AGREEMENT IN ARCHI FROM A MINIMALIST PERSPECTIVE[1]

Maria Polinsky
Harvard University

1 Introductory remarks

In this chapter, I will discuss how agreement phenomena in Archi might be accommodated within analyses developed under the umbrella of the Minimalist Program. Let me start with a disclaimer concerning the empirical data at hand. All the Archi data presented below have been provided by members of the Surrey Morphology Group or drawn from Kibrik's description (Kibrik 1977a,b,c); although these data are rich and valuable, they are by their nature incomplete, and in a number of instances I have had to simply acknowledge that there is not enough information to draw definitive syntactic conclusions. This is not necessarily bad news; after all, Archi is still spoken by a thousand or so people, so hopefully the questions I raise now can be explored in the future. Another disclaimer deals with the understanding of minimalism. As the name "Minimalist Program" emphasizes, this approach is programmatic in nature, with a primary goal of uncovering, in an optimal and predictive manner, computational procedures that generate linguistic structures. When understood in this broad way, minimalist syntax and unification-based frameworks such as HPSG are definitely compatible as their shared goals are similar. The difference is in the details of implementation — in particular, in what elements count as features, categories, and operations. In what follows, I will not focus on the larger philosophical issues of the minimalist program; rather, my goal is to outline possible analyses of the Archi data using the tools of minimalist syntax.

Agreement and case have long played a prominent role in the development of minimalist syntax, and current research on ergative languages has been particularly fruitful in this area. Recent work on Archi

agreement from a minimalist perspective includes Polinsky and Radkevich (2014) and Polinsky et al. (in press); the discussion below reflects some of the analyses put forth in these papers. Agreement in some other languages of the Nakh-Dagestanian family has received minimalist analysis: see Polinsky and Potsdam (2001, 2002); Polinsky (2003); Benmamoun et al. (2010); Gagliardi et al. (2014) for Tsez; Kazenin (1998, 2001); Gagliardi et al. (2014) for Lak; Janda (1994); Rudnev (2014) for Avar; Kazenin (2001) for Tsakhur.

This chapter is organized as follows: in section 2, I offer a brief overview of minimalist approaches to agreement; a reader familiar with minimalist syntax may skip that section and go directly to the analysis of Archi in sections 3 through 5. In section 3, I present an analysis of regular clausal agreement in Archi, demonstrating that all agreement and case licensing happens in the *v*P. Section 4 discusses more complicated cases of clausal agreement reported by Archi scholars, namely, adverbial agreement and stative verbs. It may seem more natural to beginwith agreement inside the noun phrase and then move to agreement within the clause, but research on clausal agreement, and particularly on argument–predicate agreement, has been richer - agreement in the noun phrase has often played the younger child, subjected to comparison with its clausal sibling. Section 5 discusses agreement in the Archi noun phrase and argues for a concord-based account. Section 6 summarizes the chapter.

2   Agreement in minimalist syntax

2.1   Basic principles of agreement: Agree

There are several available overviews of agreement in minimalist syntax; in the references below, I have limited my selection to the more recent work, which in turn includes references to earlier research.

To discuss agreement in minimalist syntax, we must start with two basic notions of the minimalist program: functional categories and phi-features. *Functional categories* are elements that have purely grammatical meanings (or sometimes, no clear meaning), as opposed to lexical categories, which have more obvious descriptive content. Lexical categories include verbs (V), nouns (N), adjectives (A), and most (but not all) adpositions (P). Functional categories include but are not limited to C(omplementizer), T(ense), D(eterminer), *v*, and *n*. Functional projections dominate lexical projections, and inflectional features are associated with functional, rather than lexical, heads. Syntax of tense and auxiliary expressions provide strong evidence for this association between inflectional features and functional heads (cf. Radford 2004); in some other phrases, the evidence for functional heads is not as strong, but these projections are nevertheless assumed for the sake of structural uniformity.

In consideration of the lexical and functional heads below, it is important to keep in mind that minimalist syntax (as well as its predecessors, such as government-and-binding theory) allows for silent lexical items to represent both types of heads. Although invisible material is often suspicious, it should come as consolation that such material is never posited without a reason. The English *that*-trace effect is probably one of the most famous examples (Perlmutter 1968; Chomsky and Lasnik 1977; Kandybowicz 2006, amongst others). In English (and in some other languages), the complementizer *that* cannot be followed immediately by a trace (gap). As a result, we observe a difference between subjects, which do not allow the presence of an overt *that* under extraction, and all other constituents for which extraction is compatible with the presence or absence of the complementizer:

(1)   a.   Who$_i$ do you think (*that) t_i stole the painting?
                                  (subject extraction)
    b.   What$_i$ do you think (that) the burglars stole t_i?
                                    (object extraction)
    c.   When$_i$ do you think (that) the burglars stole the painting t_i?
                                    (adjunct extraction)

Quite often, subtle facts must be investigated to determine the presence of a silent category or an unpronounced element, but even subtle facts are relevant if they serve as cues to a language learner. The opposite is also true; sometimes surface cues suggest extraordinary patterns when there indeed are none. Noun incorporation is a good example—as exotic as this phenomenon may seem, it is actually the realization of the straightforward morphosyntactic process of head movement. Head movement is a frequent phenomenon in many languages, including the English auxiliary movement below:

(2)   a.   They will examine the evidence.
    b.   Will$_i$ they __$_i$ examine the evidence?

Again, only a careful analysis combined with testable predictions can determine the presence or absence of certain categories.

Now that we have addressed the distinction between lexical and functional categories and have embraced the possibility of silent items, we can delve into agreement. Agreement is understood as the matching of grammatical features between two constituents of a syntactic unit. Features generally play a central role in minimalist syntax; they are viewed as properties of syntactic atoms and hence are direct objects of the theory.

From this perspective it is crucial to say what the possible feature structures are such that the properties of the features allow them to enter into relationships with other features, analogously to saying what the properties of atoms are such that they can enter into relationships with other atoms. From this viewpoint, the constraints on the feature theory are substantive and amount to constraining the theory itself… (Adger and Svenonius 2012: 27).

From the standpoint outlined above, a finite and well-defined feature space is highly desirable, and as far as agreement goes, this wish is granted. Despite the astonishing morphological, lexical, and phonological variation across languages, the features that are matched in agreement are remarkably uniform cross-linguistically; they include person, number, and gender, together referred to as *phi-features (φ-features)*;[2] see Corbett (2006), Harley and Ritter (2002), Wechsler (2009), and references therein. There is growing evidence that phi-features are organized hierarchically in the sense that some features take precedence over others (Harley and Ritter 2002). The hierarchical organization of features plays a role in feature valuation because higher-ranked features are probed for (and valued) first, and features lower in the hierarchy are probed subsequently. Simplifying things somewhat, the phi-feature hierarchy is assumed to be as follows, with possible additional ordering constraints within each feature:

(3)   [PERSON] > [NUMBER] > [GENDER]

That nouns are specified for gender as they enter the derivation is relatively uncontroversial; gender is viewed as an inherent (lexically specified) property of nouns. Things are less clear with respect to number, and there are two possibilities; either the number feature always enters the derivation as a separate functional head (Num), one that dominates the noun phrase as shown below, or it is at least sometimes specified in the same way as gender. Finally, on the assumption that all languages have DPs, [PERSON]

---

[2] Phi-features involved in agreement are merely a subset of the more general set of phi-features, which are viewed as primitives of grammar and used to define various categories; these features include +Noun, +Verb, Case, and the wh-feature. The final of these is sometimes included in the inventory of agreement features (cf. O'Herin 2002; Caponigro and Polinsky 2011). For the purposes of this chapter, I will limit discussion to the traditional agreement phi-features of [person], [number], and [gender]. The use of brackets is a standard shorthand for representing phi-features.

is considered an inherent property of the D head.[3] There are a number of motivations for assuming that DPs are universal. I will not discuss them all here, but I will highlight one such argument: the parallelism between the design of clauses and the design of noun phrases. Semantic parallels between tense and determiners suggest that clauses and noun phrases can be delimited the same way; for clauses, the delimiting category is tense while for noun phrases, it is a determiner (Partee 1987). The semantic parallels in turn support the conjecture that clauses and noun phrases are built in a similar manner (Borer 2005; Alexiadou et al. 2007, amongst others). Just as a clause has a (possibly unexpressed) T (or I) as its highest inflectional head, so too may a noun be expected to have an inflectional category (D) as its highest projection. And just as inflectional heads can be silent, the D head can also be silent. Thus, DPs are assumed to have the structure shown below. This structure also indicates the DP projections associated with each of the phi-features introduced above:

(4)
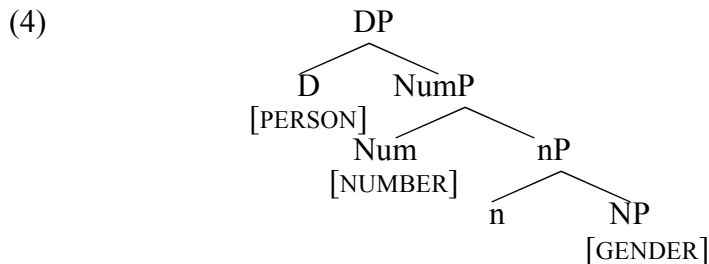
Under the universal-DP analysis, offering accommodation for languages like Archi that lack overt determiners is necessary. Very often, such languages are assumed to possess a silent D head, a working assumption I adopt for the analysis of Archi proposed below.

In minimalist syntax, agreement is a morphological manifestation of the matching of features; crucially, such sharing is asymmetrical. In principle, agreement could be conceived of as a symmetrical relationship, which is how it is treated in unification-based frameworks (see Sadler, this volume, and Borsley, this volume). The minimalist approach, by contrast, conceives of agreement as an asymmetrical connection between two elements. These elements are linked via a single syntactic process, called *Agree* (Chomsky 2000, 2001). *Agree* identifies a constituent that has a certain feature due to its nature (for example, nouns are inherently specified for gender; pronouns can be specified for person) and matches (values) that feature on another constituent that "needs" that same feature but does not possess it independently. This latter constituent thus becomes dependent on the former constituent for the feature it seeks. Crucial for the

---

[3] This latter assumption is not uncontroversial; for a different view, see Bošković (2005, 2008), and see Alexiadou et al. (2007) for more general discussion.

implementation of *Agree* is the notion of *feature valuation*, which states that the features required by one constituent can be valued by the matching features of a second constituent.

The constituent that requires a phi-feature (and therefore must seek a partner for feature valuation) searches or "probes" for a constituent with a matching feature. This feature-seeking constituent is therefore called the agreement *probe* (this term corresponds to "agreement target" in other frameworks). The constituent that bears the semantically meaningful phi-feature, the one that the *probe* is looking for, is referred to as the *goal* (this term corresponds to "agreement trigger" or "agreement controller" in other frameworks).

In addition to relying on the distinction between *goals* and *probes*, *Agree* makes reference to a domain of application (the domain of agreement) and the hierarchical relationship between the *goal* and the *probe*. In the most general terms, the domain of a head X is the set of nodes dominated by XP that is distinct from and do not contain X (Chomsky 1995). For argument-verb agreement, the local domain is assumed to be the clause (TP) or the verb phrase (*v*P); for agreement within a noun phrase, the local domain is DP. Locality enforces the notion that agreement cannot be maintained if the *goal* is on one clause and the *probe* in another; this restriction explains why (5b) is ungrammatical. Agreement restrictions arise when an extra structure intervenes between the *goal* and the *probe* (Anagnostopoulou 2005; Preminger 2014, amongst others); in (5b), the complementizer intervenes between *know* and the attempted *goal*: *she.* Locality restrictions will not play a role in the discussion in this chapter, so I will not expand further on this concept.

(5)   a.   She make-s her own ice cream.
        b.   *I know-s [(that) she makes her own ice cream].

        We are now in a position to define the operation *Agree*:

(6)   *Agree*
        Probe A can agree with *goal* B if:
        a.   A carries at least one unvalued phi-feature, and B carries a
                matching valued feature (*valuation*)
        b.   A c-commands B (*c-command*)
        c.   B is the closest *goal* to A that carries the phi-feature A
                probes for (*closeness*)

This definition is similar to the definition in Chomsky (2000; 2001), but the two differ in several respects. First, following Frampton and Gutmann (2006), Pesetsky and Torrego (2007), and Preminger (2014), the definition of agreement presented here dispenses the notion of the (un)interpretability

of features, which was present in the original formulation. In the original conception, the contrast between interpretable and uninterpretable features was essential because it determined what features remained in the derivation. Interpretable features were defined as features relevant for LF-interpretation, and they included categorial features and nominal phi-features. These features are not deleted or erased after they are checked because they are relevant to the interpretative component. Uninterpretable features were defined as features that needed to be deleted in the derivation; they include Case features on DPs and the phi-features on verbs.

Dispensing with feature (un)interpretability, I follow the authors cited above and assume that *Agree* is a feature-sharing operation uniting separate feature occurrences (on a goal and a probe) into a single shared formal object. Such a shared formal object can be described as a "feature bundle"; the details of this structure will not play a role below. The formulation above also abandons the activation condition (Chomsky 2001), which likewise relied on the presence of uninterpretable features in syntax.

The second point of departure from the original minimalist conception of *Agree* pertains to the tight link between case and agreement. In a large body of minimalist work, case and agreement are seen as two sides of the same coin: both are morphological manifestations of feature sharing created by the application of *Agree*. This view is strongly motivated; agreement often appears sensitive to case assignment — as is well known, only subjects that appear in the nominative case determine agreement in tensed clauses. Icelandic is probably one of the best-studied languages where good evidence exists that dative DPs are indeed subjects since they meet all the subject diagnostics except one: agreement with the verb. Until recently, the predominant view has been that case and agreement are two sides of the same phenomenon, mediated by *Agree* (Chomsky 2000; 2001).[4] Following this rationale, a commonly held view has been that case licensing is a side effect of agreement. Let us call this the *case-follows-agreement* approach.

The *case-follows-agreement* approach can be challenged both empirically and theoretically (Bittner and Hale 1996; Bobaljik 2008). In fact, more recently, several researchers have argued that agreement is parasitic on case. Based on this approach, case licensing (case assignment) happens first, and once cases are assigned, the agreeing probe inspects the landscape of the already case-marked nominals, searching for an appropriate goal (Bobaljik 2008; Preminger 2014; Levin and Preminger 2015). Thus, the licensing of case preconditions successful probing. Not all cases are

---

[4] An even stronger version of this approach maintains that case assignment hinges on the valuation of φ-features. See Preminger (2014: Ch. 8) for discussion.

equally accessible to agreement, accessibility being determined by a case hierarchy which is roughly as follows (Bobaljik 2008; Levin and Preminger 2015):[5]

(7)   unmarked case > dependent case > lexically-determined (inherent) case

Without delving into the details of the hierarchy in (7), I will refer to this model of the division of labor between case and agreement as the *agreement-follows-case* approach.

Some discussion in the literature concerns the directionality of *Agree*: does it always probe in one direction (up or down), or can it probe both ways? Not only have opinions diverged, but different terminologies have been used as well. If agreement is firmly associated with *Agree* (not always the case) and defined in terms of the directionality of the search operation (i.e., a probe looks for an appropriate goal), then the relationship between the higher probe and the structurally lower goal is captured as downward *Agree*. The relationship between the lower probe and the structurally higher goal is described as upward *Agree*. However, the desire to focus on the phenomenon of feature-sharing or matching rather than on a particular mechanism of feature-value transmission presents a compelling reason to depart from such terminological usage. Instead, we arrive at a new way of querying the probe-goal relationship: In which direction are phi-features transmitted from the goal to the probe, viz., is the agreement controller - the constituent that inherently bears the relevant phi-features and transmits them to the probe - structurally lower or higher than the probe itself? If we approach the matching of features from this angle, it makes sense to adopt agreement terminology based on the direction of valuation. Such valuation-based terminology is adopted below, reflecting the transmission of valued features up or down in the structure - upward valuation versus downward valuation (see also Preminger and Polinsky 2015 for discussion).

All logical possibilities have been proposed and argued for in the literature:

(8)   a.   Upward valuation: valuation proceeds from the c-commanded goal to the c-commanding probe (Chomsky 2000; 2001; Diercks et al. 2011; Carstens and Diercks 2013; Preminger 2013)
        b.   Downward valuation: the direction of valuation is from the c-commanding goal to the c-commanded probe (Zeijlstra 2012)

---

[5] This case cline is inspired by earlier work by Moravcsik (1978), and the references cited here refer to it as the "Moravcsik hierarchy."
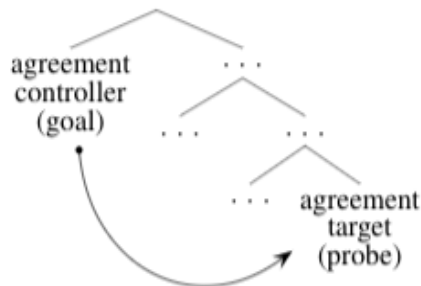
c. Hybrid valuation: the direction of valuation can go up or down (Baker 2008; Bjorkman and Zeijlstra 2014, and references therein)

The first two options are shown in the following structures; hybrid valuation entails the availability of (8a) and (8b) in the same system.

(9) a. Upward valuation
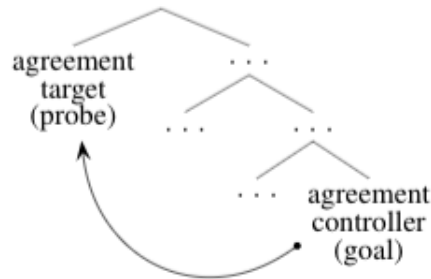

b. Downward valuation

A number of arguments support the conception of upward valuation. In fact, (8a) is fully compatible with the Archi data with one exception: the agreement between the absolute subject of unergative predicates, which bears relation to the probe as shown in (8b). Such restricted downward valuation requires further investigation, which is ongoing in minimalist work on agreement.[6]

So far, we have established *Agree* as a local agreement relationship between a probe bearing an unvalued phi-feature [uF] and a structurally lower goal bearing a valued version of that same feature. In the structure that originates from this notion, there is no apparent constraint against several c-commanding probes valuing their features by establishing

---

[6] As an aside, (8a) or (8c), but not (8b), can successfully account for the more complex agreement data in a related language, Tsez (see Preminger 2013 and Preminger and Polinsky 2015, for a discussion).

relations with the same goal. This valuation, which I will refer to as *multiple probing*, is schematically represented below:

(10)   Multiple probing
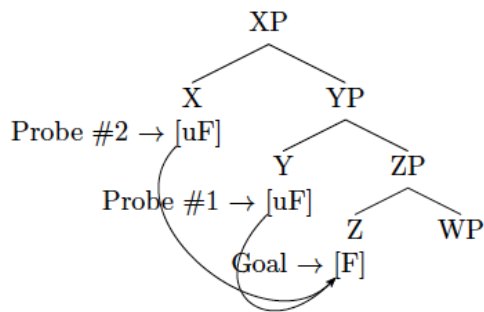
The alternative to this approach is *successive valuation* where agreement with a given goal can happen only once. In this case, the closest probe (probe #1 in (11)) would agree with the goal, and the probe above it (probe #2 in (11)) would value its feature using the already-valued feature on probe #1. Thus:

(11)   Successive valuation
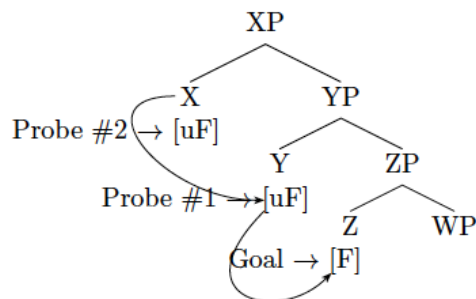
Empirical facts from agreement in Ibibio (Baker and Willie 2010) argue against multiple probing. In addition, if we seriously consider the conception that *Agree* unites feature occurrences into instances of one shared formal object (see above), then multiple probing forces us to revise the shared formal object as the derivation progresses (see also Režać (2003) for additional theoretical considerations). These considerations indicate successive valuation as the more reasonable analysis, and I adopt this approach below.

The other side to multiple probing is *Multiple Agree*: a process whereby a single probe values features on more than one goal

simultaneously. Thus, if (12a) is a schematic representation of regular *Agree* where one goal values the features on one probe, then (12b) schematizes *Multiple Agree*, with one goal (A) valuing features on two probes, B and C, at the same time (see Hiraiwa 2001 for a global approach to *Multiple Agree*, and see Nevins 2011 n for the discussion of possible subtypes of *Multiple Agree*).

(12)

   a.   Agree

           A   >   B

   b.   Multiple agree

           A   >   B   >   C
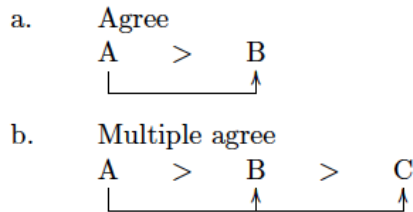
Researchers have questioned the validity of *Multiple Agree* on theoretical and empirical grounds. On general conceptual grounds, *Multiple Agree* is undesirable because it upendsthe strict locality condition on *Agree*, one of the most robust characteristics of agreement and a condition that is important in other linguistic representations. The very nature of *Multiple Agree* dictates that a probe need not have a local relation tothe goal, which is undesirable. Empirical considerations against *Multiple Agree* have been advanced based on data from various languages; data on negative concord in West Flemish are among the most persuasive (Haegeman and Lohndal 2010).

     To summarize, agreement is an asymmetrical relation of phi-feature valuation in which a constituent with a feature deficit compensates by acquiring a matching feature from a partner constituent. Agreement is conceived of as a strictly local relationship, with features normally valued upward, from the goal c-commanded by the probe. Such valuation is subject to a one goal/one probe relationship (hence no *Multiple Agree* or successive valuation). Finally, agreement is a phenomenon that follows (rather than precedes) case licensing.

2.2   Basic principles of agreement: Concord

Agreement is traditionally compared with *concord*, and various frameworks attempt to capture the difference between the two (consider Borsley, this volume, on the difference between agreement and concord in HPSG). Different researchers seem to have different understandings of what agreement and concord entail making a clear-cut division of the phenomena challenging. Descriptively, there are two main approaches separated by their answer to the following question: does agreement in the nominal domain arise through the same mechanism as verbal agreement?

Proponents of the *unifying approach* answer affirmatively, assuming that agreement in the nominal domain and in the verbal domain is established using *Agree*. Strong parallels between clausal and nominal architecture emphasized in the current generative work (cf. Alexiadou et al. 2007 for an overview and discussion of the relevant parallels) justifies this approach. Some recent work on agreement, especially agreement within DP, champions the unifying approach although the actual terminology used varies (Carstens 2000; Baker 2008; Kramer 2009; Danon 2011, 2012).

A contrasting approach can be described as *differential*; under this approach, concord and agreement may involve different features, and concord can be marked in more places than agreement can (den Dikken 2006; Kramer 2009; Norris 2014). The motivation for concord is viewed as different from the motivation for agreement. Under *Agree*, it is feature valuation that, as mentioned above, creates a new complex object. Under concord, agreement amounts to feature copying; such copying is not as constrained as *Agree* and can occur on multiple nodes—a problematic situation for *Agree* (see above). Thus, the notion of concord dispenses with the one goal/one probe approach, allowing for the concordial equivalent of *Multiple Agree*. Unlike feature valuation, which is subject to severe restrictions, copying can occur multiple times and on multiple probes.

To anticipate the discussion below, the agreement within Archi nominals is amenable to the *differential* approach (section 5). It does not immediately mean, however, that the unifying approach should be rejected. Rather, agreement in the nominal domain may need to be inspected on a language-by-language basis.

2.3   Distributed Morphology

A few remarks are necessary concerning the interface between syntax and morphology under minimalist-syntactic analyses. The relationship between syntax and morphology (i.e., surface representation) can be captured in various ways. Here, I will touch upon just one: Distributed Morphology (DM). Distributed Morphology assumes that the input to morphology is syntactic derivation, meaning that syntax is the source of grammatical features and determines, in a principled way, thearrangement of such features (Halle and Marantz 1993; Harley and Noyer 1999, Embick 2010; Bobaljik 2012). The following assumptions are particularly important for this model:

(13)   Distributed morphology: Basic assumptions
   a.   *Syntactic hierarchical structure all the way down*: elements within syntax and elements within morphology enter into the same types of constituent structures (such structures can be diagrammed through binary-branching trees); these elements (both in syntax and in morphology) are understood as discrete units

b. *Late insertion*: syntactic categories are purely abstract having no phonological content; only after syntax are phonological expressions, called Vocabulary Items, inserted through the process of Spell-Out

c. *Morpheme*: morphemes consist of syntactic or morphological terminal nodes and their content (whereas the phonological expression of those terminals is provided within Vocabulary Items)

In sum, under DM, each morpheme corresponds to one functional head in the syntax. This arrangement bypasses the problem of multiple exponence by postulating a series of functional heads (possibly invisible), which carry overt agreement markers to spell out the relevant phi-features.

With this brief background on the minimalist approach to agreement, we can now turn to the application of minimalism to agreement in Archi.

3 Clausal agreement in Archi

3.1 The components of Archi structure

3.1.1 Gender specification

Within Archi clausal syntax, the predicate, some adverbs, some pronouns, and the focus particle –*ejt'u* agree with the absolutive argument in gender and number. Agreement with both categories is encoded by a single exponent again suggesting that the two features may be bundled together. If we consider the agreement affixes on the verb, as in (14) (see also Chapters 1 and 2 of this volume), we can identify six different values of the relevant phi-feature bundle. In what follows, I will refer to this agreement as agreement in [GENDER], shorthand for the bundle composed of gender + number values.

(14)   Archi agreement prefixes (as marked on verbs)

	SG	PL
I	w-	b-
II	d-	
III	b-	Ø-
IV	Ø-	

All noun phrases in Archi syntax have a gender feature where "gender" subsumes singular/plural distinctions; the outcome is a series of six genders, four that mark singular nouns and two that mark plural. This descriptive simplification is helpful from an expository standpoint; one could just as

readily divide gender and number into separate specifications (and, in fact, the structure in (17) below allows us to do exactly that).

The statement, "all noun phrases in Archi syntax have a gender feature," demands that gender/number specification be encoded in DP. The following principle rearticulates this fact in formal terms:[7]

(15) *Gender Specification Principle*
   All Archi DPs must be specified for [GENDER]

The structure of the *n*P, to which we now turn, supports this principle. Reference to *n*P is required in order to establish how the specification of gender and number on a given noun is transferred to the syntax where it can interact with other constituents of structure. In other words, we must begin our broader syntactic account by identifying the source of gender and number features. These features are represented on the noun phrase (DP), which serves as the goal for different agreeing probes. We can follow Embick and Marantz's (2008: 5) proposal that all roots combine with a category-defining functional head distinguished by virtue of its feature content: *n* for nouns and *v* for verbs. The *n*P head is the syntactic phrase within the DP that encodes the semantically contentful features [GENDER] and [NUMBER]. Derivation starts from the lexicon, which provides roots. The nature of roots and their specification (with respect to lexical categories or selection) is a subject of considerable debate, and I will not review it here; see Harley (2014) for a detailed discussion and arguments in favor of considering roots individuated in narrow syntax.

Regardless of whether a root is specified, it combines with the functional head *n,* and the resulting *n*P enters the syntactic structure with a gender feature. Compare the derivation of the noun *gurgur* 'turkey' in (16a) where the *n* head is null and the derivation of a complex noun *buwakul* 'motherhood' in (16b) where the *n* head is overt. The gender contributed by the *n* head overwrites any gender that may be present on the nominal complement. In (16a), the root *gurgur* is not specified for gender, and the gendered noun *gurgur* appears by virtue of its combination with the null head. However, in (16b), the gender of the noun *buwa* 'mother (gender II)' is deleted when it combines with the gendered head *kul.*

(16) a.   nP [GENDER: III]   b.   nP [GENDER: IV]

        √/N   n   nP   n

---
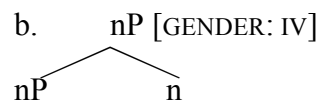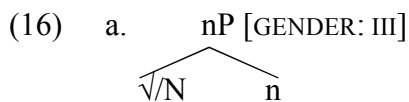
[7] This principle does not indicate the means of gender specification, i.e., the manner in which the gender of a given expression is determined — whether the gender determination is unambiguous, whether a given noun may be of common gender, etc.

14

gurgur Ø   *buwa*   *kul*

As mentioned above, there is no single approach to number projection in noun phrases, and the different analyses available seem to reflect cross-linguistic differences in the way number is marked. In Archi, number fuses with gender, as shown in (16).

      The typical syntactic location for plural inflection is Num(ber), the head of a Num(ber)P between DP and NP (see e.g., Ritter 1991 among many others). However, there is a growing body of research on the idiosyncratic, lexically-driven properties of certain plurals cross-linguistically. Idiosyncratic plurality is often analyzed as the realization of the nominalizing functional head, closer to the noun than Num (see Kramer 2012 for an overview). The underlying assumption is that higher heads are associated with more regular morphology than lower, categorizing heads. Thus,

(17)   NumP   ⇐   domain of regularity

        Num   nP   ⇐   domain of idiosyncrasy

               √/N   n
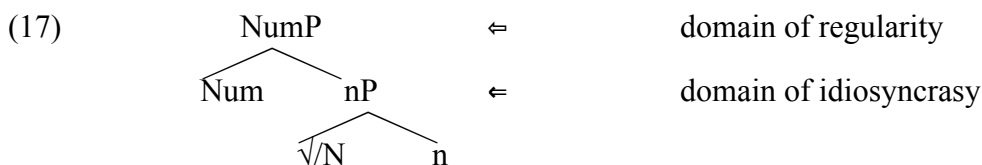
As most languages of its family, Archi combines two productive ways of forming plural suffixes (*–mul,* which follows a consonant, and *–ttu*, which follows a vowel) with a dozen other, much more idiosyncratic formations (Kibrik 1977b: 44-45; Kibrik and Kodzasov 1990: 283-284). On the assumption that nP should allow idiosyncratic interpretations and NumP should only allow compositional interpretation, we can conclude that the locus of Archi plural is on the nominalizing head *n*, together with gender.

      For the discussion purposes below, I will treat *n*Ps as indivisible units and will not illustrate their internal composition. In other words, I will assume a given noun enters the derivation with valued gender and number features. I will also revert to the more familiar NP label rather than the *n*P label that I used in this section; this terminological shift is merely for expository purposes, and nothing hinges on the difference in notation.

3.1.2   The role of [GENDER]

The feature [GENDER] helps determine the form of other clausal constituents particularly predicates and attributive modifiers. The examples below demonstrate that agreement within a clause is always with the absolutive argument. Thus, in (18a), the intransitive verb 'come' agrees with its sole argument *buwa* 'mother', and in (18b), the transitive verb 'bring' agrees with the absolutive object, also *buwa*. The actual agreement markers differ because the predicate in (18b) is expressed by a complex analytical form with agreement marked by an infix on the auxiliary.

15

(18) a. Buwa   da-qˤa.
      mother.**II.SG.ABS**   **II.SG**-come.PFV
      'Mother came.'
  b. Dija-mu   buwa   χir   a‹r›u.
      father.I-SG.ERG   mother.**II.SG.ABS**   behind ‹**II.SG**›make.PFV
      'Father brought mother along.'

As discussed in the preceding section, agreement is sensitive to the
hierarchical structure of the clause; agreement-bearing categories (probes)
must be in a higher structural position than the base position of their goals
(6b). The goal also must meet the *closeness condition*, which requires that
the goal be the closest available feature-bearing constituent with which the
probe can share features (6c).

3.1.3   Hierarchy of arguments in the clause

To derive Archi agreement, we first must evaluate the structure of Archi
clauses in more general terms. Using standard diagnostics of hierarchical
relations between arguments, we observe that an ergative argument can bind
a reflexive in the absolutive position but not vice versa. The reflexive
expresses the gender of the antecedent.

(19)   a. Pat'i-mu   inža‹r›u   čučebo.
        Pati.II-SG.ERG   REFL.ABS‹II.SG›   wash.PFV
        'Pati washed herself.'
     b. *že‹r›u   Pat'i   čučebo.
       REFL‹II.SG›.ERG   Pati.II.SG.ABS wash.PFV
       ('Pati washed herself.')

Next, only the ergative, not the absolutive, object can serve as the covert
subject of an embedded transitive control clause. Consider the grammatical
(20a), which instantiates regular control from the object of the matrix clause
(*ustar* 'master') to the understood subject of the embedded clause and the
ungrammatical (20b), which attempts to establish a control relationship
between the object of the matrix clause and the object of the embedded
clause:

(20)   a.   ʕAli-mu   ustar   u‹w›k'u
         Ali.I-SG.ERG   craftsman.I.SG.ABS   ‹I.SG›force.PFV
      [PRO   duχˤan   halmu   χir   a<w>-s].
          mill.GEN   owner(I).ABS behind   ‹I.SG›do-FIN
      'Ali made the master bring the miller.'
      NOT: 'Ali made the master be brought by the miller.'
      b.   *ʕAli-mu   ustar   u‹w›k'u

Ali.I-SG.ERG   craftsman.I-SG.ABS   ⟨I.SG⟩force.PFV
[PRO   duχ:ʕan   halmu-mu   χir   a<w>-s].
         mill.GEN   owner-ERG   ⟨I.SG⟩do-FIN
('Ali made the master be brought by the miller.')

The binding and control data confirm that the ergative DP is structurally higher than the absolute object; in other words, the ergative is the subject.[8]

3.2 The syntax of Archi agreement (and case)

3.2.1 The verb phrase as the locus of licensing of Archi case and agreement

Archi probes look for a goal bearing the feature [GENDER]. Given that the subject (including ergative subjects) is the highest (and closest) available goal, conceivably the subject would be "considered" for agreement by the probe; as the facts illustrate, however, the agreement relation bypasses this subject much as agreement bypasses dative subjects in Icelandic, Spanish, Russian, and many other languages (Bobaljik 2008; Baker 2013). Consider the following standard Spanish example where the verb 'like' must agree with the nominative, not dative, subject (let us set aside dialectal variation with respect to *gustar*):

(21)   No   me   gustan/*gusto los   exámenes.
         not me.DAT   like.3PL/1SG DET   exams
         'I don't like the exams.'

The basic structural explanation for such non-agreement is straightforward. The probe is specified to seek a certain feature and cannot accept just any feature. This search for a particular feature is called *relativized probing* (Preminger 2014: 39ff.) and is not a phenomenon unique to agreement:interrogative heads (C[wh]) ignore phrases that do not bear a [wh] feature, focus heads bypass phrases without a focus feature, and so on. Oblique subjects such as ergative and dative DPs do not bear the [GENDER] feature, and as a result, the probe ignores them.

      Knowing what exactly prevents the ergative or dative from carrying the relevant phi-feature is more difficult. Different frameworks have noted that ergatives (and datives, for that matter) are poor controllers of agreement

---

[8] The ability to determine coreference across clauses, as in (i), is often included in the diagnostics for determining hierarchical relationships between subjects and objects. However, this property is an unreliable diagnostic since coreference does not rely on syntactic properties alone.

(i)   John$_i$ saw Bill$_k$ and *pro$_{i/*k}$* got upset.

(cf. Moravcsik 1974, 1978, 1988, for an early statement of that deficiency). While solid, this descriptive generalization has received no convincing explanation, and theories deal with ergative agreement deficiency in a variety of ways. Minimalist analyses often stipulate that the ergative and dative are inherent cases (as opposed to structural cases such as nominative, accusative, absolutive) and that inherent cases are uniformly invisible to agreement operations. This postulate is certainly less satisfying than the basic idea of relativized probing, and more work is needed to explain precisely why and when ergative and dative subjects do not make good agreement goals.

Once the ergative is deemed ineligible for agreement, the probe continues its search down through the structure until it reaches the phrase with the relevant features. That phrase is the absolutive DP — the closest constituent that can deliver the feature [GENDER] to the probing functional head.[9] But "closest" to what? What is the locus of Archi agreement?.

It is commonly assumed, based primarily on data from nominative-accusative languages, that agreement is associated with the functional head T(ense), which agrees with the subject. Among other pieces of evidence for associating T with the probe is the absence of agreement in non-finite structures, illustrated by the English examples:

(22)   a.   The probe agree*(s) with the goal.
       b.   We watch [the probe agree/*agrees with the goal].

Unlike English, Archi non-finite clauses share the same agreement and case-marking characteristics as finite clauses. Initial evidence for this parallel can be found in the infinitival clause in (20) where the object is in the absolutive and the infinitival form of the verb agrees with it. Let us see if this initial evidence withstands scrutiny.

Compare the following finite clauses and the corresponding tenseless nominalizations and participial clauses; in each, the case assignment and agreement is the samemeaning that case is licensed and agreement is valued at the level of the verb phrase, not at TP. Also note the identity of case assignment and agreement across non-finite and finite clauses holds regardless of transitivity. This characteristc is relevant because, for at least some ergative languages, researchers have argued that the absolutive object and the absolutive subject are licensed in different

---

[9] If the search fails, the derivation goes on but with 'default' agreement—for Archi, that is gender IV. I will return to the issue of default agreement below; for a general theoretical discussion of "agreement failures", see Preminger (2014).

configurations (see Aldridge 2008; Legate 2008; Coon 2013 for a discussion).

To illustrate the licensing of case and agreement, consider examples (23) through (25). The predicate (23) is an intransitive verb; in (24), we find a transitive verb that takes an ergative and an absolutive argument; in (25), the verb selects a dative subject and an absolutive object.[10] In each of these examples, (a) is a finite clause, (b) is an instance of *v*P-nominalization (in the Caucasological tradition, these nominalizations are called *masdars*), and (c) shows a tenseless participial construction. In addition, in (24) and (25), example (d) presents embedded non-finite *v*P structures with the restructuring aspectual verb *kes* 'become'; in this usage, its meaning is similar to 'happen (to), manage, contrive'.

(23) a.   Pat'i   dogi-li-t:i-š   e‹r›ku.
            Pati.II.SG.ABS donkey.III-SG.OBL-SUP-EL   <II.SG>fall.PFV
            'Pati fell off a donkey.'

       b.   Pat'i   dogi-li-t:i-š   d-ek-mul
            Pati.II.SG.ABS donkey.III-SG.OBL-SUP-EL   II.SG-fall-MSDR
            'Pati('s) falling off a donkey'

       c.   [Pat'i   dogi-li-t:i-š
            Pati.II.SG.ABS donkey.III-SG.OBL-SUP-EL
            e‹r›ku-t:u-t]   biq'ʷ
            ‹II.SG›fall.PFV-ATTR-IV.SG   place.IV.SG.ABS
            'the place where Pati fell off a donkey'

(24) a.   Rasul-li   tilivizor   b-esde.
            Rasul.I-SG.ERG   tv.set.III.SG.ABS   III.SG-buy.PFV
            'Rasul bought a TV.'

       b.   Rasul-li   tilivizor   b-uš-mul
            Rasul.I-SG.ERG   tv.set.III.SG.ABS   III.SG-buy-MSDR
            'Rasul's buying a TV'

       c.   [Rasul-li   tilivizor
            Rasul.I-SG.ERG   tv.set.III.SG.ABS
            b-ešde-t:u-t]   biq'ʷ
            III.SG-buy-ATTR-IV.SG   place.IV.SG.ABS
            'the place where Rasul bought a TV'

       d.   [Rasul-li   tilivizor   b-ušbu-s]
            Rasul.I-SG.ERG   tv.set.III.SG.ABS   III.SG-buy-FIN
            e<b>t:i.

---

[10] This frame is an instance of the so-called *affective construction* commonly found with psychological state verbs in Nakh-Dagestanian languages; see Comrie and van den Berg (2006) and Cysow and Forker (2009) for details.

<III.SG>become.PFV
'Rasul managed to buy a TV.'

(25) a. Laha-s　　　　　　　Rasul　　　　　　　w-ak:u.
　　　　child.I.SG.OBL-DAT　Rasul.ABS.I.SG　　I.SG-see.PFV
　　　　'A/The child saw Rasul.'

　　 b. laha-s　　　　　　　Rasul　　　　　　　w-ak-mul
　　　　child.I.SG.OBL-DAT　Rasul.ABS.I.SG　　I.SG-see-MSDR
　　　　'the child's seeing of Rasul'

　　 c. [laha-s　　　　　　　Rasul
　　　　child.I.SG.OBL-DAT　Rasul.ABS.I.SG
　　　　w-ak:u-t:u-t]　　　　biq'ʷ
　　　　I.SG-see-ATTR-IV.SG　place.IV.SG.ABS
　　　　'the place where the child saw Rasul'

　　 d. [Laha-s　　　　　　　Rasul　　　　　　　w-aku-s]
　　　　child.I.SG.OBL-DAT　Rasul.ABS.I.SG　　I.SG-see-FIN
　　　　e<w>t:i.
　　　　<I.SG>become.PFV
　　　　'The child happened to see Rasul.'

To reiterate, these data corroborate that the agreement-bearing head in Archi is not T or I (the inflectional head of the finite clause) but rather *v*.[11] Both *v* or Voice have been used as labels for this functional head in the literature (see Harley 2013, Legate 2014, for a discussion and overview); for the purposes of this chapter, I will assume that functional heads in the verbal complex are uniformly *v*, but nothing hinges on this particular representation. What matters is that all case licensing and agreement licensing in Archi happen in the *v*P at the early stages of clause-structure building. I would like to underscore that this result cannot be extrapolated to other ergative languages[12] or even to the other Nakh-Dagestanian languages; for each language, one must look at non-finite structures to ascertain whether they differ from tensed structures in terms of case and agreement.

3.2.2 Deriving basic structures in Archi

We can now derive the basic phrase structure of Archi. Keep in mind that Archi has V-to-*v* head movement. Evidence for this movement comes from the order of roots and agreement markers in lexical verbs. The lexical verb corresponds to V in the syntactic structure, whereas agreement markers

---

[11] For additional evidence supporting this conclusion, see Polinsky et al. (to appear).

[12] See Aldridge (2008); Legate (2008) for a discussion of variation across ergative languages with respect to licensing heads T vs. *v*.

(Agr) are lexical realizations of the [GENDER] feature on *v*. With the exception of stative verbs (which I will discuss in section 4), Archi verbs are always inflected with agreement markers. These agreement markers can be either prefixal or infixal but never suffixal. Thus, we observe the sequences Agr-Root with a prefix and <Agr.Infix>-Root with an infix but not *Root-Agr. The licit orders correspond to *v*-V and <*v*>-V; the order *V-*v* is excluded. The only way to derive these morpheme orders in a head-final (V-*v*) language is to assume that V undergoes head movement to *v*, yielding a complex head consisting of the lexical verb and the functional head. This type of (short) verb movement is otherwise attested (cf. Legate 2014), so Archi is well within the range of possibilities.

Most simple dynamic (non-stative) verbs require agreement marking. Out of the 163 simple dynamic verbs reported in the Archi dictionary (Chumakina et al. 2007), 144 require overt agreement; the remaining 19 seem somehow specified in the lexicon (Chumakina and Corbett 2015). Such a lexical specification—possibly with a diacritic on the relevant verbs—can be viewed as a way of blocking the surface realization of agreement rather than the presence of agreement in general. Simple verbs can combine with non-inflecting lexical items to form complex verbs, in which case the verbal component still inflects for agreement. All this evidence points to the conclusion that all verbs enter the derivation with the [GENDER] feature as part of their specification; this feature must be subsequently valued.

The absolutive, be it the subject of an intransitive or the object of a transitive, is licensed by the lowest *v*; this functional head carries a case feature and an unvalued gender feature, as shown in (26) and (27). Thus, the merging of this head into the structure produces the absolutive argument. This argument receives its case from the functional head *v* and enters into a phi-feature-sharing relationship with that argument. The result is agreement between the absolutive and the verb. As I mentioned in section 2.1, this result is the only instance of agreement in Archi where the direction of valuation is presumably downward, albeit in a very small domain, the vP.

(26) a. unergative intransitive
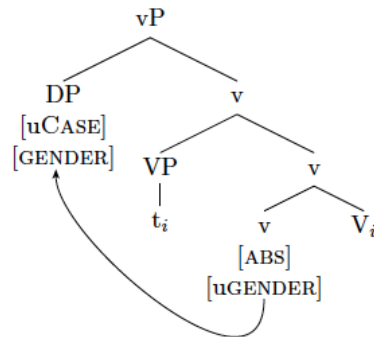
b. transitive
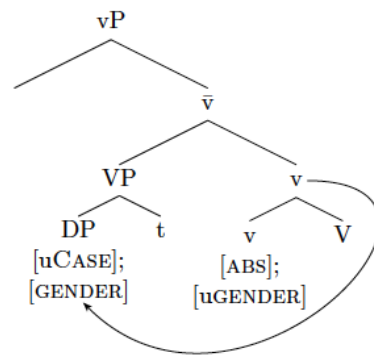
By assumption, the ergative and dative are inherent cases (Aldridge 2008, Woolford 2006, Legate 2008, amongst others); they are licensed as external arguments of the next functional head, v_2. The ergative case comes with an [AGENT] feature on v (see Wurmbrand 2013 for general properties of such a feature and Gagliardi et al. 2014 for its valuation in Lak and Tsez). The derivation for transitive verbs is as follows: the closest v head (v_1) assigns the absolutive case to the object and values its gender feature on the object DP. The next head, v_2, assigns the inherent ergative case to the higher DP; however, this DP does not have a visible [GENDER] feature to value, therefore the verbal head v_2 must continue with its relativized probing. When it encounters the valued [GENDER] feature on v_1, valuation occurs on v_2 as shown below (only agreement valuation is shown).

(27)
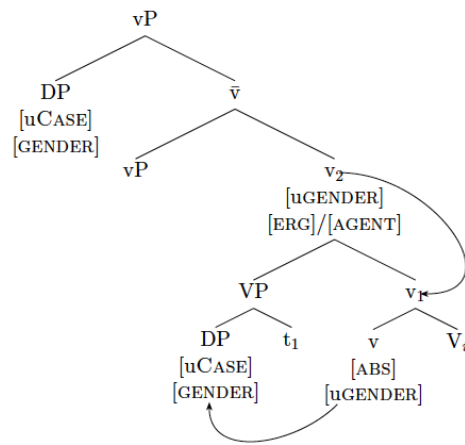
Both *v* heads can be silent, which is why we do not see multiple instances of overt agreement in some forms. However, if the verbal form selected by the derivation includes an auxiliary, then agreement can appear on each overt verbal constituent and hence, more than once within a phrase; this phenomenon is illustrated in the present tense example below, which includes the auxiliary *i* 'be' (Kibrik 1977b: 186ff.).[13]

(28) a. Laha   waʕrt'i   b-ača-r-ši   b-i.
           child.ERG   plate.ABS.III III-lick-IPFV-CVB III-be.PRS
           'The child is licking the plate.' (Kibrik 1977b: 187)

---

[13] Here and below, I use English glosses in the structural schemas for illustrative purposes.

b.
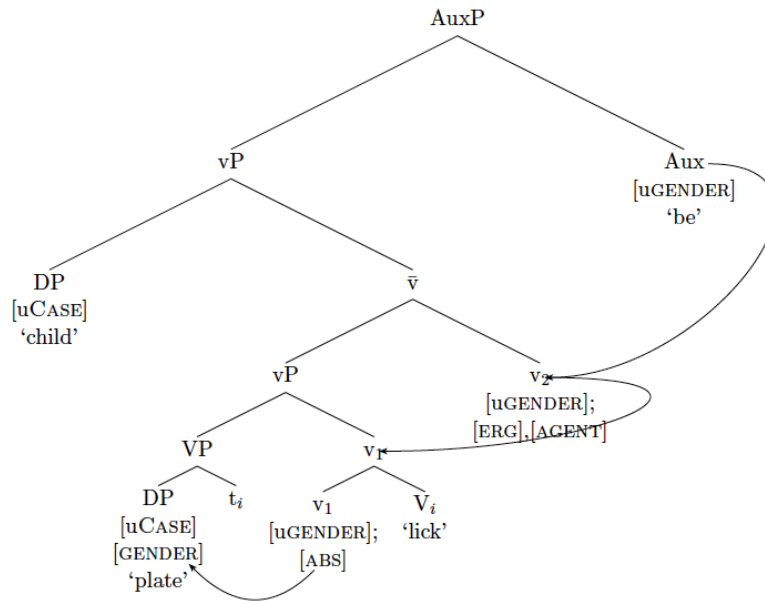
The example in (28a) presents another important contrast observed in Archi between ergative an biabsolutive constructions. Compare (28a) and (29a):[14]

(29) a.   [DP Lo]   [DP waˁrt'i]   b-ača-r-ši   w-i.
         child.ABS.I   plate.ABS.III   III-lick-IPFV-CVB   I-be.PRS
         HIGHER ABS   LOWER ABS
         'The child is licking the plate.'

     b.   *Lo   waˁrt'i   w-ača-r-ši   b-i.
         child.ABS.I   plate.ABS.III   I-lick-IPFV-CVB   III-be.PRS

     c.   *Lo   waˁrt'i   b-ača-r-ši   b-i.
         child.ABS.I   plate.ABS.III   III-lick-IPFV-CVB   III-be.PRS

The difference between the sentences in (28a) and (29a) is twofold. First, the argument expressed by the ergative in (28a) is expressed by a second absolutive in (29a) - hence the term "biabsolutive" (or "binominative") construction (Kibrik 1975; Forker 2012). Second, the auxiliary verb *i* 'be' agrees with the higher ("added") absolutive, and the lexical verb still agrees with the lower absolutive, just as in the ergative construction. As (29b,c) illustrate, no other agreement configuration is possible. Thus, Archi biabsolutives are two-place predicate constructions in an analytical form

---

[14] The word *lo* 'child' can belong to gender I or gender II depending on whether it denotes a male or a female child. In the examples in this paper, I will indicate the gender as provided by the context.

where both arguments are in the absolute and where agreement systematically tracks both.

Biabsolutive constructions have been noted in Archi (see Chumakina and Bond, this volume) and are widely attested in Nakh-Dagestanian (Forker 2012; Gagliardi et al. 2014) and other languages with ergative alignment (Coon 2013: 195-199). Although the biabsolutive constructions in these various languages look superficially similar, they are not structured in a uniform way - some biabsolutive constructions are monoclausal and some are biclausal (Gagliardi et al. 2014). For the purposes of this chapter, I will only discuss the biabsolutive construction with the converb in –*ši*, as in the example above. The properties of the other biabsolutive construction, with the converb in –*mat*, are different (cf. Polinsky and Radkevich 2014 and see Brown and Sells, this volume, for some discussion).

Kibrik (1975) argues that Archi constructions such as (29a,b) are monoclausal since they freely allow scrambling and express only one instance of negation. If biabolutives are in fact monoclausal, then the main difference between the ergative and the biabsolutive construction pertains to the nature of the second functional head *v*. In the ergative construction, that head assigns the inherent ergative case; in the biabsolutive construction, an aspectual head is specified for absolutive assignment. Evidence for the aspectual nature of the biabsolutive head *v* comes from the obligatorily progressive or durative reading of that construction. Assuming an agreement-follows-case approach to *Agree*, once the higher absolutive case is assigned, the aspectually specified verbal head probes for a gender phi-feature on the higher absolutive DP:

(30)
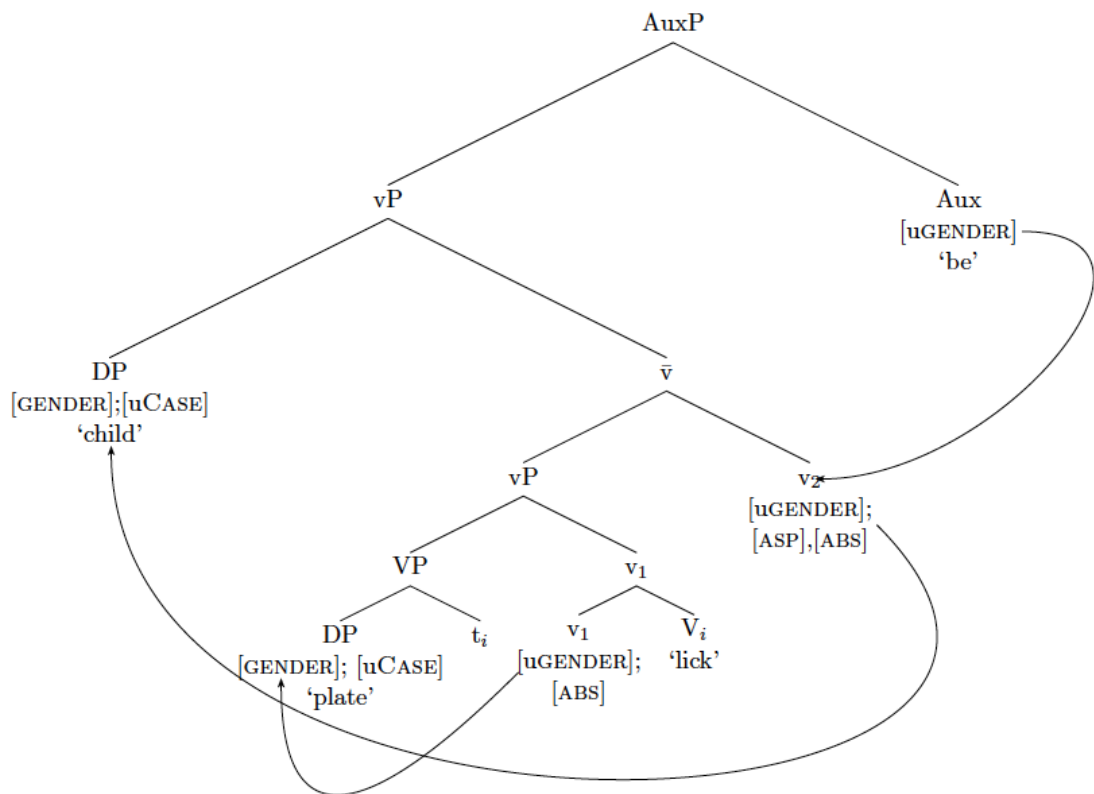
Structural properties of the biabsolutive construction are thus accounted for. However, the optionality of the biabsolutive construction remained unresolved; since ergative constructions can also readily host a progressive reading, it remains to be seen what factors determine the choice between the two. Conceivably,the choice between sentences such as (28a) and (29a) is based on subtle interpretive characteristics of these constructions; such nuances of meaning must be captured regardless of the syntactic framework used to model the structure of these sentences.

To summarize this section, the main properties of Archi agreement and case licensing are as follows:

(31)   all case licensing is done in vP: the absolutive case is always licensed by v_1 on arguments in intransitive constructions (unaccusatives and unergatives); ergative case on external arguments is licensed by v_2 when it bears the [AGENT] thematic feature; dative case on external arguments is licensed by v_2 when it has the [EXPERIENCER] thematic feature;

(32)   the Archi verb phrase can include several *v*P layers. Each *v* head has [GENDER] features, which can be valued either by a DP[ABS] or by the closest *v* head with valued [GENDER] features.[15]

4   More unusual cases of agreement within a clause

The facts presented in the previous section were relatively straightforward. The account of adverb agreement and non-agreeing stative verbs offered in this section is on less solid ground and should be viewed as a promissory note rather than a clear analysis. In both instances, my goal is to outline a number of possible solutions and identify what sets of empirical data are needed to confirm or refute those possibilities. Whichever of the proposed analyses ultimately turn out to be correct, the bottom line is that each instance of seemingly unusual agreement is actually well-behaved and does not require any new theoretical or analytical tools.

In addition to the two unusual cases discussed here, Archi has apparent agreement on a subset of its pronouns: ergative, dative and genitive pronouns in the first person seem to agree with the absolutive. I will not address this phenomenon here, but in Polinsky et al. (in press), we demonstrate that this apparently irregular agreement pattern can be reduced to an instance of commonplace argument-predicate agreement and is therefore well behaved.

4.1   Agreeing adverbs

Examples of agreeing adverbs are given below (the agreeing adverb is in boldface). Agreeing adverbs include only VP-level (low) adverbs.

(33)   *pro*   balah   **dit:a‹b›u**   b-erχin.
         trouble(III).SG.ABS   **soon‹III.SG›**   III.SG-forget.IPFV
       'One forgets trouble quickly.' (Kibrik et al. 1977a: 186)

(34)   Tu-w-mi   is   mišin   **allij‹t'›u**
         that-I.SG-SG.ERG   IV.SG.1SG.GEN   car(IV).SG.ABS   **for.free‹IV.SG›**

         mua-<r>-ši   i.
         repair-<IV.SG.>-IPFV.CVB   IV.SG.be.PRS

       'He is repairing my car for free.'

             (Chumakina and Bond, this volume, ex. (52))

(35)   Tu-w-mi-s   Aiša   **horo:keij‹r›u**
         that-I.SG-SG.OBL-DAT   Aisha(II).SG.ABS   **long.time.ago‹II.SG›**

---

[15] See Polinsky et al. (to appear) on the key role of the functional head *v* in the syntactic design of Archi.

27

kł'an-ši   e‹r›di.
love.IPFV-CVB   <II.SG>be.PST

'He fell in love with Aisha a very long time ago.'
       (Chumakina and Bond, this volume, ex. (54))

Although some descriptions suggest that agreeing adverbs also include the degree adverb 'very' (cf. Chumakina and Corbett 2015; Chumakina and Bond, this volume), the adverb in the relevant example is the same as 'long ago', shown in (36); compare (36) and (37). It therefore remains to be seen if genuine degree adverbials in Archi display agreement.

(36)   Arša   **horo:kej‹b›u**   iškul   dabłu.
         Archi.IN.ESS **long.ago‹III.SG›**   school(III).SG.ABS   open.PFV
         'A school was opened in Archi a very long time ago.'
                                       (Kibrik et al. 1977a: 326)

In contrast, TP-level adverbs never display agreement. Consider the following example:

(37)   ***Talaħliš-ijr'u/ejt'u**   χˤel
         fortunately-II.EMPH/IV.EMPH   rain.IV.SG.ABS
         eχdi-t'aw   da-qˤa.
         IV.SG.to.rain.PFV-CVB.NEG   II.SG-come.PFV
         ('Fortunately, I (woman speaking) came back before it rained.')

Cross-linguistically, adverb agreement is rare but not unattested. Agreeing adverbs have been reported in Italian dialects (Antrim 1994; Ledgeway 2011), in Spanish (Fábregas and Perez 2008), in Dutch (Corver 2007), in Shipibo (Baker 2014), in Hungarian (Csirmaz 2008), and in Bantu (Carstens and Diercks 2013). In all these instances, the set of agreeing adverbs is quite small, including one or two lexical items. Agreeing adverbs also occur in other Nakh-Dagestanian languages, as attested by language descriptions (e.g., Forker 2013: 465-466 for Hinuq).

      The facts about Archi agreeing adverbs are scarce; in particular, we lackinformation about the relative placement or scope properties of agreeing and non-agreeing adverbs. We also need more information to determine whether all adverbs are licensed in a uniform manner. Unlike verbs, the majority of which display agreement, only a subset of Archi VP-level adverbs can carry agreement exponents: Chumakina and Corbett (2015) and Bond and Chumakina (this volume) identify almost four hundred Archi adverbs, of which only 14 agree. Let me say that the sheer number of Archi adverbs reported in this study is quite astounding; a cursory look at the English lexicon yields a much lower number. It would be instructive to find out what subtypes of adverbs emerge among the 383 listed. In the face of

such an enormous number of adverbs, and without knowing what they all are, we could hypothesize that half are *v*P-level adverbs, and the other half are TP-level. If so, it could be that all VP-level adverbs are agreeing, but some morphological or phonological constraints prevent them from displaying agreement, just as happens with the 19 non-agreeing verbs. This possibility raises learnability problems, however; an Archi learner must either learn the agreeing adverbs as exceptions or encounter them so frequently that their agreeing status is no longer an issue.

Without additional information, I can only sketch out possible solutions which should be further investigated once new data is available. Among the possibilities outlined here, the first three (38a-c) treat adverbs as a special category, while the fourth (38d) assimilates adverbs to adjectival modifiers.

(38)   Possible analyses of agreeing adverbs in Archi
      a.   Agreeing adverbs represent dedicated functional heads in *v*P
      b.   Agreeing adverbs are adjuncts with unvalued phi-features adjoined to *v*P
      c.   Agreeing adverbs are adjuncts that undergo head movement to *v*
      d.   Agreeing adverbs are modifiers of an absolutive DP

Analysis (38a) posits a number of adverbial phrases in clause structure, each heading its own projection. An articulated version of this approach, developed by Cinque (1999), contends that adverbs occur in the specifier positions of various functional projections which themselves occur in a fixed relative order. When a given adverb appears in different positions with the same interpretation, it indicates movement from a base position; when an adverb appears in two different positions with different interpretations, it suggests that they are two different although homophonous adverbs. Adopting this approach, one could imagine that agreeing adverbs are in the specifier of a particular head, which bears a [GENDER] feature. The head values this feature from the features of the closest *goal*, via successive valuation. For example, in (39), the adverbial phrase is projected between *v*P1 and *v*P2; the first functional head values its phi-feature on the gender feature of the internal argument; v_1 values its gender feature on v_2, and the adverbial head values its gender feature on v_2.[16] The head itself is silent, so the morphological exponent of agreement attaches to the phrasal specifier,

---

[16] In this structure, I abstract away from the actual labels proposed by Cinque for the different adverbial projections and simply use AdvP without further specification.

resulting in an infix or prefix (the structure below does not show the details of case valuation).

(39)
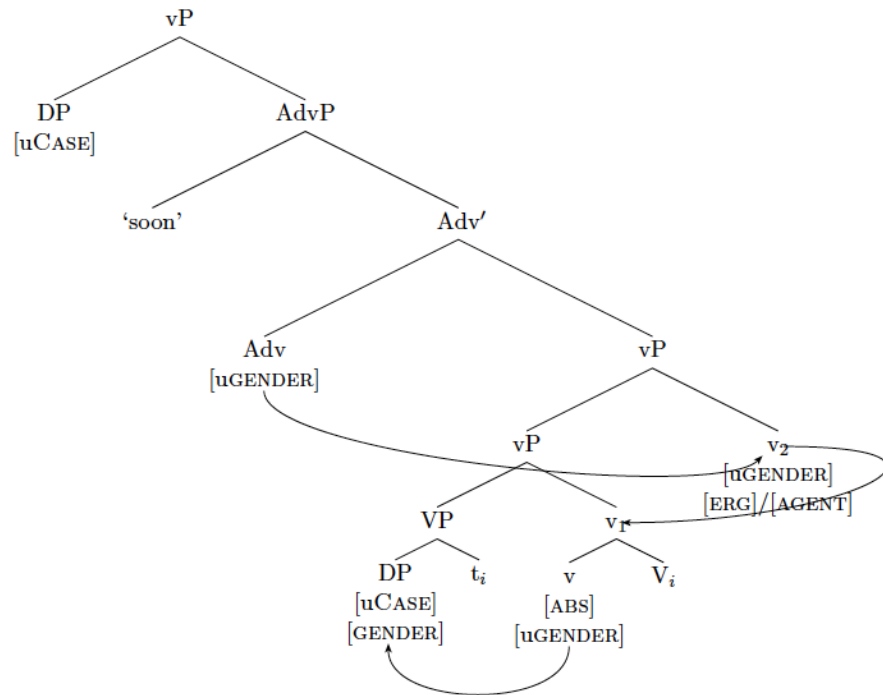
Cinque's adverbial hierarchy, which he developed based on observations of the relative ordering of adverbs and verbal heads, has generated much discussion in the literature and has certainly inspired interesting theoretical developments. Setting aside general issues concerning such a developed architecture of adverbs (see Ernst 2001 for an alternative view), the solution outlined in (38a) has two problems. First, it requires a significant number of silent adverbial heads, motivated only, at least for now, by the need to register agreement. To avoid circularity in the argument, we would need to look for other evidence. Second, given the architecture in (39), how actual agreement exponents on the adverbs become prefixal or infixal is not straightforward. If anything, one would expect suffixation (because the exponent is in the functional head node), but instead we find the same ordering of agreement exponents as on verbs.

Solution (38b) is similar to (38a) in that the adverb is analyzed as probing to satisfy an unvalued phi-feature. However, under this analysis, agreeing adverbs merge as adjuncts to vP and probe in their immediate local domain. To represent this schematically: an adverb is licensed as an adjunct; it probes the closest constituent with valued phi-features (v_2, in the structure

30

below) and values its [GENDER] feature from that constituent. Thus, the absolute DP is the goal for the v_1 probe; v_1 serves as the goal for the v_2 probe, and v_2 serves as the goal to the adverbial probe. If more adverbs merge, they value their phi-features in successive valuation (case valuation arrows not shown).

(40)
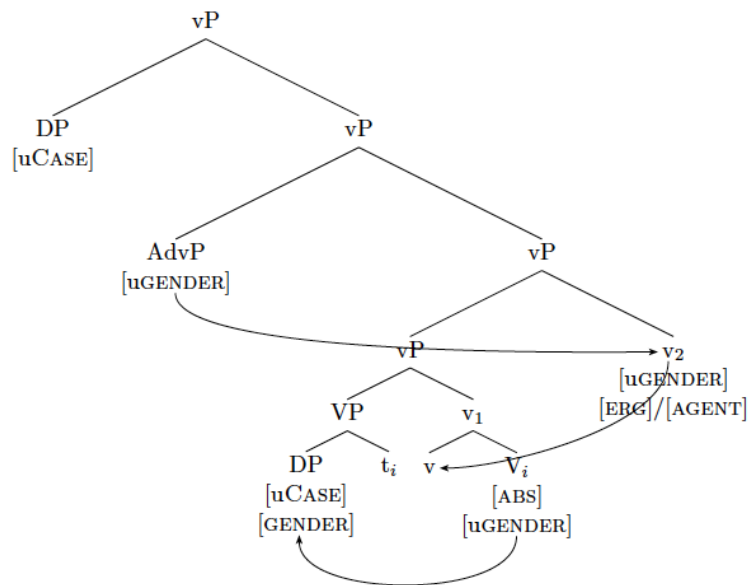
This approach derives the facts of Archi morphology in a more satisfactory manner than (38a) and finds support from additional facts. It is similar in spirit to the analysis proposed in Carstens and Diercks (2013) for Bantu; Carstens and Diercks' paper is exemplary in outlining different possibilities and then rejecting them on the basis of subtle data. The downside for both (38a) and (38b) is that these approaches require motivating the presence of phi-features on adverbs. It could be done by underscoring similarities between adverbs and verbs (an agreeing category) or adverbs and adjectives (another agreeing category), but of course the non-agreement of the vast majority of Archi adverbs is problematic. In addition, it is unclear how much can be gained by drawing parallels between adverbs and adjectives given that 'underived adjectives' in Archi do not agree.

The analytical possibility in (38c) offers an alternative. This analysis argues that agreeing adverbs originate in the *v*P and undergo head movement to incorporate syntactically into the verb (ananalysis proposed by Antrim 1994 for Italian). Instances of Adv-to-*v* head movement occur in Archi in parallel to the instances of V-to-*v* head movement we saw above. To illustrate this analysis schematically: the adverb phrase (AdvP) is

merged inside the *v*P; the head of this AdvP then undergoes head movement to v_2 (just as the lexical verb undergoes head movement), and the agreement marker appears on it as an infix (as in our example) or as a prefix but never as a suffix. All in all, the head movement of a VP-level adverb into *v* is identical to the head movement of the lexical verb. This account differs from the Cinque-style account because it does not posit an unvalued phi-feature on the adverb. The agreement on the adverb is accidental, basically a reflex of agreement on the functional head *v*, which happens to be invisible. The adverb serves as a vehicle to express this agreement morphologically.

(41)
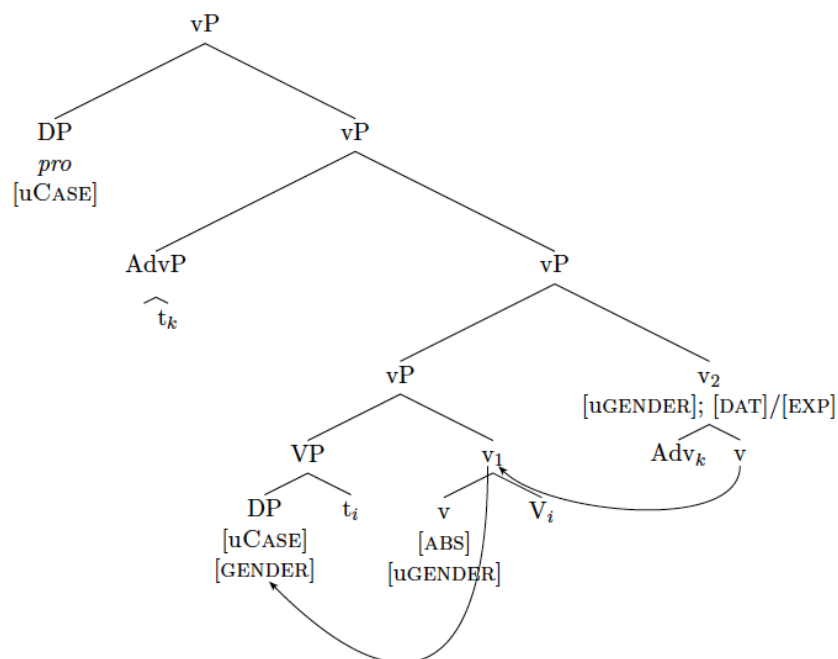
Finally, (38d) pursues the possibility that agreeing and non-agreeing adverbs are structurally distinct (this account is modeled after analyses in Corver 2007; Ledgeway 2011; Fábregas and Perez 2008). The basic idea is that some adverbs are more adjectival in their function and interpretation;therefore, such adverbs can modify the internal argument of the VP (object or subject of an unaccusative) and enter into an agreement relation in their in-situ positions locally within the VP (or remotely elsewhere in the clause). Thus:

(42)
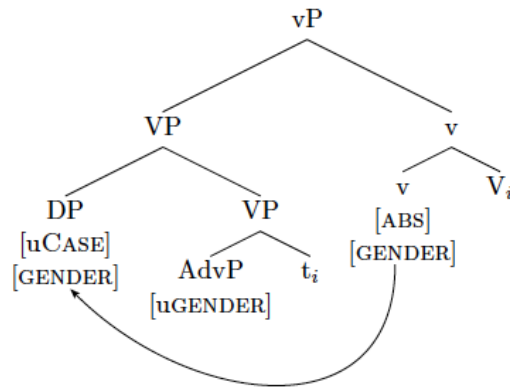
With this approach, the agreeing adverbs constitute a special class within the more general category of adverbs; this class can be defined either by a combination of predicational properties and form (the agreeing adverbs all have the constituent –*ejt'u-*, a focus particle) or by their distributional characteristics. Their agreement is no longer accidental but instead reflects their morphosyntactic status in the verb phrase.

    All the possibilities outlined in this section must be explored further; at this juncture, we only have positive data on Archi adverbial agreement, and without more in-depth information on the limitations of this agreement, a more specific analysis will be hard to produce. Additionally, it would be helpful to clarify what criteria are used to determine the categorial status of adverbs. For example, Chumakina and Brown (2015) characterize the word *eq'en*, presented in example (43) below, as an agreeing postposition. However, the distinction between adverbs and postpositions in Nakh-Dagestanian is notoriously elusive (see Comrie and Polinsky 1999 for some discussion), and that *eq'en* is also an adverb is not impossible.

(43) to-w-mi-s   sin-t'u   ɫ:ʷak-du-t
     that.one-I.SG-OBL.SG-DAT   know-NEG   near-ATR-IV.SG
     duχriqˁa-k   e‹b›q'en   b-i-t:u-b
     village(IV).SG.INTER-LAT   ‹III.SG›up.to   III.SG-be.PRS-ATR-III.SG
     deqˁ.
     road(III)[SG.ABS]
     'He does not know the way to the next village.' (Kibrik et al. 1977a: 227)

4.2   Clauses with stative verbal predicates

Stative verbs are quite different from the non-statives we have considered so far. They have only one stem; out of 190 stative verbs listed by Chumakina et al. (2007), only seven register agreement.

There could be a number of explanations for this lack of agreement on stative verbs, and future work is needed to explore the problem. Here, I will offer several considerations. First off, not all 183 non-agreeing stative verbs must necessarily be non-agreeing for the same reason. A scan of the stative verbs listed in Kibrik et al. (1977a: 71-72) suggests at least three (maybe more) subtypes: predicates expressing psychological and cognitive states ('doubt', 'know', be sorry', 'be ashamed'), evaluative predicates ('be enough', 'be better'), and genuine statives used as attributives (Kibrik et al. 1977a: 72). Likely,the latter group can be subsumed within the category of non-agreeing attributive expressions (see section 5 below). Several verbs (e.g., 'be difficult', 'be easy') take a sentential complement in the absolutive position. Sentential complements are gender IV, and the verbal exponent of agreement in that gender is null - so conceivably, agreement in this case is invisible on the surface.

The remaining verbs have different case frames (see Kibrik et al. 1977a: 71-72), but many of them have experiencer arguments. In some verbs, the experiencer argument is absolutive, and the stimulus appears in a locative case (e.g., 'worry', 'fear', 'be embarrassed'—Kibrik et al. 1977a: 71). With other verbs, the stimulus is absolutive and the experiencer is a locative case ('understand', 'know'). At least some of the statives may not have an external argument at all; they thus resemble applicative unaccusatives in Basque (Režać 2010: 225-231) or in Shipibo (Baker 2014), which have two internal arguments only.[17] Unaccusative *v*Ps are defective in that they lack a specifier position into which the external argument can be merged (cf. Chomsky 2001; Legate 2003; Marantz 2007, amongst others); in that sense, all unaccusative *v*Ps are built the same way. However, it is possible that what looks like an absolutive argument in Archi statives is actually a covert oblique whose presence is motivated by the stative semantics (see Malchukov 2008 for a discussion of the interpretive

---

[17] Baker refers to them as "dyadic unaccusatives" (Baker 2014: 345).

characteristics of such verbs). In that case, a sentence like (44) would have the structure shown in (45), and the verb *sini* could be more accurately interpreted as 'be known to someone'.

(44)　Ja-r　　　　　laha-s　　　　χabar　　　　　　sini.
　　　DEM-II.SG　　child-DAT　　story(III).SG.ABS　　know.PRS
　　　'This girl knows the story.'

(45)
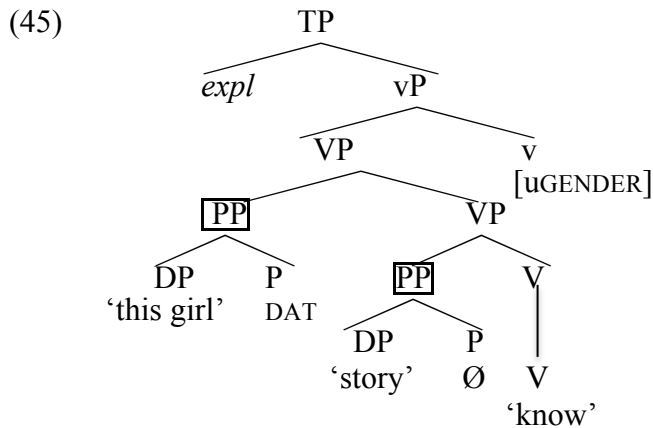
In (45), DPs endowed with phi-features are embedded under postpositional heads (P); the relevant PPs are shown in boxes. Nowhere else in Archi is there agreement between a verb and a PP, therefore, such a configuration renders the gendered DPs invisible to the probing head. In the derivation of this structure, the probing head (*v*) does not find any goal that carries the requisite phi-feature; the result looks like default agreement.[18] As noted above, the Archi default is gender IV; agreement with this gender has the null exponent. Superficially, then, the relevant verb appears to be non-agreeing, but in fact its agreement exponent is just an invariable null morpheme.

　　　The same result occurs if the agreement is actually with the null expletive (dummy subject) since the gender of these expletives is also IV (Kibrik et al. 1977: 55-66). If agreement is with the null expletive, then the direction of valuation is downward, as in (8b) above. However, agreement is established on verbs such as 'know', it is marked by an innocuous null

---

[18] Some debate in the current minimalist literature on agreement is whether what we (descriptively) call default agreement is actually the morphology that surfaces when a probe fails to find a goal bearing the appropriate feature (cf. Preminger 2014: 137 for discussion and arguments for the latter view). If what we call "default" is in fact the absence of agreement, then the postulation of a null exponent on *sini* in (44) and (45) may not be needed.

35

exponent of the type standardly accepted across linguistic approaches and theories since it can appear in variation with overt forms.

In contrast, in the handful of agreeing statives in Archi, each has a genuine absolutive argument, not a PP. This absolutive DP can value the phi-feature on the functional head. Thus, the *v*P in the sentence in (46) presumably has the structure in (47):

(46) Ja-b   χ^{w}alli   b-aχ^ʕ.
      this-III.SG   bread(III).SG.ABS   III.SG-be.enough
      'This bread is sufficient.'

(47)
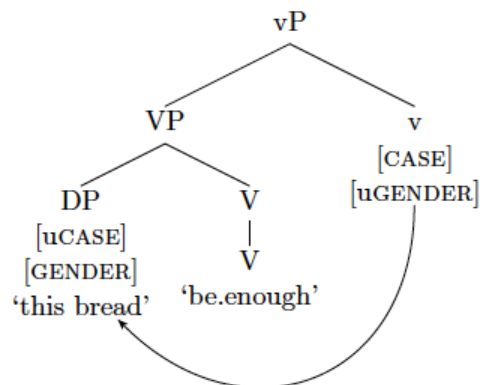
The difference in agreement between (44) and (46) is suggestive of the contrast between the structures in (45) and (47), respectively, but of course further independent evidence is needed to prove the hypothesis that the arguments in (44) are PPs. The data on Archi available to me do not include additional evidence on the differences between PPs and DPs, but establishing such evidence should be possible. Normally, most verbs select for DP complements, and only some verbs select for PP complements; judging by the distribution of putative dyadic statives, the limitations on selection are observable in Archi. More definitive evidence of differences between PPs and DPs should come from distributional properties that await exploration. For example, one can anticipate that PPs, but not DPs, should be islands for subextraction (Abels 2003; 2012; Corver 2015), that DPs and PPs may differ in their binding properties, and that they may be subject to different scrambling constraints (see Neeleman 1999; Landau 2009, for defining properties of PPs and differences between DPs and PPs).

4.3 Variable ("semantic") agreement

4.3.1 Pluringulars

To quote Corbett (2006: 155), the terms "semantic" and "syntactic" agreement apply in the following situations:

> "[S]yntactic agreement (sometimes called 'agreement *ad formam*', 'formal agreement' or 'grammatical agreement') is agreement consistent with the form of the controller (*the committee* has *decided*). Semantic agreement (or 'agreement *ad sensum*', 'notional agreement', 'logical agreement' or 'synesis'*)* is agreement consistent with its meaning (*the committee* have *decided)*. The distinction between syntactic and semantic agreement links to Steele's definition… in that the covariance involves a 'semantic or formal property' of the controller… The terms syntactic and semantic agreement are used only when there is a potential choice."

That "semantic" agreement in Archi happens only in the clausal domain is critical for our discussion; agreement in the noun phrase, discussed in the next section, does not vary according to semantics. What is called "syntactic" agreement is agreement with the morphological form of the DP. Since the theoretical assumptions of minimalism allow for the presence of silent elements, it is plausible to expect that "semantic" and "syntactic" agreement differs in the underlying structure of the goal and that this difference may not be apparent from the surface form of that goal. In other words, what is referred to as "semantic" agreement is agreement with a structure larger or smaller than the surface DP. One of the best-known cases of semantic agreement, which Corbett refers to in his remarks above, is the case of so called pluringulars (den Dikken 2001) - nouns such as *committee, crew, band,* etc., which look singular but can determine plural agreement on the predicate. Example (48a) illustrates "syntactic" agreement, driven by the morphology of *committee* as a singular noun, and (48b) illustrates"semantic" agreement.[19] (Acceptability judgments for (48b) vary dialectically but do not diminish the need for an account that explains the variation in those English dialects that allow for it.)

(48)   a. The committee has decided.
        b. The committee have decided.

---

[19] The discussion of variable agreement in English reproduces den Dikken's (2001) observations and analysis.

37

Just as in Archi, the English pluringular distinction occurs only in verbal agreement but not in DP-internal agreement. Consider the ungrammaticality of the plural agreement in (49b):

(49)   a. This committee has/have decided.
        b. *These committee has/have decided.

Several other effects accompany the variation in agreement. For example, while variable agreement is possible with regular plurals in existential constructions (where the existential verb can agree either with the associate or with the expletive subject), no such variability is observed with pluringulars:

(50)   a. There's/are lots of people holding a meeting in this room.
        b. There's/*are a committee holding a meeting in this room.

Difference in agreement with pluringulars mirrors differences in person binding:

(51)   a. The committee consider themselves/*ourselves indispensable.
        b. We, the committee, consider ourselves indispensable.
        c. ?Our committee considers ourselves indispensable.

Regular plurals can induce the phenomenon of agreement attraction whereby a verb erroneously agrees with an intervening noun rather than the actual goal of agreement (52b); pluringulars never cause such attraction. Compare the widely attested (52b) and the completely unacceptable (53b):

(52)   a. The educational background of my neighbour's children is
           unclear.
        b. The educational background of my neighbour's children are
           unclear.
(53)   a. The educational background of the committee is unclear.
        b. *The educational background of the committee are unclear.

To account for the differences in pluringular agreement, den Dikken (2001) proposes that such expressions are structurally ambiguous between a regular DP (54a), which includes a noun specified as a non-plural, and a more complex structure (54b), which has an extra, silent DP specified as a plural pronominal. "Syntactic" agreement is agreement with (54a) and "semantic", with (54b).

(54) a.   DP[-PLURAL]   b.   DP
        /\   /\
       D   NP   DP₁   DP₂
      the   *committee*[-PLURAL]   *pro*[+PLURAL]   /\
                                                            D   NP
                                                          the   *committee*
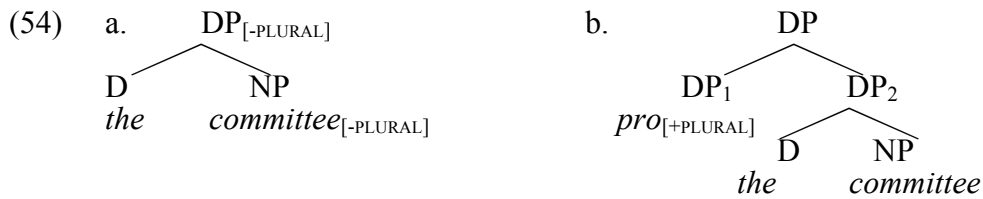
All the differences discussed above (as well as some other effects addressed by den Dikken) are fully accounted for under the proposed structure. A pronoun cannot combine with a demonstrative (cf. *these they, *they these), which explains why (49b) is ill-formed, and the plural *these* cannot act as the demonstrative for the common NP *committee* since the noun is morphologically singular. Notwithstanding some exceptions, such as list readings, the definiteness effect prevents pronouns in general from associating with the existential *there*. This observation accounts for the ungrammaticality of (50b), incompatible with the structure in (54b). Similarly, the inability of pronouns to induce agreement attraction accounts for the impossibility of (53b).

In sum, differences in agreement between (48a) and (48b) reflect principled differences in structure, shown in (54a) and (54b). Thus, apparent variation in agreement is actually a result of structural ambiguity.

4.3.2   Archi pluringulars

Archi numerical phrases headed by human-denoting nouns allow both "syntactic" and "semantic" agreement, boldfaced in (55a) and (55b) respectively:

(55) a.   Os   **i‹w›di-li**   **i‹w›di-t'u**   łib-aw   kulu
           one   ‹I.SG›be.PST-EVID   ‹I.SG›be.PST-NEG   three-I.SG orphan
           lo.
           child(I)ABS.SG
           'Once upon a time, there were three orphan boys.' (T2:1)
           (lit.: … there was or there was not…)
      b.   Os   **e‹b›di-li**   **e‹b›di-t'u**   łib-aw
           one   ‹I/II.PL›be.PST-EVID   ‹I/II.PL›be.PST-NEG   three-I.SG
           kulu   lo.
           orphan child(I)ABS.SG
           'Once upon a time, there were three orphan boys.'

Note that the noun in (55a,b) remains singular. As in the English pluringulars, the numeral invariably agrees with the singular noun in both examples, while the verb takes variable agreement. To account for the variation in (55a,b), we might hypothesize that numerical phrases can

include a null pronominal; if such a pronominal is present, it triggers "semantic" plural agreement on the verb.

(56) a.
```
           DP
          /  \
        NP     D
       /  \
    NumP   NP
   'three' 'orphan'
          [-PLURAL]
```

b.
```
                    DP
                   /  \
                DP₁    DP₂
          pro[+PLURAL] /  \
                     NP     D
                    /  \
                 NumP    NP
                'three' 'orphan'
                       [-PLURAL]
```
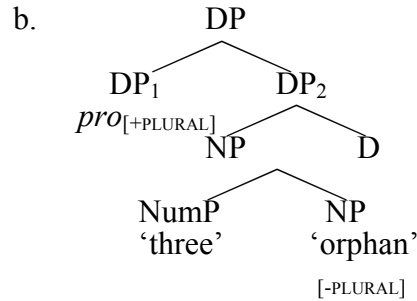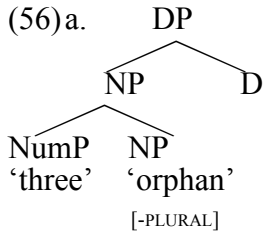
The pronominal postulated in (56b) can actually be overtly expressed, as the following example shows:

(57)   [DP [DP Nen]   [DP [NP [NumP q'ˤwe‹r›u] [NP *e*]]
              1PL.EXCL   two‹II.SG›
       q'oc'o-li   **q'iˤjdi-li…**
       1PL.reconcile.PFV-CVB   1PL.sit.PFV-EVID
       'We two (girls) having reconciled (by then) were sitting there...'

This example includes two verb forms, the converbal predicate of the embedded clause and the matrix predicate 'sit'; both agree with *nen q'ˤwe‹r›u* 'we two' as a plural DP. The agreed-with DP seems to be the subject of the matrix clause, co-indexed with a null pronominal (*pro*) in the embedded clause, also plural. Thus:

(58)   [DP Nen   q'ˤwe‹r›u]ᵢ [*pro*ᵢ **q'oc'o-li**]
              1PL.EXCL   two‹II.SG›   1PL.reconcile.PFV-CVB
       q'iˤjdi-li…
       1PL.sit.PFV-EVID
       'We two (girls) having reconciled (by then) were sitting there...'

When the pronoun is not part of the pluringular, the structure can differ. In (59), *nen* is a free-standing personal pronoun in the matrix clause, and *q'ˤwe‹r›u* 'two [girls]' is in the embedded clause unaccompanied by the extra pronominal. Thus, the relevant DP in this sentence has the structure shown in (56a). The embedded verb agrees with that regular DP in the singular, and the matrix verb agrees with the pronoun in the plural. The pronoun *nen* does not need to be adjacent to *q'ˤwe‹r›u* to demonstrate this pattern of agreement.

(59) a. Nen   [q'ˤwe‹r›u   **do-q'c'o-li**]   **q'iˤjdi-li…**
         1PL.EXCL   two‹II.SG›   II.SG-reconcile.PFV-CVB   1PL.sit.PFV-EVID

'We two (girls) had reconciled (by then) and were sitting there...'
b. [Q'ˤwe‹r›u   **do-q'c'o-li**]   nen   **q'iˤjdi-li**…
   two‹II.SG›   II.SG-reconcile.PFV-CVB   1PL.EXCL   1PL.sit.PFV-EVID
   'We two (girls) had reconciled (by then) and were sitting there...'

Finally, in the matrix clause, which contains a pronoun, the verb must agree with that pronoun in the plural; singular agreement on the matrix verb is ungrammatical:

(60)   *Nen   q'ˤwe‹r›u   **q'oc'o-li**   **q'a‹r›di-li**…
        1PL.EXCL   two‹II.SG›   1PL.reconcile.PFV-CVB   ‹II.SG›sit.PFV-EVID
        ('We two (girls) had reconciled (by then) and were sitting there...')

As already noted, variation in agreement is possible only with human nouns, which suggests that the (null) pronominal in Archi pluringulars must be specified as [+human]. Null pronominals are lexical items, the same as the overt pronominals *he, she,* or *you*, and it is fully expected that they should be specified for various lexical features such as animacy, human/non-human distinction, gender, etc. That null pronominals be constrained as animate or human is, in fact, not uncommon. For instance, the cross-linguistic availability of null subjects is often tied to the universal person/animacy scale (cf. Silverstein 1976):

(61)   1/2 Person > Proper Noun 3 Person > Human > Animate > Inanimate

For example, Hebrew limits null subjects to first and second person. In Russian, there are two different null pronouns for human plurals and inanimate natural forces (Mel′čuk 1974). Mandarin Chinese null pronominals are construed as [+human], etc. In English pluringulars, there is also a tendency to interpret the null pronominal as [+human], which leads to variable acceptability between *who* vs. *which.* Compare the following examples:

(62)   a. The committee who/?/*which have been in session since 9am….
        b. The committee which/*who has been in session since 9am…

A final question concerns agreement on the numerical phrase. Recall that in all the examples above, only the predicate exhibited variable agreement; the numerical phrase always appeared in the singular. The numerical expression in (56a) and in (56b) is always part of the lower DP (DP$_2$), and its only relationship is with the NP inside the lower DP. Whatever model of agreement we adopt, the numerical expression is inaccessible to agreement with the higher DP, the one that includes the null pronominal. Thus the

41

structure in (56b) actually predicts that the plural agreement on the numerical expression should be impossible.

To conclude, the account offered here bypasses any issue of variable agreement. The patterns are predictable, and variation is an illusion. Different agreement patterns result from different structural configurations, which are not always visible on the surface; a more detailed analysis of underlying patterns allows us to distinguish between the different configurations. In particular, what is described as "semantic" agreement stems from the presence of a pronominal expression in the DP structure. At least in some cases in Archi, such a pronominal may actually be overt; in this sense, Archi presents a particularly compelling case in support of the present analysis. "Syntactic" agreement follows when the agreement goal does not include a pronominal in its structure. Since pronouns are often specified for animacy or gender, this approach also allows us to explain why seeming variation in agreement is observed only with human nouns; no non-human third person null pronominal exists, so the larger structure with an extra pronominal DP is simply unavailable for such nouns.

5   Agreement within the noun phrase

5.1   The range of facts to be accounted for

Archi has a small number of non-derived attributive forms (about thirty). Kibrik (1977b: 113) characterizes these forms as adjectives proper; they include names of nationalities (*maʕarul* 'Avar', *oʕroʕs* 'Russian') and names of properties, e.g., *bišin* 'foreign, step' *č'ere* 'barren'. The remaining attributive forms are derived always with the extremely productive suffix -*t:u*-. Traditional descriptions refer to such forms as "derived adjectives" (Kibrik 1977b: 113ff.; Bond and Chumakina, this volume; Bond and Chumakina, in press; Chumakina and Corbett 2015). These forms display agreement, which is always suffixal — verbs, by comparison, do not allow agreement suffixes. The suffixes encoding gender and number agreement on the derived adjectives appear below (see also Bond and Chumakina, this volume). Note that gender agreement is neutralized in the plural:

(63)   Attributive agreement suffixes

	SG	PL
I	-w	
II	-r	-ib
III	-b	
IV	-t	

Archi demonstratives, like adjectives, display suffixal agreement with the head noun in number and gender. The data below reveal close similarities

between the endings in (63) and the endings found on demonstratives; again, gender agreement is neutralized in the plural. Based on this identical pattern, we treat agreeing adjectives and agreeing demonstratives as members of the same general class of agreeing modifiers.

(64) Archi demonstratives

I	II	III	IV	PL	GLOSS
ju-w	ja-r	ja-b	ja-t	j-eb	this, close to the speaker
jamu	jamu-r	jamu-m	jamu-t	jem-im	this, close to the listener
to-w	to-r	to-b	to-t	t-eb	that, further away from the speaker
gud-u	god-or	god-ob	god-ot	gid-ib	that, lower than the speaker
ʁud-u	ʁod-or	ʁod-ob	ʁod-ot	ʁid-ib	that, higher than the speaker

Finally, numerals, too, display a similar pattern of agreement with head nouns. Consider the following example repeated from (55b):

(65) Os **i‹w›di-li** **i‹w›di-t'u** ɬib-aw
 one ‹I.SG›be.PST-EVID ‹I.SG›be.PST-NEG three-I.SG
 kulu lo.
 orphan lad.I.SG
 'Once upon a time, there were three orphan boys.' (=(55b))

In sum, several categories of nominal modifiers in Archi — derived attributive adjectives with the suffix *-t:u*, demonstratives, and numerals — display suffixal agreement with the head noun. The next section presents a derivational account of this attributive agreement. I limit the discussion to attributive forms that appear as nominal modifiers, setting aside those used as predicative constituents.

5.2 Attributive modifiers as adjoined phrases

The analysis of attributive agreement is not uniform across languages; treatment depends on the categorial status of adjectival (attributive) phrases and their placement within the noun phrase. Simplifying things somewhat, modifying adjectives can be viewed as specifiers/adjuncts, as heads, or as reduced relative clauses (see Cabredo Hofherr 2010; Alexiadou 2002 for an overview).

 The adjective-as-head approach has a number of instantiations; the variant presented in (66a) places adjectives in the specifier of a dedicated

functional projection (FP) in the noun phrase structure. According to proponents of this approach, adjective–noun agreement occurs via raising when the noun passes through the adjectival position on its way to a higher FP (Cinque 1994: 86-89). The mechanism of agreement in this scenario, however, is not entirely clear (see Sichel 2002 for a critical discussion).

(66) a. $[_{DP} [_{FP} Adj [_{NP} NP]]]$
      b. $[_{DP} [_{FP} N_i [_{FP} Adj t_i [_{NP} t_i]]]]$

Several researchers have offered arguments supporting the analysis of adjectives as heads. In particular, see Bernstein (1993) for Romance prenominal adjectives, Delsing (2008) for Scandinavian, Androutsopoulou (2001) for Greek, Carstens (2000) for Bantu, and Sichel (2002) for Hebrew, among others. Evidence for the head status (or, alternatively, the specifier-of-FP status) of attributive expressions across various languages comes from several sources, including ordering generalizations, interaction with definite marking, interaction with possessives, and various morphological processes. A particular advantage of treating (attributive) adjectives as heads on the nominal spine is that adjectival agreement can then be fully assimilated to clausal agreement (Carstens 2000; Sichel 2002). This assimilation is advantageous from at least two perspectives: first, more uniform agreement mechanisms produce a more parsimonious theory; second, clausal agreement is a better understood process, which can help model adjectival agreement.

An alternative approach holds that all adjectives should be assimilated to (reduced) relative clauses (see Kayne 1994), thus appearing as adjuncts to NP/nP/DP. This analysis is schematized in (67) with the relative clause adjoined on the left (to show the Archi order):

(67) $[_{DP} [_{NP} CP/AP NP] D]$ (left) adjunction to NP

Under this analysis, a surface form in the standard adjectival configuration (e.g., 'a challenging problem') is understood to have an underlying relative clause structure ('a problem (that is) challenging').

Adjectives — and attributive expressions more generally — are a heterogeneous class cross-linguistically (and may be dissimilar even within a single language), which suggests more than one analysis may be needed (see Alexiadou 2002 for an argument that APs should be analyzed both as specifiers of FP and as essentially predicative elements). If so, language-specific data can crucially help decide which analysis should be preferred in a given context. Depending on the characteristics of nominal modifiers in a language, both approaches to nominal agreement outlined in this section may be correct; ultimately, the choice of nominal agreement analysis hinges on the syntactic status of modifiers within a given language.

The available facts of Archi argue in favor of the adjunction analysis shown in (67). First, there is a morphosyntactic similarity between adjectives and relative clauses: both types of modifiers bear the suffix *–t:u-*, which serves as the morphosyntactic locus of agreement marking. (I will return to the categorial status of this marker below.) Second, there is no evidence of any kind of movement in DPs with attributive modifiers; relative clauses and adjectival attributive expressions appear in the same prenominal position with the modified head noun to their right. Based on this structural parallel, an analysis that assimilates adjectives (and other attributive expressions) to (reduced) relative clauses is desirable. I will pursue such an analysis below, departing from the Kaynian approach. However, only *some* of the attributive forms in Archi will be treated as reduced relative clauses in this analysis. I understand the rest of these modifiers to be simple attributive forms that differ from relative clauses in their internal structure but share the same syntax of adjunction to the noun phrase they modify.[20]

To pursue this approach, we must first develop a version of (67) in which all attributive forms adjoin to the modified NP; a subset of these forms will be treated as reduced relative clauses. The relevant structure is shown in (68) where I represent all modifiers atheoretically as Attributive Phrases (AttrP).

(68)　　　　　　　　　　　NP
　　　　　　　　　　　　 ⁀
　　　　　　　　　AttrP　　　NP

In what follows, I will first discuss actual reduced relative clauses, then other modifiers, and subsequently will illustrate how concord can account for agreement on these modifiers.

---

[20] Possibly, non-derived attributive forms, which are also prenominal, may appear as specifiers of FP, as shown in (66a) above. Such a differential analysis of Archi attributives may account for the non-agreeing nature of non-derived attributives (see section 5.1), echoing the ideas in Bond and Chimakina (to appear) who argue that agreeing and non-agreeing adjectives are categorially different in Archi. Let us assume the structure such as (66a) for some adjectives; since we postulate no movement of the noun through the specifier position that houses the adjective, this structural configuration provides no source for agreement. Testing against additional data is necessary to support or refute any such possibility.

5.3 Archi attributive modifiers

5.3.1 Archi attributive modifiers as reduced relative clauses

Relative clauses are usually analyzed as CPs. However, reduced relative clauses are also amenable to a participial analysis where a special nominalizing node can embed a verbal structure including tense/aspect/mood (TAM) morphology (Doron and Reintges 2005). Following Doron and Reintges' proposal, I adopt the following general structure for clausal participial modifiers:

(69)
```
                      NP
                  ┌───────┴──────┐
               PtcpP            NPᵢ
            ┌────┴────┐
         (Opᵢ)      Ptcp'
                  ┌───┴────┐
                 TP       Ptcp
              ┌───┴──┐     t:u
          Subjectⱼ   T'
                  ┌──┴──┐
                 vP     T
              ┌───┴──┐
             tⱼ      v'
                  ┌──┴──┐
                 VP     v
              ┌───┴──┐
           Object    V
```
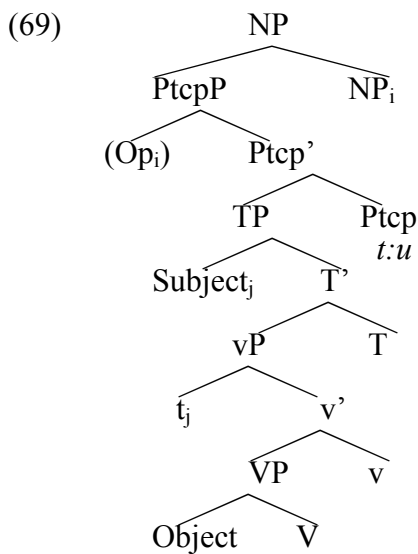
The participial node does not need to embed the entire tensed clause; it can also embed a *v*P or a smaller phrase (see Doron and Reintges 2005 for a discussion and examples from Afroasiatic languages).

The structure schematized in (69) allows us to identify the suffix -*t:u*- as a participial node (Ptcp). This node embeds a tensed structure (as shown in (69)), a verb phrase, or any other non-participial phrase and turns it into an attributive expression. This node also serves as the morphosyntactic locus of agreement to which gender agreement markers are suffixed.

Assuming the participial relative analysis, the noun phrase in (70a) has the structure shown in (70b) or (70c).[21] To decide between (70b) and (70c), we would need additional data (for example, evidence on the types of adverbials permitted in the participial clause and data on modal and negative affixes acceptable in the participle); in the absence of such data, I just

---

[21] For expository ease, I use English glosses in the schematics but annotate them with the grammatical features of the respective Archi expressions.

present both possible structures. The choice between the two does not affect the analysis of agreement in the noun phrase.

(70) a. [s:iħru   b-i-t:u-r]   lo
        cunning(III).SG.ABS   III.SG-be.PRS-ATTR-II.SG   child(II).SG.ABS
        'a cunning girl//a girl with slyness'
        (lit.: girl for whom slyness exists)

b.

```
                          NP
                     ┌────────┴──────┐
                  PtcpP             NP
               ┌────┴────┐       'child'.II
              TP        Ptcp
          ┌────┴───┐     t:u
         DP        T'
    'cunning'ᵢ.III ┌──┴──────┐
                  vP         T
              ┌───┴───┐
             DP       VP
             tᵢ    ┌───┴───┐
                  DP       V
                  tᵢ     'be'
```

c.

```
                          NP
                     ┌────────┴──────┐
                  PtcpP             NP
               ┌────┴────┐       'child'.II
              vP        Ptcp
          ┌────┴───┐     t:u
         DP        VP
    'cunning'ᵢ.III ┌──┴───┐
                  DP      V
                  tᵢ    'be'
```
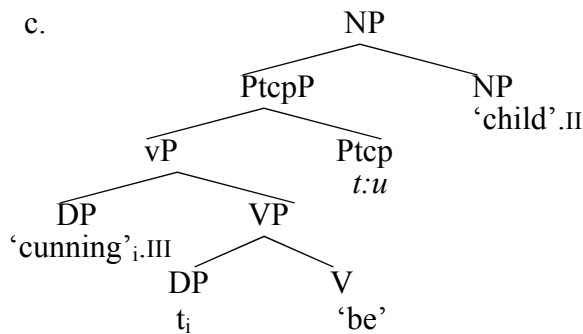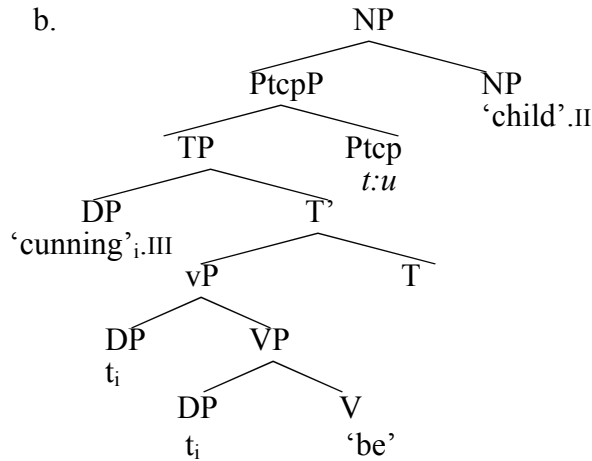
In these structures, the unaccusative relative clause verb 'be' agrees with its sole argument, 'cunning' (gender III), which has risen from the internal argument position that generates subjects of unaccusatives. This agreement is properly verbal, so it is marked as a prefix in keeping with the standard verbal agreement pattern in Archi (see section 3).

    Consider now two additional examples supporting the proposed analysis of attributive modifiers. If the relative-clause analysis is on the right track, we can predict verbs that do not display agreement (see section 4.2 for such verbs) will appear with the participial suffix –t:u- and have suffixal agreement only. This prediction is confirmed. Consider the stative verb *bala* 'be difficult', which does not agree with its argument. The only agreement marker is the suffix that follows -t:u-; the participle agrees in

gender with the head noun *ac:'i*.[22] Again, I present two possible structures, the choice between which would require more data on Archi relative clauses.

(71) a. [bala-t:u-t]   ac:'i
         be.difficult-ATTR-IV.SG   disease(IV).SG.ABS
         'bad (tough) disease'

b.

```
                         NP
                        /  \
                    PtcpP   NP
                   /   \    'disease'ᵢ.IV
                 Opᵢ   Ptcp'
                      /    \
                    TP      Ptcp
                   /  \      t:u
             proᵢ/tᵢ   T'
                      /  \
                    vP    T
                   /  \
             proᵢ/tᵢ   VP
                      /  \
                    DP    V
                    tᵢ    'be bad'
```

c.

```
                         NP
                        /  \
                    PtcpP   NP
                   /   \    'disease'ᵢ.IV
                 vP     Ptcp
                /  \     t:u
             proᵢ   VP
                   /  \
                 DP    V
                 tᵢ    'be bad'
```
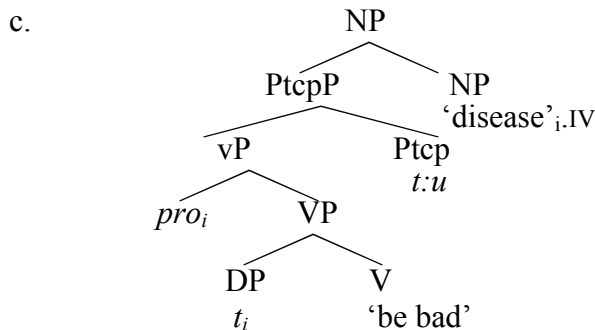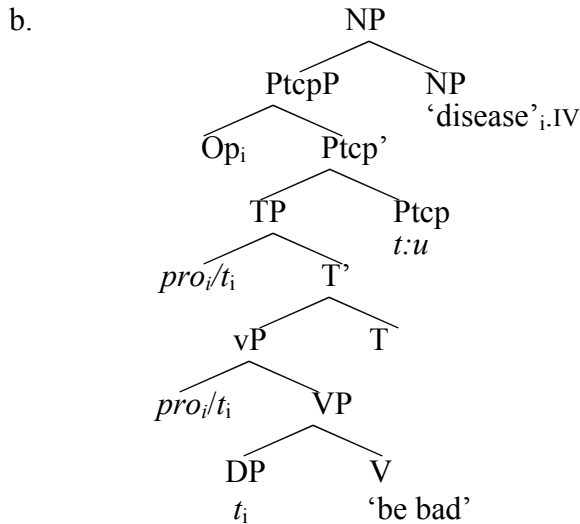
Let us continue with the assumption that the relative clause analysis is applicable to (at least some) Archi modifiers. If the predicate of a relative clause takes part in agreement, it is expected to agree with the absolutive argument as occurs elsewhere in Archi (see section 3). Such verbal agreement is expected to be infixal or prefixal, as schematized in (72a)

---

[22] In the proposed structure (71b), the head noun may undergo extraction (represented by a trace) or simply be co-indexed with a null pronominal. The choice between these two options is not critical for the discussion here and would require additional empirical evidence, such as reconstruction and binding data.

below (for expository purposes, I present only prefixal agreement examples) and occurs independently of the absolutive presence in the relative clause or is extracted and represented by a gap. However, it is not the only form of agreement that takes place: the relative clause predicate (the participle in –*t:u*-) also agrees with the head noun via suffixal agreement, as we just saw. Now, if the external head noun of the relative clause corresponds to the (gapped) absolutive argument inside that clause, then we can expect that the predicate of the relative clause will agree with that noun twice — once as the verb agreeing with the absolutive gap (72a) and once as the modifier agreeing with the head noun (72b). Note I am using the term "agreement" atheoretically here, just to describe the matching of gender features between constituents.

(72)   a.   [$_{RC}$ DP$_{ABS}$ ... agreement-V] ...
                   |_____|

     b.   [$_{DP}$ [$_{PtcpP=RC}$ [ABS-GAP$_i$ ... agreement-V] Ptcp-agreement] DP$_i$]
                      |_____| |_____|

The schematics in (72b) display double agreement: prefixal/infixal agreement with the absolutive of the embedded clause and simultaneous suffixal agreement (following the participial suffix -*t:u*-) with the external head of the relative clause — which simply happens to be the same expression. This incidental double agreement pattern is amply confirmed by Archi data. Consider the following example where the verb 'run' displays prefixal agreement in gender II with the subject 'girl', and the attributive form displays agreement with that noun as well, marked by the suffix –*r*. Based on the analysis presented in this section, this phenomenon of double agreement can be reduced to a subcase of modification where the referent of the gapped argument inside the relative clause and the referent of the head noun happen to be the same.

(73)   a.   [d-eˤrš:u-r-t:u-r]   lo
               II.SG-run-IPFV-ATTR-II.SG   child(II).ABS.SG
               'a running girl'

b.

```
                          NP
              PtcpP              NP
                              'girl'ᵢ.II
        Opᵢ        Ptcp'
              TP         Ptcp
                         t:u
         proᵢ/tᵢ    T'
              vP       T
         proᵢ/tᵢ    VP
                    |
                    V
                  'run'
```

The examples presented in this section all display a typical configuration between a restrictive relative clause and its head. The relationship between the head noun and the relative clause may be adpositional, as in (70a),[23] or may rely on co-indexation between the head noun and a constituent or subconstituent in the relative clause, as in (73).

In examples (23c), (24c), and (25c) above, the head noun 'place' is coindexed with the presupposed locative adjunct in the relative clause. The locative adjunct inside the relative clause can also be expressed by an overt adverb, as shown below, where *tenik* 'there' inside the participial clause and the external head *biq'ʷ* 'place' are coreferential (the overt resumptive in the relative clause is optional):

(74) [laha-s   Rasul   tenikᵢ w-ak:u-t:u-t]
      child.I.SG.OBL-DAT   Rasul.ABS.I.SG there   I.SG-see-ATTR-IV.SG
      biq'ʷᵢ
      place.IV.SG.ABS
      'the place where the child saw Rasul'
      (lit.: 'the place that the child saw Rasul there')

---

[23] Gapless relative clauses in which the head noun is not represented in the relative clause itself are independently attested in Archi. Consider the example below, and see also Daniel and Lander (2011: 149).

(i)   [χːʷalli   b-ača-r-t:u-t]   di
      bread(III).SG.ABS   III.SG-bake-IPFV-ATTR-IV.SG   smell(IV).SG.ABS
      'the smell of bread being baked'

Having established the internal structure of Archi participial relative clauses, let us now probe further the relationship between that relative clause and the head noun. If we assume the structure of Archi attributive modification shown in (67) and (68), then we can postulate that the head noun may be replaced by a proform — just as, in English, *one* can replace *girl,* in the noun phrase *the running girl*. While in English, the proform must be overt (*one*), in Archi, the equivalent proform is null, and the agreement suffix serves to narrow the range of possible referents to those compatible with a given gender specification. For example, compare (75a) and (75b):

(75) a. [d-eˤrš:u-r-t:u-r]   lo
          II.SG-run-IPFV-ATTR-II.SG   child(II).ABS.SG
          'a/the running girl'
      b. [d-eˤrš:u-r-t:u-r]   *e*
          II.SG-run-IPFV-ATTR-II.SG
          'the running one' (a female)

From the semantic standpoint, both the (reduced) relative clause and the head behave like predicates in this configuration and can therefore only combine by intersection. The result of such an intersection is a new predicate. For example, in (71), "being-bad" refers to the set of things that are bad, and "disease" refers to the set of things that are illnesses; both are predicates. The intersection of their denotations derives the (sub)set of referents corresponding to "being-bad disease". The determiner converts the predicate denotation from a singleton set to the unique individual in the set.

5.3.2   Archi attributive modifiers which are not relative clauses

Not all attributive modifiers can be constructed as relative clauses. For example, adjectives such as "former", "future", "possible", "alleged", etc., do not denote a set of individuals that intersects with the set of individuals denoted by the noun. Rather, the interpretation of these "intensional" adjectives crucially relies on a time and/or world different from the actual/current one. The same applies to demonstratives, which are not intersective in the same sense as "running" or "cold". Despite these differences, however, all these attributive forms appear before the noun in Archi, and they all display the same suffixal agreement. In terms of their internal structure, they fall into two classes: attributive modifiers with the suffix –*t:u*- (comprising the majority of forms) and other modifiers such as numerals and demonstratives.

Modifiers formed with the suffix –*t:u*- can be considered participial, but unlike the participial clauses discussed in the preceding section, they are probably lexical or phrasal but not clausal. For example, the non-intersective adjective *kɬ'irt:u*- 'former' (literally, '(one) below') has the

following tentative structure where the participial head embeds either a lexical adverb or an adverbial phrase:

(76)   PtcpP

Adv(P)   Ptcp
kɬ'ir   *t:u*
'below'

Numerals and demonstratives are not participial, but they also appear as adjoined modifiers of the NP. Thus, their syntactic relation to the noun they modify is the same as the relation held by the participial modifier along the lines shown in (68) above.

(77)   a.   NP   b.   NP

DemP   NP   NumP   NP

Now that we have established an understanding of the syntactic relationship between attributive expressions and the noun phrases they modify, let us examine agreement inside the Archi noun phrase.

5.4   Attributive agreement: Concord

When an attributive expression is left-adjoined to its head noun (as in (68)), the relationship between the two cannot be mediated by *Agree*. The two expressions are not in a c-command relation, and in some instances, the head noun is not even represented in the relative clause — consider (70) and example (i) in footnote 23. Furthermore, the verb in the relative clause has already had its phi-features valued by its own absolutive argument, and there is absolutely no evidence that the participial head –*t:u*- has any phi-features. All these facts indicate that *Agree* is not applicable. Instead, we posit that the relationship between the predicate of the relative clause and the head noun is one of concord (see section 2.2). The phi-features of the noun are simply copied onto the predicate of the relative clause, and since copying is not restricted to a single occurrence, these features can be copied on multiple attributive expressions modifying a given noun. To represent this schematically,

(78)   [NP [PtcpP [TP [PredP [...]]]]-φ   [NP]φ]
                                          ↑_____|
                                          copying

Not only are multiple instances of copying allowed under concord, but copying can also occur over (apparent) intervening material — a configuration impossible for *Agree*, which observes strict locality. Possible

52

evidence of copying across intervening material comes from agreement in attributives that are separated from the head noun by non-agreeing adjectives. In general, attributive adjectives follow a particular order (cf. Dixon 1982; Sproat and Shih 1988):

(79) Linear order of adjectival modifiers by meaning
     evaluative > size > age > shape > color > provenance > material

Recall that adjectives expressing provenance (nationality, origin) are often non-derived and do not display agreement; however, the adjectives preceding them do, indicating that concord disregards possible barriers:

(80) ɬːʷak-du-t   maʕarul duχriqʕ
     near-ATTR-IV   Avar   village(IV).ABS.SG
     'a/the nearby Avar village'
(81) beːχu-tːu   mu-tːu   oʕroʕs   lo
     be.tall-ATTR.I.SG   be.handsome-ATTR.I.SG Russian   child(I).SG.ABS
     'a tall handsome Russian lad'

Thus, the structures schematically shown in (82a-c) underlie these expressions:

(82)   a.   [$_{NP}$ [$_{PtcpP}$ …[XP]]-φ   [NP]$_φ$]
                          ↑_____|

       b.   [$_{NP}$ [$_{NumP}$ Num]-φ   [NP]$_φ$]
                              ↑_____|

       c.   [$_{NP}$ [$_{DemP}$ Dem]-φ   [NP]$_φ$]
                            ↑_____|

Adjuncts can be iterated, so it is fully expected in this analysis that there may be more than one modifier associated with a given head noun.

I am not in a position to determine whether the agreement markers on modifiers in the Archi noun phrase are suffixes or clitics; both possibilities are compatible with the proposed syntactic analysis. Nothing inherent in this analysis predicts that the relevant agreement markers should appear at the right edge of a word. On the other hand, since feature matching in the noun phrase is achieved via concord (feature copying), whereas feature matching in the verb phrase is achieved via valuation through *Agree*, there is no expectation that the agreement markers in the noun phrase and the agreement markers in the verb phrase should be the same or similar—after all, they are licensed by two different mechanisms.

To summarize, the minimalist analysis can account for agreement in the Archi noun phrase without any additional stipulations. The proposed account presents all prenominal modifiers as adjuncts to the noun phrase

which receive agreement through phi-feature copying (concord) from that noun phrase. Although the structures in (68) and in (82a-c) are well motivated by the empirical facts of Archi, they should not be adopted indiscriminately across languages without a critical evaluation of language-internal facts. After all, some languages display a striking similarity between noun phrase architecture and clausal architecture (see especially Carstens 2000); what factors determine the possible parametric variation remains to be seen.

6   Conclusions

I have sketched a minimalist analysis of the main agreement phenomena of Archi at the level of the clause and at the level of the noun phrase. All facts surveyed here can be handled straightforwardly by minimalist syntax. That even complex agreement patterns such as those found in Archi do not require any theoretical innovations and can be accounted for using independently available mechanisms and operations is an inspiring result. In terms of the actual structure, it is notable that all case and agreement licensing in Archi happens at the level of the verb phrase (vP), not the tensed clause. Throughout Archi, agreement serves as evidence of underlying structure, providing surface indications of the functional projections inside the clause; in terms of L1 acquisition, these agreement markers form a trail of morphological breadcrumbs leading Archi Hansels and Gretels to the design of Archi language.

Agreement within the noun phrase in Archi is subject to the principles of concord and cannot be reduced to *Agree*. Most Archi attributive modifiers seem to fit the profile of (reduced) relative clauses and adjoin to the nouns they modify; there is no evidence of movement inside the noun phrase. I have proposed a participial analysis of these reduced relative clauses, one that allows us to unify all attributive forms derived with the suffix *–t:u-* under the rubric of lexical, phrasal, and clausal participles. The remaining modifiers, such as numerals and demonstratives, also have attributive characteristics and are adjoined to the NP in the same way that reduced relative clauses are.

The proposed structures, combined with the distinction between *Agree* and concord, also allow us to account for the different mechanisms of agreement in Archi, which employ prefixes/infixes on the one hand and suffixes on the other. Prefixation and infixation are straightforwardly associated with the head movement of lexical verbs/adverbs to a functional head position inside the verb phrase, while suffixation is a sign of feature copying. While Archi data are best accounted for by separating *Agree* and the mechanisms of nominal concord, this result does not mean that the unifying approach to verbal and nominal concord should be abandoned. This approach may be applicable in some languages but not in Archi where

strong language-particular evidence points to the differential approach to agreement in the two domains.

More generally, the discussion above demonstrates that in order to explain apparently complex facts, we often must start from very basic structures; for example, we needed to examine argument hierarchy and basic case licensing facts in order to approach agreement. To determine the syntax of a language, one needs a large body of paradigmatic facts, some straightforward and seemingly uninteresting and some very subtle. Sometimes surface cues suggest substantive differences when there really are none, which may be the case with agreeing adverbs in Archi. Alternately, sometimes superficially similar grammatical objects turn out to differ, as may be the case with Archi statives — I tentatively proposed that the absence of agreement on certain statives may be due to structural differences between different facets of the stative repertoire. Likewise, what seems to be an arbitrary difference between singular and plural agreement with some plural nouns denoting humans has been revealed to originate follow from principled structural variation in the representation of such nouns: when the verb agrees with a human noun in the plural, it signals the presence of an additional pronominal element specified as plural in the noun phrase structure.

Some proposals outlined here, especially those presented in section 4 and my suggestion concerning non-agreeing adjectives, may need revision if and when additional data become available. Hopefully, the tentative analyses sketched in this chapter will guide us in eliciting new empirical data needed to test the relevant accounts of Archi.

REFERENCES

Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. PhD Dissertation, University of Connecticut.

Abels, Klaus. 2012. *Phases: An essay on cyclicity in syntax.* Berlin: De Gruyter.

Adger, David, and Peter Svenonius. 2012. Features in Minimalist Syntax. In Cedric Boeckx (ed.) *The handbook of linguistic minimalism*, 27-51. Oxford: Blackwell.

Aldridge, Edith. 2008. Generative approaches to ergativity. *Language and Linguistic Compass*: *Syntax and Morphology* 2, 966–995.

Alexiadou, Artemis. 2002. Adjective syntax and noun raising: Word order asymmetries in the DP as the result of adjective distribution. *Studia Linguistica* 55, 217-248.

Alexiadou, Artemis, Liliane M. V. Haegeman, and Melita Stavrou. 2007. *Noun phrase in the generative perspective*. Berlin: Walter de Gruyter.

Anagnostopoulou, Elena. 2005. Strong and weak person restrictions: A feature checking analysis. In Lorie Heggie and Francisco Ordóñez (eds.) *Clitic and affix combinations: Theoretical perspectives*, 199–235. Amsterdam: John Benjamins.

Androutsopoulou, Antonia. 2001. Adjectival determiners in Albanian and Greek. In Maria-Luisa Rivero and Angela Ralli (eds.) *Comparative syntax of Balkan languages*, 161-199. Oxford: Oxford University Press.

Antrim, Nancy Mae. 1994. Italian adverbial agreement. In Michael L. Mazzola (ed.). *Issues and theory in Romance linguistics: Selected papers from the Linguistic Symposium on Romance Languages XXIII, April 1-4, 1993,* 129-140. Washington, DC: Georgetown University press.

Baker, Mark. 2008. *The syntax of agreement and concord.* Cambridge: Cambridge University Press.

Baker, Mark. 2013. On agreement and its relationship to case: Some generative ideas and results. *Lingua* 130, 14-32.

Baker, Mark. 2014. On dependent ergative case (in Shipibo) and its derivation by phase. *Linguistic Inquiry* 45, 341-380.

Baker, Mark, and Willie Udo Willie. 2010. Agreement in Ibibio: From every head, to every head. *Syntax* 13, 99-132.

Benmamoun, Elabbas, Archna Bhatia, and Maria Polinsky. 2010. Closest conjunct agreement in head final languages. In Jeroen Van Craenenbroeck (ed.) *Linguistic variation yearbook 2009,* 67–88. Amsterdam: John Benjamins.

Bernstein, Judith. 1993. Topics in the syntax of nominal structure across Romance. Ph.D. Dissertation, City University of New York.

Bittner, Maria, and Ken Hale. 1996. The structural determination of Case and agreement. *Linguistic Inquiry* 27, 1-68.

Bjorkman, Bronwyn, and Hedde Zeijlstra. 2014. Upward Agree is superior. Ms., University of Toronto and Georg-August-Universität Göttingen. http://ling.auf.net/lingbuzz/002350

Bobaljik, Jonathan D. 2008. Where's φ? Agreement as a post-syntactic operation. In David Adger, Susana Béjar, and Daniel Harbour (eds.) *Phi-Theory: Phi features across interfaces and modules*, 295–328. Oxford: Oxford University Press.

Bobaljik, Jonathan D. 2012. *Universals in comparative morphology: Suppletion, superlatives, and the structure of words*. Cambridge: MIT Press.

Bond, Oliver, and Marina Chumakina. To appear. Attributives in Archi: A mixed category with multiple bases.

Borer, Hagit. 2005. *Structuring sense*, vol. I: *In name only*. Oxford: Oxford University Press.

Bošković, Željko. 2005. On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59, 1-45.

Bošković, Željko. 2008. What will you have, DP or NP? *Proceedings of NELS 37*, 101-114.

Cabredo Hofherr, Patricia. 2010. Adjectives: An introduction. In Patricia Cabredo Hofherr and Ora Matushansky (eds.) *Adjectives: Formal analyses in syntax and semantics*, 1-26. Amsterdam: John Benjamins.

Caponigro, Ivano, and Maria Polinsky. 2011. Relative embeddings: A Circassian puzzle for the syntax/semantics interface. *Natural Language and Linguistic Theory* 29, 71-122.

Carstens, Vicki. 2000. Concord in minimalist theory. *Linguistic Inquiry* 31, 319-355.

Carstens, Vicki, and Michael Diercks. 2013. Agreeing How? Implications for theories of agreement and locality. *Linguistic Inquiry* 44, 179-237.

Chomsky, Noam. 1995. *The minimalist program.* Cambridge: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In Roger Martin et al. (eds*.) Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, 89-155. Cambridge: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz (ed.) *Ken Hale: A life in language*, 1-52. Cambridge: MIT Press.

Chomsky, Noam, and Howard Lasnik. 1977. Filters and control. *Linguistic Inquiry* 8, 425-504.

Chumakina, Marina, and Dunstan Brown. 2015. Charting adposition agreement. Ms., University of Surrey and University of York.

Chumakina, Marina, Dunstan Brown, Greville Corbett, and Henry Quilliam. 2007. Archi: A dictionary of the language of the Archi People, Daghestan, Caucasus, with sounds and pictures (reference edition, DVD for Windows).

Chumakina, Marina, and Greville G. Corbett. 2015. Gender-number marking in Archi: Small is complex. In Matthew Baerman, Greville G. Corbett and Dunstan Brown (eds.) *Understanding and measuring morphological complexity.* Oxford: Oxford University Press.

Cinque, Guglielmo. 1994. On the evidence for partial N-movement in the Romance DP. In Guglielmo Cinque, Rafaella Zanuttini, and Jean-Yves Pollock (eds.) *Paths towards Universal Grammar*, 85-110. Washington: Georgetown University Press.

Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic Perspective.* Oxford: Oxford University Press.

Comrie, Bernard, and Maria Polinsky. 1999. Form and function in syntax: Relative clauses in Tsez. In Michael Darnell et al. (eds.) *Functionalism and formalism in linguistics:* Volume II: *Case studies*, 77–92. Amsterdam: John Benjamins.

Comrie, Bernard, and Helma van den Berg. 2006. Experiencer constructions in Dagestanian languages. In Ina Bornkessel (ed.) *Semantic role universals and argument linking*, 127-154. Berlin: de Gruyter.

Coon, Jessica. 2013. *Aspects of split ergativity*. Oxford: Oxford University Press.

Corbett, Greville. 1979. The agreement hierarchy. *Journal of Linguistics* 15**,** 203–224.

Corbett, Greville. 2006. Agreement. Cambridge: Cambridge University Press.

Corver, Norbert. 2007. Dutch *'s*-prolepsis as a copying phenomenon. In Norbert Corver and Jairo Nunes (eds.) *Copy theory of movement*, 175-215. Amsterdam: John Benjamins.

Corver, Norbert. 2015. Subextraction. In Martin Everaert and Henk van Riemsdijk (eds.) *Syntax Companion*, 2 edition.

Csirmaz, Aniko. 2008. The accusative case and aspect. In Katalin É. Kiss (ed.) *Event structure and the left periphery: Studies on Hungarian*, 159-200. Dordrecht: Springer.

Cysow, Michael, and Diana Forker. 2009. Reconstruction of morphosyntactic function: Nonspatial use of spatial case marking in Tsezic. *Language* 85, 588-617.

Daniel, Michael, and Yuri Lander. 2011. The Caucasian languages. In Bernd Kortmann and Johan van Auwera (eds.) *The languages and linguistics of Europe: A comprehensive guide*, 125-158. Berlin: de Gruyter.

Danon, Gabi. 2011. Agreement and DP-internal feature distribution. *Syntax* 14, 297-317.

Danon, Gabi. 2012. Two structures for numeral-noun constructions. *Lingua* 122, 1282-1307.

Delsing, Lars-Olaf. 2008. On attributive adjectives in Scandinavian and other languages. *Studia Linguistica* 47, 105-125.

den Dikken, Marcel. 2001. "Pluringulars", pronouns and quirky agreement. *The Linguistic Review* 18, 19–41.

den Dikken, Marcel. 2006. Agreement. In *Encyclopedia of Cognitive Science,* published online. DOI: 10.1002/0470018860.s00211

Diercks, Michael, Michael Putnam, and Mario van Koppen. 2011. The directionality of Agree: Can a universal feature valuation operation be established? Paper presented at the conference "The Minimalist Program: Quo Vadis? – Newborn, Reborn, or Stillborn?", Potsdam, Germany, October 2011.http://www.hum.uu.nl/medewerkers/j.m.vankoppen/handouts/potsdam%202011.pdfDixon, R.M.W. 1982. *Where have all the adjectives gone?: And other essays in semantics and syntax.* Berlin: de Gruyter.

Doron, Edit, and Chris Reintges. 2005. On the syntax of participial modifiers. Unpublished manuscript, Hebrew University of Jerusalem.

Embick, David. 2010. *Localism and globalism in morphology and phonology*. Cambridge: MIT Press.

Embick, David, and Alec Marantz. 2008. Architecture and blocking. *Linguistic Inquiry* 39, 1-53.

Ernst, Thomas. 2001. *The syntax of adjuncts*. Cambridge: Cambridge University Press.

Fábregas, Antonio, and Isabel Perez. 2008. Gender agreement on adverbs in Spanish. *Journal of Portuguese Linguistics* 7-2, 25-45.

Forker, Diana. 2012. The bi-absolutive construction in Nakh-Dagestanian. *Folia Linguistica* 46, 75-108.

Forker, Diana. 2013. *A grammar of Hinuq*. Berlin: de Gruyter.

Frampton, John, and Sam Gutmann. 2006. How sentences grow in the mind: Agreement and selection in an efficient minimalist syntax. In Cedric Boeckx (ed.) *Agreement systems*, 121-157. Amsterdam: John Benjamins.

Gagliardi, Annie, Michael Goncalves, Maria Polinsky, and Nina Radkevich. 2014. The biabsolutive construction in Lak and Tsez. *Lingua* 150, 137-179.

Haegeman, Liliane, and Terje Lohndal. 2010. Negative concord and (Multiple) Agree: A case study of West Flemish. *Linguistic Inquiry* 41, 181-211.

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*, 111-176. Cambridge: MIT Press.

Harley, Heidi. 2013. External arguments and the Mirror Principle: On the distinctness of Voice and v. *Lingua* 125, 34–57.

Harley, Heidi. 2014. On the identity of roots. *Theoretical Linguistics* 40, 225-276.

Harley, Heidi, and Ralf Noyer. 1999. State-of-the-Article: Distributed Morphology. *Glot* 4, 3-9.

Harley, Heidi, and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78, 482-526.

Hiraiwa, Ken. 2001. Multiple Agree and the defective intervention constraint in Japanese. *MIT Working Papers in Linguistics* 40, 67-80.

Janda, Richard D. 1994. Checking-theory, syntactic feature-geometry, and the structure of IP. In Erin Duncan, Donka Farkas, and Philip Spaelti (eds.) *The proceedings of the Twelfth West Coast Conference on Formal Linguistics (WCCFL),* 319-337. Stanford: CSLI.

Kandybowicz, Jason. 2006. Comp-trace effects explained away. In Donald Baumer, David Montero, and Michael Scanlon (eds.) *Proceedings of the 25th West Coast Conference on Formal Linguistics*, 220-228. Somerville, MA: Cascadilla.

Kayne, Richard. 1994. *The antisymmetry of syntax*. Cambridge: MIT Press.

Kazenin, Konstantin. 1998. On patient demotion in Lak. In Leonid Kulikov and Heinz Vater (eds.) *Typology of verbal categories*, 95-115. Berlin—Boston: Max Niemeyer.

Kazenin, Konstantin. 2001. Focus in Dagestanian languages and word order parameter. *Linguistic Typology* 1, 289-316.

Kibrik, Aleksandr E. 1975. Nominativnaja/èrgativnaja konstruktsija i logičeskoe udarenie v arčinskom jazyke. In Vladimir Zvegintsev (ed.) *Issledovanija po prikladnoj i strukturnoj lingvistike*. vol. 7, 54-62. Moscow: Moscow State University.

Kibrik, Aleksandr E. 1977a. (with S. V. Kodzasov, I. P. Olovjannikova and D. S. Samedov). *Opyt strukturnogo opisanija arčinskogo jazyka*, I: *Leksika, fonetika*. (Publikacii otdelenija strukturnoj i prikladnoj lingvistiki, 11). Moscow: Izdatel'stvo Moskovskogo universiteta.

Kibrik, Aleksandr E. 1977b. *Opyt strukturnogo opisanija arčinskogo jazyka*, II: *Taksonomičeskaja grammatika*. (Publikacii otdelenija strukturnoj i prikladnoj lingvistiki, 12). Moscow: Izdatel'stvo Moskovskogo universiteta.

Kibrik, Aleksandr E. 1977c. *Opyt strukturnogo opisanija arčinskogo jazyka*, III: *Dinamičeskaja grammatika*. (Publikacii otdelenija strukturnoj i prikladnoj lingvistiki, 13). Moscow: Izdatel'stvo Moskovskogo universiteta.

Kibrik, Aleksandr E. And Sandro V. Kodzasov. 1990. Sopostavitel'noe izučenie dagestanskix jazykov. Imja. Fonetika. Moscow: Izd. MGU.

Kramer, Ruth. 2009. Definite markers, phi-features, and agreement: A morphosyntactic investigation of the Amharic DP. Ph.D. Dissertation, University of California, Santa Cruz.

Kramer, Ruth. 2012. A split analysis of plurality: Evidence from Amharic. In Nathan Arnett and Ryan Bennett (eds.) *Proceedings of the 30th West*

Coast Conference on Formal Linguistics, 226-236. Somerville: Cascadilla.

Landau, Idan. 2009. *The locative syntax of experiencers*. Cambridge: MIT Press.

Ledgeway, Adam. 2011. Adverb agreement and split intransitivity: Evidence from southern Italy. *Archivio glottologico italiano* 96, 31-66.

Legate, Julie Anne. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34, 506-516.

Legate, Julie Anne. 2008. Morphological and abstract case. *Linguistic Inquiry* 39, 55–101.

Legate, Julie Anne. 2014. *Voice and v: Lessons from Achenese*. Cambridge: MIT Press.

Levin, Theodore, and Omer Preminger. 2015. Case in Sakha: Are two modalities really necessary? *Natural Language and Linguistic Theory* 33, 231-250.

Malchukov, Andrej. 2008. Split intransitives, experiencer objects, and transimpersonal constructions. In Mark Donohue and Søren Wichmann (eds.) *The typology of semantic alignment*, 76-100. Oxford: Oxford University Press.

Marantz, Alec. 2007. Phases and words. In S.-H. Choe (ed.) *Phases in the theory of grammar*, 191-222. Seoul: Dong-In Publishing Co.

Mel′čuk, Igor. 1974. O sintaksičeskom nule. In Alexander Xolodovič (ed.) *Tipologija passivnyx konstrukcij,* 343-361. Leningrad: Nauka.

Moravcsik, Edith. 1974. Object-verb agreement. *Working Papers on Language Universals* 15, 25-140.

Moravcsik, Edith. 1978. Agreement. In Joseph Greenberg (ed.) *Universals of human language,* Volume IV: *Syntax*, 331-374. Stanford: Stanford University Press.

Moravcsik, Edith. 1988. Agreement and markedness. In Michael Barlow and Charles Ferguson (eds.) *Agreement in natural language: Approaches, theories, descriptions,* 79-106. Stanford: CSLI.

Neeleman, Ad. 1997. PP-complements. *Natural Language and Linguistic Theory* 15, 89-137.

Nevins, Andrew. 2011. Multiple Agree agree with clitics: Person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29, 939-971.

Norris, Mark. 2014. A theory of nominal concord. Ph.D. Dissertation, University of California, Santa Cruz.

O'Herin, Brian. 2002. *Case and agreement in Abaza*. Dallas: SIL International.

Partee, Barbara. 1987. Noun phrase interpretation and type shifting principles. In Jeroen A. G. Groenendijk, Dick de Jongh, Martin J. B.

Stokhof (eds.) *Studies in discourse representation theory and the theory of generalized quantifiers*, 115-144. Dordrecht: Foris.

Perlmutter, David. 1968. *Deep and surface structure constraints in syntax*. New York: Holt, Rinehart and Winston.

Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In Simin Karimi et al. (eds.) *Phrasal and clausal architecture: Syntactic derivation and interpretation*, 262-294. Amsterdam: John Benjamins.

Polinsky, Maria. 2003. Non-canonical agreement is canonical. *Transactions of the Philological Society* 101, 279-312.

Polinsky, Maria, and Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19, 583-646.

Polinsky, Maria, and Eric Potsdam. 2002. Backward control. *Linguistic Inquiry* 33, 245-283.

Polinsky, Maria, and Nina Radkevich. 2014. Bi-absolutives in Nakh-Dagestanian: A Minimalist approach. Paper presented at the Annual LSA Meeting, Minneapolis, January 2014.

Polinsky, Maria, Nina Radkevich, and Marina Chumakina. To appear. Layered vP and agreement between arguments in Archi.

Preminger, Omer. 2013. That's not how you agree: A reply to Zeijlstra. *The Linguistic Review* 30, 491-500.

Preminger, Omer. 2014. *Agreement and its failures*. Cambridge: MIT Press.

Preminger, Omer, and Maria Polinsky. 2015. Agreement and semantic concord: A spurious unification. Ms.

Radford, Andrew. 2004. *Minimalist syntax: Exploring the structure of English*. Cambridge: Cambridge University Press.

Režać, Milan. 2003. The fine structure of cyclic Agree. *Syntax* 6, 156-182.

Režać, Milan. 2010. *Phi-features and the modular architecture of language*. Dordrecht: Springer.

Rudnev, Pavel. 2014. Dependency and discourse-configurationality: A study of Avar. Ph.D. Dissertation, University of Groenigen.

Sichel, Ivy. 2002. Phrasal movement in Hebrew adjectives and possessives. In Artemis Alexiadou et al. (eds.) *Dimensions of movement*, 297-339. Amsterdam: John Benjamins.

Sproat, Richard, and Chilin Shih. 1988. Prenominal adjectival ordering in English and Mandarin. In James Blevins and Juli Carter (eds.) *Proceedings of the 12th Annual Meeting of the North East Linguistic Society*, 465-489.

Wechsler, Stephen. 2009. Agreement features. *Language and Linguistics Compass* 33, 384-405.

Woolford, Ellen. 2006. Lexical case, inherent case, and argument structure. *Linguistic Inquiry* 37, 111-130.

Wurmbrand, Susi. 2013. The features of voice. Handout of the talk, October 26, 2013, Little v Workshop, Leiden University, Holland.

Zeijlstra, Hedde. 2012. There is only one way to agree. *The Linguistic Review* 29, 491-539.