-es-
 3PL.ERG 2PL.NOM PVB-2-invite-**3PL.PST**-
 “They invited you(PL).”
 T: {[PERS], [PL]} → *-es*: {[PERS], [PL]}
 #: ~~{[PERS], [PL]}~~

In Georgian, it is the higher head whose features are deleted. A possible explanation

for why it is the higher head that deletes in Georgian, as opposed to the lower head in, for example, Algonquin, is that the head with the fewest features gets impoverished. In the above Georgian example, T has copied back person and number features, while # has copied back only number features. In Oxford (2019)’s account of Algonquin, the lower Voice head has fewer features than the neighboring Infl head, and it is Voice’s features that delete.

4.6.2 Fission/Cyclic spell-out

The other scenario in which the plural suffix *-t* fails to appear when we would expect it to is when the lower argument is 1st person plural, and there is no other plural argument. In this configuration, *v* generates the clitic *gv-*. Recall that *gv-* is the only one of the prefixes that spells out number as well as person. In effect, then, *-t* would be entirely redundant, even though the clitic is in an accessible position to the number probe.

- (100) shen chven da-gv-p’at’ij-e- .
 2SG.ERG 1PL.NOM PVB-**1PL**-invite-PART.PST-
 “You(SG) invited us.”

We cannot, however, apply the same notion of impoverishment invoked above because there is a fundamental difference between the two scenarios. With a plural inner suffix, as shown in Section 4.6.1, *-t* is blocked for *any* plural argument in the sentence. With the prefix *gv-*, on the other hand, *-t* is only blocked for the *same* argument. Consider (101), where the inclusion of a plural subject results in *-t* being pronounced.

- (101) tkven chven da-gv-p’at’ij-e-t.
 2PL.ERG 1PL.NOM PVB-**1PL**-invite-PART.PST-**PL**
 “You(PL) invited us.”

Interestingly, this pattern (where 1st person plural has its own morpheme, but 2nd and 3rd person plural are referenced by separate person and number markers), is also attested in other languages such as Basque and Hebrew. Arregi & Nevins (2008) account for the phenomenon using Fission; Halle & Marantz (1993) and Thivierge (2021) take the same approach for Georgian.

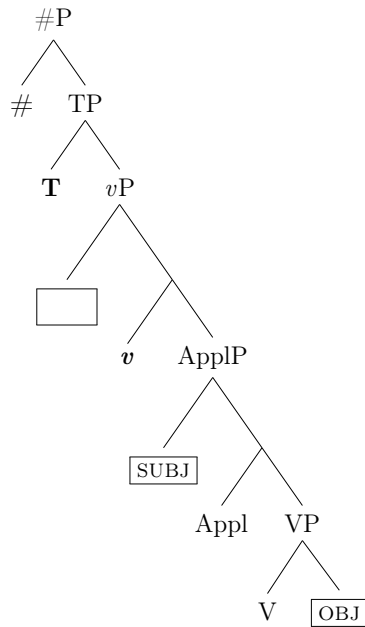
There is an alternative account, by Bondarenko & Zompì (2021), which has the number probe able to agree with phase heads. Under this account, the probe may agree with a plural argument in the specifier of *v*P, or, if there is no such plural argument, may agree with “leftover” features on *v* that have not been spelled out. However, as the authors point out, their analysis runs into problems in the inverse, where it does not capture number agreement with 3rd person subjects. Whatever the account, I take the absence of *-t* not to be due to different syntactic structure in these clauses.

5 Implications for the PCC in ditransitives

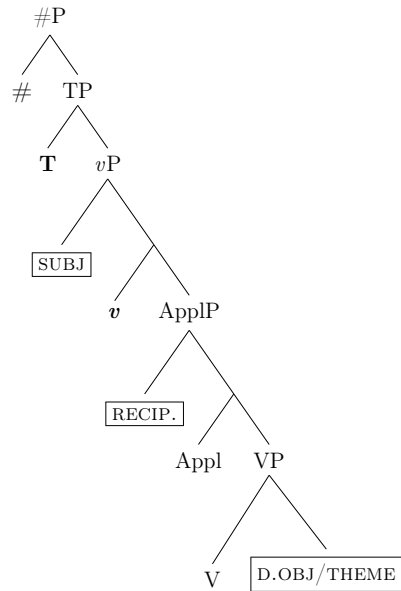
I have proposed that a simple Agree mechanism can account for the verbal agreement pattern in Georgian. In this section, I discuss implications for the Person-Case Constraint, showing that my account correctly predicts the existence of the PCC in ditransitives but not inverse clauses.

As we have seen, inverse constructions in Georgian have a dative argument above a nominative argument within the *v*P. This makes them look strikingly similar to ditransitives; both clause types have an Applicative projection that introduces an argument higher than the direct object. In the inverse, the applicative argument is the subject, whereas in a ditransitive, the applicative argument is the recipient. Structurally, then, the two constructions differ in whether there is an argument generated in the specifier of *v*P (no in the inverse, yes in a ditransitive). The two structures are shown below.

(102) *Inverse*



(103) *Ditransitive*



Despite the structural similarities, ditransitives are subject to a Strong PCC effect, which bans configurations in which the direct object is 1st or 2nd person (104). A natural question at this point is why there is no PCC effect in inverse clauses—that is, why are participant objects allowed in the inverse (105)?

- (104) *vano-m (shen) she-**g**-adar-**a**- givi-s.
 Vano-ERG 2SG.NOM PVB-**2SG**-compare-3SG.PST- Givi-DAT
 “Vano compared **you** to Givi.” * 3 > [PART] (Bonet 1991)

- (105) mas (shen) -u-q'var-**xar**-.
 3SG.DAT 2SG.NOM **2**-VER-love-2INV.PRES-
 “He/she loves you.” * 3 > [PART]

The difference comes down to whether the specifier position is filled, and thus whether that position is available for the direct object to move into. The *Person Licensing Condition* (Béjar & Rezac 2003) states, “An interpretable 1st or 2nd person feature must be licensed by entering into an Agree relation with a functional category.” Under a licensing account to PCC effects, the lack of a PCC effect in the inverse can be naturally explained by the fact

that there is nothing generated in the specifier of vP in the inverse. Thus, participant objects can move to that position, where they get agreed with, satisfying the PLC. This explains why object shift is obligatory for 1st and 2nd persons, but not for 3rd persons. In a ditransitive, on the other hand, the specifier is filled by the subject, so the direct object cannot undergo object shift to that position. When the direct object is 1st or 2nd person, then the Person Licensing Condition is violated, as there is a participant argument that fails to get agreed with.

If, alternatively, we assume a *feature gluttony* approach (Coon & Keine 2021), where PCC violations occur because a probe has agreed with too many arguments, leading to a configuration that cannot be resolved in later operations, we see the same phenomenon: the inverse differs from ditransitives by removing the problematic configuration. If the PCC arises because v has agreed with two arguments, the lower of which is more specified than the former, then the inverse eliminates this problem by moving the lower participant object out of the search domain of v .

6 Conclusion

I have proposed a unified account of basic and inverse agreement in Georgian, showing that it need not involve the mechanisms of Multiple Agree or Cyclic Agree. Instead, I have shown how the full pattern of agreement can be derived using an agreement mechanism in which a probe agrees with at most one argument.

In my analysis, Georgian transitive clauses involve probes on three separate heads—each with its own feature requirements—that work exactly the same in the basic and the inverse paradigms. The person hierarchy effects in verbal prefixes arise from competition between a clitic and the spell-out of agreement with a Merge feature, both of which are triggered by v . The inner suffix on the verb reflects agreement with a ϕ -probe on T, and the outer, plural suffix $-t$, which displays a pattern of omnivorous agreement, reflects agreement with a plural

argument that was either generated or has moved outside of the *vP* phase.

The two key ingredients of my proposal are that clitic movement feeds number agreement, and that object shift in the inverse is driven by an EPP feature. I have shown that analyzing the agreement system in this way removes many of the puzzles that previous work had to contend with. The fact that Georgian agreement can be analyzed using a simple probing mechanism raises the question of whether other languages can be similarly re-analyzed, and whether it might be possible to rely on a simpler notion of Agree in general. In sum, this account simplifies our understanding of the types of agreement mechanisms necessary to capture certain phenomena, including person hierarchy effects and omnivorous number.

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Abbreviations

ACC = accusative, DAT = dative, ERG = ergative, INV = inverse, NOM = nominative, OPT = optative, PART = participant, PL = plural, PRES = present, PVB = preverb, PST = past, SG = singular, TAM = tense/aspect/mood, VER = versionizer