

Agreement in the languages of the Caucasus

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Abstract: The three language families indigenous to the Caucasus exhibit a range of diverse, unusual, and highly complex agreement phenomena. Nakh-Daghestanian languages are dominated by ergative-aligned gender agreement in which the absolutive argument controls agreement on the verb, and potentially other clausal elements like adverbs or even pronouns. Special agreement patterns like long-distance and biabsolutive agreement emerge in certain syntactic configurations. Northwest Caucasian is polysynthetic; its verbs register features from each of their arguments in a distinct templatic slot. These languages also have special agreement for arguments that undergo $\bar{A}$ -extraction. Kartvelian agreement is not straightforwardly linked to syntactic roles, and morphemes exhibit many complex blocking relationships. Dative-subject constructions “invert” the normal morpheme–role mappings, adding another dimension of complexity to the languages’ agreement systems. This chapter describes typologically and theoretically notable agreement phenomena found in these three language families, highlighting micro- and macro-variation, drawing parallels to other language families, and citing relevant theoretical and experimental studies. For reference, the chapter concludes with an appendix of agreement paradigms.

Keywords: biabsolutive constructions, ergativity, gender, inverse agreement, long-distance agreement, morphological blocking, multiple exponence, number, omnivorous agreement, person, polysynthesis, *wh*-agreement

1. Introduction

Agreement is a prominent morphosyntactic phenomenon in the languages of the Caucasus, manifesting in diverse and complex ways. Defined pretheoretically, agreement is the covariation between the formal features of one grammatical element (the agreement *target*) and the formal or semantic features of another (the agreement *controller*) (Corbett 2006:4). The following examples from Hinuq (Northeast Caucasian, GIN) illustrate this. In each, the absolutive subject controls an agreement that targets the verb (both are in bold); a prefix on the verb covaries with the subject’s grammatical gender, glossed with Roman numerals.

(1) Agreement in Hinuq (Forker 2013:466)

- | | |
|--|---|
| <p>a. <i>uži</i> <i>q'idir</i> <i>Ø-ił'i-yo</i>
 boy(I).ABS down I-go-PRES
 'The boy falls down.'</p> <p>b. <i>ked</i> <i>q'idir</i> <i>y-ił'i-yo</i>
 girl(II).ABS down II-go-PRES
 'The girl falls down.'</p> <p>c. <i>k'et'u</i> <i>q'idir</i> <i>b-ił'i-yo</i>
 cat(III).ABS down III-go-PRES
 'The cat falls down.'</p> | <p>d. <i>t'ek</i> <i>q'idir</i> <i>y-ił'i-yo</i>
 book(IV).ABS down IV-go-PRES
 'The book falls down.'</p> <p>e. <i>t'oq</i> <i>q'idir</i> <i>r-ił'i-yo</i>
 knife(V).ABS down V-go-PRES
 'The knife falls down.'</p> |
|--|---|

More complex agreement relationships involve targets with more than one controller, or controllers with more than one target. Both situations occur in (2), a noun phrase containing a relative clause from Archi (Northeast Caucasian, AQC). Within the relative clause, the absolutive object *χ^oošon* 'dress' controls gender agreement prefixes both on the lexical verb and the auxiliary. The auxiliary also shows suffixal agreement with the gender of the head noun, *buwa* 'mother'. Agreement relations controlled by these two nouns are highlighted in different colors (grey vs. white), a notational convention used throughout this chapter.

(2) Agreement in Archi (Chumakina & Bond 2016:108)

- | | | | |
|--------------------------|---------------|----------------------|----------------|
| <i>χ^oošon</i> | <i>b-arši</i> | <i>b-i-t.u-r</i> | <i>buwa</i> |
| dress(III).ABS | III-make.CVB | III-be.PRES-ATTR-III | mother(II).ABS |
- 'mother who is making a dress'

When one dives deeper into Caucasian languages, it becomes clear that agreement dependencies like those in (1) and (2) are just the tip of the iceberg. Indeed, each of the three language families indigenous to the region represents a typologically distinct agreement system, which may itself display considerable internal microvariation: from absolutive-controlled gender agreement in the Northeast Caucasian family, to ergative-aligned polysynthetic agreement in Northwest Caucasian, to the complex interactions between features and between agreement controllers in South Caucasian. Together, these languages exemplify many agreement phenomena of great typological and theoretical interest. Some are summarized below.

- (3) Notable agreement phenomena in the languages of the Caucasus
- a. *Ergativity*: Agreement morphemes display an ergative–absolutive alignment pattern.
 - b. *Multiple exponence*: Features of a single agreement controller appear multiple times within a single target, or across multiple targets within a single syntactic domain.
 - c. *Long-distance agreement*: An agreement relationship holds between a target and controller which are not both in the normal locality domain (e.g., the clause).
 - d. *Morpheme blocking*: On their own, controller X triggers morpheme α , and Y triggers β . But when both X and Y cooccur, only α appears; in other words, α blocks β .
 - e. *Omnivorous agreement*: The same morpheme that expresses feature [F] is triggered by heterogeneous controllers (e.g., both subject and objects) bearing [F].
 - f. *Wh-agreement*: Special agreement morphology triggered by arguments that have undergone $\bar{A}$ -movement (e.g., *wh*-movement or relativization).
 - g. *Inverse agreement*: Controller X normally triggers morpheme α , and Y normally triggers β . In special environments (generally dative-subject constructions), the agreement pattern seems to ‘invert’ — X triggers β , and Y triggers α .

The goal of this chapter is to provide a reference useful to areal scholars and specialists on agreement alike. Empirical generalizations will be prioritized, but relevant theoretical treatments will also be cited. Agreement among predicates and their arguments will be the focus; agreement between a noun and its modifiers, or nominal concord, also exists in these languages, but for space I will not discuss it. Additionally, I will not attempt to diagnose whether a particular agreement morpheme constitutes ‘agreement proper’ or is a pronominal clitic. This distinction can be a very subtle one, requiring sophisticated syntactic evidence to justify (e.g., Preminger 2009, Kramer 2014, Yuan submitted). So, while I use the term ‘agreement’ throughout, it should not be taken as a theoretical claim about the syntactic properties of any particular morphological object.

The chapter has the following structure. Sections 2, 3, and 4 discuss Northeast, Northwest, and South Caucasian, respectively. Section 5 concludes with some open questions for future research. For reference, an appendix gives full agreement paradigms from select languages.

2. Northeast Caucasian

The Northeast Caucasian (NEC; also known as Nakh–Daghestanian) family, comprising some 30 languages, is dominated by ergative-aligned agreement in gender (or noun class). These languages typically have between two and eight gender categories: male human and female human usually

constitute distinct genders; nonhuman nouns are divided up somewhat arbitrarily.¹ In general, fewer genders are distinguished in the plural than the singular — a very common crosslinguistic pattern (Corbett 1991, Section 7.1). Nouns themselves generally do not indicate their own gender morphologically. Instead, the primary means of expressing gender is through agreement on verbs and other categories.

The calculus of agreement is, broadly speaking, straightforward: the controller is always and only the absolutive argument of the clause. Nevertheless, NEC languages exhibit a number of typologically unusual agreement phenomena. The first involves agreement targets. Verbs (lexical and auxiliary, finite and nonfinite) are the most common loci. But one may also encounter adverbs, particles, postpositions, case suffixes, and even personal pronouns which agree with the gender features of the absolutive argument of their clause. Yet within any lexical category which might potentially be an agreement target, only a subset of lexical items actually can express agreement morphologically — just a slim majority of verbs, say, or a handful of adverbs.

Certain syntactic constructions in NEC languages involve special agreement phenomena. These include cases where an agreement controller and its target are in different clauses (long-distance agreement), or ones where a single clause has more than one potential or actual controller (‘biabsolutives’). Such constructions are well attested in the family and display interesting microvariation.

Finally, a few NEC languages have dedicated person agreement, either alongside or instead of gender agreement. Here we see omnivorous patterns — sometimes governed by a feature hierarchy, and sometimes by the relative structural position of potential controllers — and also highly eccentric distributional patterns of person agreement morphemes.

This section focuses first on clause-bound gender agreement (Section 2.1), discussing some of the notable morphological phenomena associated with it. Then we turn to a few of the syntactic constructions with special agreement properties (Section 2.2). The section is rounded out by a description of a few of the person agreement systems in NEC languages (Section 2.3).

¹ NEC gender categories are glossed differently by different authors: typically with roman numerals (I, II, III...) or animacy/sex-based designations (M = masculine, HPL = human plural).

2.1 Gender agreement

In NEC languages with gender agreement, the controller is always the clause's absolutive argument. As the following Ingush (INH) data show, this obtains no matter the absolutive's syntactic or semantic role.

(4) Gender agreement with absolutive arguments in Ingush

- a. *jett aara-b-ealar*
 cow(NH).ABS out-NH-go.WPST
 'The cow went out.' (Nichols 2011:432)
- b. *aaz jett aara-b-oala-b-yr.*
 1SG.ERG cow(NH).ABS out-NH-go-NH-CAUS.WPST
 'I led the cow out.' (Nichols 2011:432)
- b. *Muusaa cwan hamagh v-aashazh v-aac*
 Musa(M).ABS any thing.LAT M-like.CV M-NEG
 'Musa is not impressed by anything.' (Nichols 2011:433)
- b. *yshtta v-eizar suona Ibreahwam.*
 thus M-know.WPST 1SG.DAT Ibrahim(M).ABS
 'That's how I got to know Ibrahim.' (Nichols 2011:466)

Morphologically speaking, agreement is typically prefixal, but it may also be expressed with suffixes, infixes, or stem ablaut (van den Berg 2005:157). Multiple exponence (Caballero & Harris 2012, Harris 2017) is very common: consider Batsbi (BBL, a.k.a. Tsova-Tush), where no fewer than three agreement affixes can occur on a single verb (Harris 2009; cf. Harris & Samuel 2011).

(5) Multiple exponence within a word in Batsbi

- a. *a d-ic'-d-aq-o-d-õ is bader...*
 NEG V-forget-V-raise-PRES-V-PRES this child(V).ABS
 'Don't make this child supercilious!' (Harris 2009:276)
- b. *y-ox-y-o-y-anõ k'ab.*
 III-rip-III-PRES-III-EVID dress(III).ABS
 'Evidently she is ripping the dress.' (Harris 2017:2)

Multiple exponence can also occur across targets within a single agreement domain, as in the following Akhwakh (AKV) example. Not only do all the lexical and auxiliary verbs of the

matrix clause agree with their (null) absolutive subject, this argument also controls suffixal agreement on the verb of the subordinate adverbial clause.

(6) Multiple exponence across targets in Akhwakh

[*Moḷa Rasadi* *w-ul'-ī*] *Ø* *š^wela-īa* *m-āne*
Molla Rasadi(M).ABS M-die-ADV.HPL *pro*(HPL).ABS graveyard-LOC HPL-go.PROG
b-ak'-ī *goli.*
HPL-be-ADV.HPL AUX.HPL

‘Molla Rasadi having died, they were going to the graveyard.’ (Creissels 2012:140)

So far we’ve seen that NEC languages allow verbs of all stripes to agree — lexical and auxiliary, finite and nonfinite. But agreement is not limited to verbs. A remarkable property of NEC agreement is its ‘promiscuity’: a wide range of lexical categories can participate in gender agreement, all controlled by an absolutive clausemate. Archi in particular has attracted attention for its promiscuous agreement (Chumakhina & Corbett 2008; Corbett 2013; Corbett 2015; Bond et al. 2016; Polinsky et al. 2017), but the phenomenon is observed across the family, as examples in (7) show.

(7) Non-verbal agreement targets in NEC²

a. Adverbs

hayloy y-oḷo t'ek t'ot'er-ho gol.
he.ERG IV-fast book(IV).ABS read-CVB AUX
‘He is reading the book fast.’ (Hinuk, Forker 2013:525)

b. Particles

gubčit:i kl'an=iju b-ez.
basket(III).ABS want=EMPH<III> III-1SG.DAT
‘I only WANT a basket.’ (Archi, Bond & Chumakhina 2016:74)

² Agreement relationships within the noun phrase (a.k.a. nominal concord) exhibit similar promiscuity: head nouns may control agreement in gender, number, and/or case with adjectives, demonstratives, numerals, the case affixes of possessors, and the participial verbs of relative clauses (van den Berg 2005: Sections 3.1, 3.4).

While promiscuous agreement may be typologically unusual in the clausal domain (though not unique to NEC; Polinsky 2016:208), agreement in the nominal domain (a.k.a. nominal concord) is often promiscuous. Norris (2014, Section 5.2.2.1), for whom noun–modifier concord and argument–predicate agreement are theoretically distinct, notes this asymmetry, and suggests that NEC data like (7) might instantiate clausal concord.

c. Postpositions³

obu-t'i q^{ɛw}'anač buɫu-lo l-oɫoɫ'o kert'i l-i-yi.
 father-ERG two shed(III)-GEN **IV-between** fence(IV).ABS IV-do-WPST

‘The father made a fence between two sheds.’ (Khwarshi, KHV; Khalilova 2009:138)

d. Case affixes

... hačam-lis xunul kari-la-r-ad čar-r-uq-i ahen.
 once-DAT wife(F).ABS bakery(NH)-LOC-F-ELA return-F-AUX-GER be.not

‘...my wife has not returned yet from the bakery.’

(Dargi, DAR; van den Berg 2001:126)

e. Pronouns

nenau ja-b tilivizor b-ez mu au.
1IN.ERG<III> this-III television(III).ABS **III-1SG.DAT** be.good **<III>do.PFV**

‘We fixed this TV set for me.’

(Archi, Polinsky et al. 2017:57)

Yet while agreement in NEC may be promiscuous, it is also spotty. For any given lexical category that can potentially agree, typically only a minority of lexical items in that category actually do. For example, just 32% of Archi verb stems participate in agreement (Chumakina & Bond 2016:111); similar proportions do in Hinuq (around one third, Forker 2013:189), Ingush (31%, Nichols 2011:141, fn. 63), and Khwarshi (23%, Khalilova 2009:181).⁴ As for adjectives, sometimes a majority agree (more than 60% in Khwarshi, Khalilova 2009:99), and sometimes very few do (just nine in Hinuq, Forker 2013:463). Moving to other lexical categories, agreement is highly exceptional: never more than a few adverbs, postpositions, or pronouns agree in a given language.

Compounded with the fact that nouns usually don’t indicate their gender overtly, and that gender categories themselves are only somewhat semantically predictable, the lexical idiosyncrasy of agreement seems to pose a challenge during acquisition. Just how does a child learn when to agree, and with which affix? In a few NEC languages — namely Agul (AGX), Lezgian (LEZ), and

³ Compare Khwarshi to Ingush, where some postpositions agree with their own DP complement, rather than with the absolutive argument of the clause (Nichols 2011:434).

⁴ In NEC languages where verbal agreement is primarily prefixal, vowel initiality is often a necessary, but not quite sufficient, property a verb stem needs for it to agree. This recalls certain sign languages, where phonological properties of verbs also lead to spotty agreement (Pfau et al. in preparation).

Udi (UDI) (van den Berg 2005:155) — the gender system has disappeared altogether, suggesting this situation is a diachronically unstable one. However, Nichols (2011:141) notes that agreeing *types* may be in the minority, but *tokens* are plentiful, at least for Ingush: the set of agreeing verbs includes the extremely frequent auxiliaries. Gagliardi & Lidz (2014) tackle the question of gender acquisition directly for Tsez (DDO), observing that children weigh less reliable phonological generalizations more highly than more reliable semantic ones when assigning gender to novel nouns.

2.2 The syntax of agreement

We’ve seen that NEC agreement calculus is generally quite simple: whatever the target, it reflects the gender of its absolutive clausemate. However, there are several syntactic constructions which complicate this picture. Descriptively, these include constructions which either widen the normal agreement domain to include a normally inaccessible controller (long-distance agreement), or which license more than one absolutive noun within a single domain (biabsolutive constructions). There is considerable microvariation in both these constructions, a testament to the fact that superficially similar constructions, even across very closely related languages, can have very different syntactic properties.

2.2.1 Long-distance agreement

Normally, NEC agreement is constrained by locality: only syntactic categories within the same clause can participate in an agreement relationship. Under certain circumstances, though, this locality restriction is (at least apparently) relaxed, resulting in long-distance agreement (LDA).⁵ Take Tsez, whose LDA is thoroughly investigated by Polinsky & Potsdam (2001). In this language, verbs that take clausal complements typically show agreement in the default gender, class IV (8a). An alternative, though, is for the matrix verb to agree with the absolutive argument of the *embedded* clause (8b). For Tsez, there is convincing evidence that this agreement dependency is indeed long-distance — i.e., crossing across a genuine clause boundary — since independent syntactic diagnostics show the absolutive agreement controller to be within the embedded clause.

⁵ LDA is found in other languages, including Basque (Isolate, BAQ), Chukchi (Chukotko–Kamchatkan, CKT), Hindi-Urdu (Indo-European, HIN/URD), and Passamaquoddy (Algonquian, PQM). For an overview, see Bhatt & Keine (to appear).

(8) Long distance agreement in Tsez (Polinsky & Potsdam 2001:609)

- a. *eni-r* [*už-ā* *magalu* *b-āc'-ru-li*] *r-iy-xo*.
 mother-DAT boy-ERG bread(III).ABS III-eat-PTCP-NMLZ IV-know-PRES
 'The mother knows the boy ate the bread.'
- b. *eni-r* [*už-ā* *magalu* *b-āc'-ru-li*] *b-iy-xo*.
 mother-DAT boy-ERG bread(III).ABS III-eat-PTCP-NMLZ III-know-PRES
 'The mother knows the boy ate the bread.'

However, LDA is not a freely available option. In Tsez, only absolutes that are topics of the embedded clause can control agreement on the matrix verb. LDA is impossible with embedded nouns that are focused or semantically incompatible with topichood. Furthermore, LDA cannot cross more than one clause boundary, and is blocked in the presence of a complementizer, *wh*-word, or a second topic in the embedded clause. Polinsky & Potsdam use these facts as evidence in favor of a covert movement analysis, whereby topics move at logical form to a dedicated position in the periphery of the embedded clause. This makes them local enough to the matrix verb, at least at some level of grammatical representation, to participate in agreement.

But the details of LDA vary across the NEC languages. For example, Hinuq, a close relative of Tsez, also exhibits the phenomenon. Like Tsez, Hinuq matrix verbs have the option to agree across a clause boundary (9). But unlike Tsez, Hinuq LDA can cross multiple clause boundaries, is not blocked by embedded *wh*-phrases, and can target absolutes which are focal or incompatible with topicality (Forker 2013:628–639).

(9) Long distance agreement in Hinuq

- a. *hayloy diž* [*buže* *b-uw-a*] *λ'ere b-ux-iš*.
 he.ERG 1SG.DAT house(III).ABS III-do-INF up III-take-PST
 'He promised me to build a house.' (Forker 2013:628)
- b. *diž y-eq'i-yo* [*ʔumar-i* [*Madina y-aq'e-s=λen*]
 1SG.DAT II-know-PRES Umar-ERG Madina(II).ABS II-come-PST=QUOT
ese-s-li.]
 tell-RES-ABST
 'I know that Umar said that Madina came.' (Forker 2013:633)

c. *Šamil-ez b-eq'i-yo [ni Madina-y mecxer*
 Šamil-DAT III-know-PRES where Madina-ERG money(III).ABS
b-uqi-š-ti.]
 III-hide-RES-ABSTR

‘Šamil knows where Madina hid the money.’ (Forker 2013:637)

Another language with (ostensible) LDA is Godoberi (GDO), where certain embedding verbs can agree with the absolutive object of their infinitival complements. However, based on scrambling and *wh*-question facts, Haspelmath (1999) argues that examples like (10) are actually monoclausal, derived through a syntactic mechanism of clause union or restructuring. This distinguishes Godoberi from Tsez and Hinuq, where agreement can cross demonstrable clause boundaries.

(10) ‘Long distance agreement’ in Godoberi

ʕali-č'u [gyazeta-be r-ax-i] r-eʔuč-a.
 Ali-CONT paper(N)-PL.ABS NPL-take-INF NPL-forget-AOR

‘Ali forgot the buy newspapers.’ (Haspelmath 1999:131)

2.2.2 Biabsolutive constructions

As their name suggests, biabsolutive constructions involve notionally transitive clauses with two absolutive arguments, ergative case on the subject being suppressed.⁶ Widely attested across the NEC family, biabsolutives typically convey progressive or imperfective actions. Many languages place additional semantic constraints on the construction: for example, the subject must be animate, agentive, or topical; the verb must be eventive; the object must precede the verb. For a detailed overview, see Forker (2012).

The biabsolutive construction has an important effect on gender agreement. To illustrate, consider the following examples from Lak (LBE) and Tsez. In the versions with ergative subjects (11a, 12a), a familiar pattern obtains: the absolutive object controls agreement. But in the biabsolutive versions (11b, 12b), both arguments control agreement: the object controls agreement on the lexical verb, and the subject controls agreement on the auxiliary.

⁶ Similar constructions are found in many other ergative languages, including Basque, Burushaski (Isolate, BSK), Hindi-Urdu, Iranian languages (Indo-European), and Mayan languages (Dixon 1998:70–110, Forker 2012:76).

(11) Biabsolutive in Lak

- a. *Aʕli-l* *q:at:a* *b-ullaj* *b-ur*.
 Ali(I)-ERG house(III).ABS III-do.PROG III-AUX

‘Ali is building a house.’

- b. *Aʕli* *q:at:a* *b-ullaj* *Ø-ur*.
 Ali(I).ABS house(III).ABS III-do.PROG I-AUX

‘Ali is (in the state of) building a house.’

(Gagliardi et al. 2014:144)

(12) Biabsolutive in Tsez

- a. *ʕal-ā* *yʕutku* *r-oy-s(i)*.
 Ali(I)-ERG house(IV).ABS IV-make-PST.EVID

‘Ali built a house.’

- b. *ʕali* *yʕutku* *r-oy-x(o)* *Ø-ičā-si* (*zow-s(i)*).
 Ali(I).ABS house(IV).ABS III-make-AFF I-stay-RES (be-PST.EVID)

‘Ali was (in the state of) building a house.’

(Gagliardi et al. 2014:144)

What about other agreeing agreement targets? At least in Avar (AVA) and Archi, either argument can control agreement on an agreeing adverb. However, the two options are not in free variation. In Avar, adverbs which follow the object register object agreement; adverbs which precede the object register subject agreement (13). In Archi, the two agreement options can have interpretive differences (14). Both of these facts suggest the structural position of an agreeing adverb determines its controller.

(13) Agreeing adverbs in Avar biabsolutives

- a. *emen* *xer* *hani-b* *b-ec-ule-w* *w-uk’ana*.
 father(I).ABS hay(III).ABS here-III III-mow-PTCP-I I-be.PST

‘Here father was mowing the grass.’

- b. *emen* *hani-w* *xer* *b-ec-ule-w* *w-uk’ana*.
 father(I).ABS here-I hay(III).ABS III-mow-PTCP-I I-be.PST

‘Here father was mowing the grass.’

(Forker 2012:88–89)

(14) Agreeing adverbs in Archi biabsolutives

- a. *Pat'i* *dit:au* *q^{ɬwib}* *b-orklin-ši* *d-i*.
 Pati(II).ABS early<III> potato(III).ABS III-dig.IPFV-CVB II-be.PRES
 ‘Pati is digging the potatoes out early.’ [It’s too early for the potatoes to be ready.]
- a. *Pat'i* *dit:a<r>u* *q^{ɬwib}* *b-orklin-ši* *d-i*.
 Pati(II).ABS early<II> potato(III).ABS III-dig.IPFV-CVB II-be.PRES
 ‘Pati is digging the potatoes out early.’ [Pati got up early.]

(Chumakina & Bond 2016:97)

While superficially similar, biabsolutives across NEC do not have a uniform syntax. Gagliardi et al. (2014) argue for two distinct structures. In languages like Lak (11), biabsolutives are monoclausal, involving a restructuring aspectual verb (cf. Kazenin 1998). In languages like Tsez (12), they are biclausal, involving nominalized verb phrases embedded under a postposition. Evidence for these distinct treatments includes the ability of the biabsolutive object to participate in certain types of $\bar{A}$ -movement. While the object can undergo scrambling, *wh*-movement, and relativization in Lak, it cannot do any of these in Tsez (Gagliardi et al. 2014:153–161). Restrictions on movement in Tsez follow from the proposed biclausal structure, as the lower nominalized VP constitutes an island. Paralleling the variation observed in LDA, these facts go to show that similar sets of agreement facts can have very different syntactic sources.

2.3 Person agreement

A few NEC languages show agreement in person features (Helmbrecht 1996). The resulting patterns are complex, and vary between languages and dialects. A few patterns are simplified in the following table. (‘L’ stands for first or second person, a.k.a. local-person; $x>y$ stands for a structure with a subject with features x and object with features y .)

(15) Controllers of person agreement in transitive clauses across NEC

	L>L	3>L	L>3	3>3	Generalization
Udi, Batsbi	SUBJ				Subject agreement
Lak	ABS				Absolutive agreement
Dargi	OBJ		SUBJ	—	Agree with L-person; object pref.
Tabasaran	SUBJ (+OBJ)	SUBJ / OBJ	SUBJ	SUBJ?	~Agree with L-person; subj. pref.

Take Udi (Harris 2002, Schulze 2011). Its agreement profile in the above table is deceptively simple. This language has a set of agreement morphemes that cliticize onto some host (16).⁷ The controller of this morpheme is always the subject, so in that sense Udi's agreement system is indeed straightforward.

(16) Agreement markers in Udi (Harris 2002:28)

	S.ERG/ABS	S.DAT	S.GEN
1SG	= <i>z(u)</i>	= <i>za</i>	= <i>bez</i> , = <i>bes</i>
2SG	= <i>n(u)</i> , = <i>ru</i> , = <i>lu</i>	= <i>va</i>	= <i>vi</i>
3SG ⁸	= <i>ne</i> , = <i>le</i> , = <i>re</i>	= <i>t'u</i>	= <i>t'a</i>
1PL	= <i>yan</i>	= <i>ya</i>	= <i>beš</i>
2PL	= <i>nan</i> , = <i>ran</i> , = <i>lan</i>	= <i>va(n)</i>	= <i>ef</i>
3PL	= <i>q'un</i>	= <i>q'o</i>	= <i>q'o</i>

What's complex about the Udi agreement morphemes is determining which word they cliticize onto — or, occasionally, into. Harris (2002:115–144) identifies a hierarchy of potential hosts, which I simplify here. If the clause is in a particular TAM (e.g., FUTII), the agreement morpheme must encliticize to the verb (17a). Otherwise, it encliticizes to a negation marker, if one is present (17b). Otherwise, it encliticizes to any focused constituent (17c). Otherwise, it slots into the verb complex, right before a light verb morpheme (17d). And if it has no better choice, the morpheme 'endoclititicizes' into the verb root itself, aligning to the right of the last consonant (17e). Besides providing a synchronic description of this pattern, Harris (2002, Ch. 8–12) proposes a diachronic pathway for its development, rooted in the reanalysis of a cleft construction still found in other NEC languages.

(17) Placement of agreement markers in Udi

a. *q'ačay-y-on bez tänginax bašq'-al=q'un.*

thief-PL-ERG my money.DAT steal-FUTII=3PL

'Thieves will steal my money.'

(Harris 2012:117)

⁷ While Udi agreement morphemes are certainly clitics in the phonological sense (Harris 2002:94–114), I remain agnostic as to whether they are also syntactic clitics, i.e., bona fide pronouns.

⁸ In certain types of questions, the 3SG subject morpheme takes a special form: =*a* (Harris 2002:30–31, 183–186).

- b. *nana-n te=ne buɣa-b-e p'a ačik'alšey.*
 mother-ERG NEG=3SG find-LV-AORII two toy.ABS
 'Mother did not find two toys.'
 (Harris 2012:117)
- c. *q'ačay-y-on bez tänginax=q'un bašq'-e.*
 thief-PL-ERG my money.DAT=3PL steal-AORII
 'Thieves stole MY MONEY.'
 (Harris 2012:119)
- d. *nana-n buɣa-«ne»-b-e p'a ačik'alšey*
 mother-ERG find-«3SG»-LV-AORII two toy
 'Mother found two toys.'
 (Harris 2012:122)
- e. *q'ačay-y-on bez tänginax baš«q'un»q'-e.*
 thief-PL-ERG my money.DAT steal«3PL»-AORII
 'Thieves stole my money.'
 (Harris 2012:125)

The remaining languages in (15) have agreement morphemes whose distributions are tamer (all are verbal suffixes), but whose controllers are determined by a more complex calculus. Batsbi person agreement tracks the subject of the clause (Holisky 1987, Helmbrecht 1996:144), but agentive and non-agentive intransitive subjects trigger different agreement morphemes (Holisky 1987:105). In Lak, there person agreement generally tracks the absolutive argument, paralleling its gender agreement system (with a few caveats; see Helmbrecht 1996:131–135).

In Dargi and Tabasaran, the agreement system compares the person features of the subject and object. In clauses where one argument is local-person (first or second) and the other is third-person — i.e., L>3 or 3>L environments — the verb agrees with the local person agreement. (In Tabasaran, agreement with local-person objects is apparently optional.) Since the same agreement morpheme is used whether the controller is a subject or object, this is a case of 'omnivorous' person agreement (Nevins 2011; Preminger 2014: Ch. 4).

Where the languages pull apart is in clauses with two local-person arguments (i.e., 1>2 or 2>1). One might imagine that both arguments trigger agreement. Indeed, this is an option in Tabasaran — but only for 1>2 verbs. Elsewhere, the subject and object compete to control agreement. In Dargi, the object wins across the board, blocking subject agreement. In Tabasaran 2>1 verbs, the subject wins. The following examples illustrate the core patterns; paradigms are provided in the appendix.

(18) Person agreement in Dargi

- a. *nu-ni* *rursi* *r-it-i-ra*.
 1SG-ERG girl(F).ABS F-hit-AOR-1
 ‘I hit the girl.’
- b. *dudeš-li* *nu* *r-it-i-ra*.
 father(M)-ERG 1SG(F).ABS F-hit-AOR-1
 ‘Father hit me.’
- c. *nu-ni* *hu* *r-it-i-ri*.
 1SG-ERG 2SG(F).ABS F-hit-AOR-2
 ‘I hit you.’
- d. *hu-ni* *nu* *r-it-i-ra*.
 2SG-ERG 1SG(F).ABS F-hit-AOR-1
 ‘You hit me.’

(van den Berg 1999:158)

(19) Person agreement in Tabasaran, Djubek dialect⁹

- a. *izu* *dumu* *uvčunu-za*.
 1SG(.ERG) 3SG.ABS beat-1SG
 ‘I beat him/her.’ (Kibrik & Seleznev 1982:23)
- b. *duru* *izu* *uvčunu-za* / ...*uvčun-uv*.
 1SG(.ERG) 1SG(.ABS) beat-1SG beat-3
 ‘S/he beat me.’ (Kibrik & Seleznev 1982:23)
- c. *izu* *ivu* *uvčunu-za* / ...*uvčunu-zu-vu*
 1SG(.ERG) 2SG(.ABS) beat-1SG beat-1SG-2SG
 ‘I beat you.’ (Kibrik & Seleznev 1982:22, 29)
- d. *ivu* *izu* *uvčunu-va* / ...**uvčunu-vu-zu*
 2SG(.ERG) 1SG(.ABS) beat-2SG beat-2SG-1SG
 ‘You beat me.’ (Kibrik & Seleznev 1982:21, 29)

⁹ Tabasaran person agreement shows some dialectal variation (Kibrik & Seleznev 1982). In the Khiv and Kondik dialects, there are two sets of local-person suffixes: one (ending in /a/) is controlled by ergative and agentive intransitive subjects; a second (ending in /u/), by direct objects and non-agentive intransitive subjects. (In Djubek, the /u/ forms only appear when there is more than one person suffix on a verb, as in (19c).) In the Khiv dialect only, both 1>2 and 2>1 verbs may bear an object suffix.

Additionally, all three dialects have an elaborate set of suffixes controlled by local person pronouns in oblique cases (Kibrik & Seleznev 1982:23).

(i) *dumu izi?in* *alarxunu-zi?in* (ii) *jas agaji* *dumu uvčun-as*
 3.ABS 1SG.SPRESS attack-1SG.SPRESS my father.ERG 3SG.ABS beat-1SG.GEN
 ‘S/he attacked me.’ ‘My father beat him/her.’

3. Northwest Caucasian

The Northwest Caucasian family (NWC) comprises Abaza (ABQ), Abkhaz (ABK), Adyghe/West Circassian (ADY), and Kabardian/East Circassian (KBD). NWC languages stand out for their polysynthetic verbal morphology: ergative, absolutive, and dative arguments each have their own prefixal agreement slot within the verbal complex; agreement with other oblique arguments can also be accommodated with a range of applicative morphemes. Nouns and postpositions may also bear agreement prefixes, controlled by their possessors and nominal complements, respectively. Agreement reflects controller’s person, number, and (in Abaza & Abkhaz) gender. Section 3.1 describes this core φ -agreement system.

On the whole NWC verbal morphology is extremely intricate (Duzémil 1932, Hewitt 1979, Chirikba 2003). However, the agreement system is relatively straightforward, and generally does not interact with syntax in unusual ways. One exception is found in contexts of $\bar{A}$ -extraction (including *wh*-movement and relativization). Here the extracted argument controls special ‘*wh*-agreement’ (O’Herin 2002, Baier 2016; cf. Chung & Georgopoulos 1988, Chung 1994), morphology that replaces the normal φ -agreement prefix on the relevant target. Section 3.2 focuses on NWC *wh*-agreement and its quirks.

3.1 Φ -agreement

The verbal complex in NWC contains a prefixal agreement slot for every clausal argument. A rough template is given in (20), and illustrations are in (21).

(20) Simplified NWC verbal template¹⁰

−4	−3	−2	−1	Root	+1
ABS.AGR	DAT/OBL.AGR	PV, APPL...	ERG.AGR		Infl...

(21) Agreement with multiple arguments in NWC

a. *sə- r- jə- t.*
 1SG.ABS-3PL.DAT-3SG.ERG-give

‘S/he gives me to them.’

(Kabardian, Matasović 2010:37)

¹⁰ For more details, see O’Herin (2002:81) on Abaza; Hewitt (1989:50–52) on Abkhaz; Paris (1989:196–198) on Adyghe; Colarusso (1989:302, 2006:27) on Kabardian; Kumakhov & Vamling (2009: Ch. 4) on Adyghe and Kabardian.

b. *d- à- ts'a- j- ts'a -jt'.*

3H.ABS- 3N.DAT- PV- 3M.ERG- put -AOR

‘He put him/her under it.’

(Abkhaz, Hewitt 1989:66)

c. *j- sə- z- č'ə- r- t -t'.*

3N.ABS- 1SG.OBL-BEN- PV- 3PL.ERG-call-DYN

‘They invited me.’ [lit., ‘They called it for me.’]

(Abaza, O’Herin 2002:78)

The NWC languages vary slightly in their inventories of agreement prefixes. The prefixes distinguish at least person and number; in Abaza and Abkhaz they also convey gender. In all four languages, the agreement morphemes resemble their corresponding independent pronouns. The inventories of Kabardian and Abkhaz follow.¹¹

(22) Agreement prefixes in Kabardian (Colarusso 1989:326, 344; Matasović 2010:37)

	ABS	DAT/OBL	ERG	IND.PRON (ABS)
1SG	<i>s-</i>			<i>sa</i>
1PL	<i>d-</i>			<i>da</i>
2SG	<i>w-</i>			<i>wa</i>
2PL	<i>f-</i>			<i>fa</i>
3SG	<i>(ma-)</i>	<i>(j-)</i>	<i>j-</i>	<i>ar</i>
3PL		<i>(j)ā-</i>	<i>jā-</i>	<i>ahar</i>
WH	<i>(j-)</i>	<i>z-</i>		

¹¹ Agreement prefixes are subject to morpho(phono)logical processes that these charts abstract away from. See, for example, Colarusso (1989), Hewitt (1989), Kumakhov & Vamling (2009:37–43), Matasović (2010:37).

(23) Agreement prefixes in Abkhaz (Hewitt 1989:56; Hewitt 2004:130)

	ABS	DAT/OBL	ERG	IND.PRON (ABS)
1SG	s–			sa(rà)
1PL	ħ–			ħa(rà)
2SG.F	b–			ba(rà)
2SG.NF	w–			wa(rà)
2PL	f ^w –			f ^w a(rà)
3SG.F (3F)	d–	l–		la(rà)
3SG.M (3M)		j–		ja(rà)
3SG.NH (3N)	(j–)	(a–)	(n)a–	
3PL	j–	r–		da(rà)
WH		z–		

It seems these morphemes may occur in nearly any logical combination¹², and do not exhibit any unexpected interactions of the kind seen in, say, Tabarasan (Section 2.3) or South Caucasian (Section 4). Furthermore, agreement is not limited to just three slots in a single verb. Causatives and applicatives are very productive in the NWC languages, and each additional argument these constructions introduce controls a new agreement morpheme in the verb (for Abaza, see O’Herin 2002: Ch. 4 and 7). Combinations of these operations might add one, two, or three new agreement slots to the verb (24).

(24) Prolific agreement in NWC

a. *jə̀ləwəsɾət̪t̪’* =

jə̀- lə- wə- s- ɾə- t -t’

3N.ABS-3F.DAT-2SG.DAT-1SG.ERG-CAUS-give-AOR

‘I made you give it to her.’

(Abaza, Lomtadidze & Klychev 1989:146)

b. *səqəpfarjə̀keɭeɰʷəɰ* =

sə- qə- p- f- a- r- jə̀- ke- ɭeɰʷə -ɰ

1SG.ABS-PV-2SG.OBL-BEN-3PL.DAT-PV-3SG.ERG-CAUS- see -PST

‘S/he showed me to them for you.’

(Adyghe, Korotkova & Lander 2010:301)

¹² Indeed, data like (21a, 24b, 24d) suggest NWC does not even have Person–Case Constraints (cf. Section 4.1).

c. *jləcərzalahč'pat'* =

j- lə- cə- r- z- a- la- h- č'pa -t'

3N.ABS-3F.OBL-COM-3PL.OBL-BEN-3N.OBL-INST-1PL.ERG- do -DYN

‘We did it with her for them with it.’ (Abaza, O’Herin 2002:229)

d. *waq'ədədjəzyəšəžəfateq'əm* =

w- a- q'ə- də- d- jə- z- yə- šə

2SG.ABS-3PL.OBL- PV- COM-LOC-3SG.DAT-1SG.ERG-CAUS-lead

-žə -f -a -te -q'əm

-REV -POT-PERF-IMPF -NEG

‘I could not then make him/her lead you back out from there together with them.’

(Kabardian, Kumakhov & Vamling 2009:30)

In Abaza and Abkhaz, there’s one situation where a verb will *lose* an agreement prefix. If the absolutive argument is immediately preverbal, and would normally control a prefix shaped *j-* (i.e., 3N.ABS or 3PL.ABS), there is a strong preference to omit that prefix (25a). In these circumstances the noun and verb form a single stress-assignment domain (O’Herin 2002:19; cf. Allen 1956:133–139). However, when a word intervenes between the absolutive argument and the verb, the agreement prefix is obligatory (25b).

(25) Absolutive agreement in Abaza

a. *sara a-mf^w (ʔjə-)s-ba-j-t'*.

1SG DET-bear (ʔʔ3N.ABS-)1SG.ERG-see-PRES-DYN

‘I see the bear.’

b. *sara a-mf^w fəfta *(jə-)s-ba-j-t'*.

1SG DET-bear early *(3N.ABS)-1SG.ERG-see-PRES-DYN

‘I see the bear early.’ (O’Herin 2002:19–20; see Hewitt 1989:56 for Abkhaz)

Finally, I note that verbs aren’t the only agreement targets in NWC. Nouns agree with their possessors, and postpositions with their objects. The prefixes on these categories are similar in form to those found in the DAT/OBL slot on verbs. Note that, at least in Kabardian and Adyghe, if any modifiers precede the possessed noun, the possessor prefix appears on the leftmost modifier (26c).

(26) Nonverbal agreement targets

a. *a-xàts 'a jə-zə*

DET-man 3M.OBL-for

‘for the man’

(Abkhaz, Hewitt 1989:46)

b. *a-ph^wəs l-xàts 'a*

DET-woman 3F.POSS-husband

‘the woman’s husband’

(Abkhaz, Hewitt 1989:64)

c. *si-adəye tχəłə-r*

1SG.POSS-Cherkess book-ABS

‘my Circassian book’

(Kabardian, Kumakhov & Vamling 2009:26)

3.2 *Wh*-agreement

Wh-agreement is special morphology triggered by arguments which undergo $\bar{A}$ -movement, such as *wh*-movement or relativization (Chung 1994, 1998; Chung & Georgopoulos 1988; Baier 2017). The NWC languages exhibit a unique system of *wh*-agreement which manifests itself in the targets’ prefixal agreement slots, replacing normal φ -agreement. The following relative clauses illustrate. (In the English translations, the symbol *t* marks the extracted argument position that controls *wh*-agreement; in NWC, there is nothing overt that corresponds to a relative pronoun.)

(27) *Wh*-agreement in NWC relative clauses¹³

a. [RC *jə-psə-z*] *a-ph^wəs*

WH.ABS-die-NFIN.PST DET-woman

‘the woman [RC **who** *t*_{ABS} died]’

(Abaza, Lomtadidze & Klychev 1989:137)

b. [RC *j-awə-j-ʃtə-z*] *a-haq^w-dəw*

WH.ABS-PV-3M.ERG-throw-PST DET-stone-big

‘the big rock [RC **which** he threw *t*_{ABS}]’

(Abaza, O’Herin 2002:260)

¹³ Relativization is discussed extensively for Abkhaz by Hewitt (1979), and Adyghe by Caponigro & Polinsky (2011). Indeed, the latter authors argue relativization is a ubiquitous syntactic mechanism in the Adyghe, being found not just in canonical relative clauses but a host of other embedded clauses.

- c. [RC *a-tdzə* *s-zə-r-ba-wa*] *a-qac'a*
 DET-house 1SG.DAT-**WH.ERG**-CAUS-see-NFIN.PRES DET-man
 ‘the man [RC **who** *t_{ERG}* is showing me the house]’
 (Abaza, Lomtadze & Klychev 1989:137)
- d. [RC *Meràb a-š^wq^w’ə* *z-j-tà-z*] *a-ph^wə̀s*
 Merab DET-book **WH.DAT**-3M.ERG-give-NFIN.AOR DET-woman
 ‘the woman [RC **who** Merab gave *t_{DAT}* the book]’ (Abkhaz, Hewitt 1979:157)
- e. [RC *č’ale-m xatə-r* *ze-r-jə-pč’e-š’tə*] *š^wanə-r*
 boy-ERG orchard-ABS **WH.OBL**-INST-3SG.ERG-hoe-FUT hoe-ABS
 ‘the hoe [RC **which** the boy will be weeding the orchard with *t_{OBL}*]’
 (Adyghe, Caponigro & Polinsky 2011:85)

The NWC language family has several different strategies for forming *wh*-questions (28), including the use of a suffix dedicated to constituent questions, *wh*-movement to a preverbal focus position, and a pseudo-cleft construction. These all involve *wh*-agreement.

(28) *Wh*-questions in NWC

- a. *jə-z-fa-x’ə-da?*
 3N.ABS-**WH.ERG**-eat-PERF-WHQ
 ‘**Who** *t_{ERG}* has eaten it?’ (Abkhaz, Hewitt 1989:85)
- b. *s-k’itap dazda j-na-z-ax^w?*
 1SG.POSS-book who 3N.ABS-PV-**WH.ERG**-take
 ‘**Who** *t_{ERG}* took my book?’ (Abaza, O’Herin 2002:252)
- c. *mə mašjəne-r zə-q^wəta-ke-r xet-a?*
 DEM car-ABS **WH.ERG**-break-PST-ABS who-Q
 ‘**Who** *t_{ERG}* broke this car?’ (Lit. ‘Who is the one **who** *t_{ERG}* broke this car?’)
 (Adyghe, Caponigro & Polinsky 2011:99)

A peculiar property of NWC *wh*-agreement is that, in certain syntactic configurations, it can appear in more places than might be expected. One such context is when a possessor undergoes $\bar{A}$ -movement, as in (29a). Unsurprisingly, the possessed noun bears *wh*-agreement, instead of normal possessor agreement. Additionally, the verb shows *wh*-agreement in the agreement slot corresponding to the whole noun phrase from which the possessor is extracted (here, the absolutive

object). This is unexpected, since the whole phrase *the man's house* is not undergoing extraction, just its possessor.

(29) ‘Extra’ *wh*-agreement in Abaza

- a. [RC z-tdzə] [jə-w-x^waf-z] a-qac’a
 WH.POSS-house WH.ABS-2SG.ERG-buy-PST DET-man
 ‘the man [RC who you bought [ABS the house of t_{POSS}]]’ (O’Herin 2002:260)
- b. [RC z-pa bzəj də-z-ba-wa] a-qac’a
 WH.POSS-son good 3H.ABS-WH.ERG-see-PRES DET-man
 ‘the man [RC who_i t_{ERG} loves [his_i son]’ (Lit., ‘...who_i sees his_i son as good’) (O’Herin 2002:274)
- c. [j-ca-nəs dəzda jə-z-taqə-z?
 WH.ABS-go-INF who 3N.ABS-WH.DAT-want-PST
 ‘Who t_{DAT} wanted [PRO_{ABS} to go]?’ (O’Herin 2002:263)

‘Extra’ *wh*-agreement is also found if an extracted argument is coreferential with the possessor of one of its coarguments (29b). In this context, the verb bears a *wh*-prefix in the appropriate argument slot — but so does as does the possessed noun, even though neither it nor its possessor undergoes $\bar{A}$ -movement.

Finally, when the subject of a verb taking an infinitival complement is extracted (29c), *wh*-agreement appears both on the matrix verb, and on the embedded verb, corresponding to the null infinitival subject (notated PRO in the English gloss). These cases of extra *wh*-agreement have attracted a few theoretical analyses, which involve feature sharing/transmission (O’Herrin 2002: Ch. 8; Baier & Yuan 2017) and parasitic gaps (Ershova 2017).

4. South Caucasian

The South Caucasian, or Kartvelian, languages (SC; Georgian GEO, Laz LZZ, Mingrelian XMF, and Svan SVA) display intricate patterns of ϕ -agreement on their finite verbs. There are several slots in the verbal template for agreement affixes (30), registering features of the subject, object, or both. Arguments’ ϕ -features, case, grammatical role, and information structure properties can all play a role in the agreement calculus, as does verb class.

(30) Simplified South Caucasian verbal template¹⁴

-3	-2	-1	Root	+1	+2	+3
Preverb	Agr	Deriv./Infl.		Deriv./Infl.	TAM+Agr	Agr

One source of complexity in SC is the existence of two distinct agreement patterns, which differ in the way syntactic roles map to agreement morphology. The following Georgian forms illustrate (31). Usually, all subjects control the Set A affixes (which include *v-* ‘1.A’, *-e* ‘PST.L’, and *-a* ‘PST.3SG’), and objects control Set B affixes (including *m-* ‘1SG.B’ and *g-* ‘2.B’); this is the Normal agreement system (31a). It contrasts with the inverse system, which obtains whenever the subject is assigned dative case. In these cases, the mapping between controllers and morphology inverts: subjects control Set B, and objects Set A (31b). Of course, even in languages with elaborate rich agreement, dative subject constructions very often ‘invert’ agreement, insofar as nominative objects will control erstwhile subject agreement morphemes. What sets SC languages apart, though, is how pervasive inverse agreement is — it affects not just experiencer-subject predicates, but also all transitive and unergative verbs in certain TAMs and modal constructions.¹⁵

(31) Direct vs. Inverse agreement in Georgian

a. Direct: ‘*x* saw *y*’ (partial aorist paradigm, Aronson 1990:172)

	1SG.NOM	2SG.NOM	3SG.NOM
1SG.ERG	— ¹⁶	<i>g-nax-e</i>	<i>v-nax-e</i>
2SG.ERG	<i>m-nax-e</i>	—	<i>nax-e</i>
3SG.ERG	<i>m-nax-a</i>	<i>g-nax-a</i>	<i>nax-a</i>

¹⁴ Detailed discussions of verbal morphology can be found for Georgian (Aronson 1990, Hewitt 1995), Laz (Chikobava 1936, Lacroix 2009, Pöchtrager & Öztürk 2011), Mingrelian (Qipshidze 1914, Chikobava 1936), and Svan (Topuria 1967, Gudjedjani & Palmaitis 1986).

¹⁵ Inverse agreement in the SC languages is superficially similar to phenomena in American Sign Language (Padden 1988) and Neo-Aramaic (Kalin & van Urk 2015). The term ‘inverse’ is also used in Algonquian and other language families for a different phenomenon, involving person hierarchies (e.g., Béjar & Rezac 2009, Oxford 2014).

¹⁶ Reflexive and reciprocal objects in SC behave as if they were third person for agreement calculus. They do not trigger special verb forms.

- b. Inverse: ‘ x had seen y ’ (partial pluperfect paradigm, Aronson 1990:273–275)

	1SG.NOM	2SG.NOM	3SG.NOM
1SG.DAT	—	m -enax- e	m -enax- a
2SG.DAT	g -enax- e	—	g -enax- a
3SG.DAT	v -enax- e	enax- e	enax- a

These and other properties make the SC agreement systems exceptionally intricate. Theories of agreement and inflection frequently discuss phenomena from this family (e.g., Anderson 1992, Halle & Marantz 1993, Stump 2001, Trommer 2001, Béjar 2003, Béjar & Rezac 2009, Nevins 2011, Wier 2011, Blix 2016, Foley 2017); Georgian in particular has figured prominently in this literature, but microvariation across the family is theoretically significant, and a prime target for future investigation.

This section first discusses prefixal agreement (4.1), then suffixal agreement (4.2). Both domains exhibit complex interactions of person and number features. For reference, full paradigms are given in the appendix.

4.1 Prefixal agreement

The SC languages’ agreement prefix inventories are given in (32). As outlined above, these morphemes come in two sets, A and B, whose functions differ across the normal and inverse agreement systems. Additionally, Georgian and Svan have a prefix (glossed 3.C) controlled by third person indirect objects in the normal agreement system, and by third person dative subjects in the inverse system.

(32) Agreement prefixes in SC languages^{17, 18}

Georgian		Laz & Mingrelian	Svan	
v- 1.A	m- 1SG.B	v/b/p/p̣- 1.A	xw- 1.A	m- 1SG.B
	gv- 1PL.B			n- 1EX.B
(x- 2.A)	g- 2.B	m(/b/p/p̣)- 1.B	l- 1IN.A	gw- 1IN.B
	h/s/Ø- 3.C			ǰ- 2.B
		g/k/ḳ/r- 2.B	x- 2.A	
			(l- 3.A)	x- 3.C

Across the SC family, prefixal agreement morphemes exhibit blocking relationships, similar to those in NEC languages (Section 2.3). But whereas NEC blocking effects can be easily stated in terms of controllers' syntactic roles — e.g., object agreement blocks subject agreement in Dargi (18) — blocking in SC is most straightforwardly characterized morphologically. Whenever both a Set A and a Set B prefix are licensed, the Set B prefix wins — no matter the syntactic role of its controller. Consequently, SC languages display a preference for object agreement in normal contexts, and a preference for subject agreement in inverse contexts. The pattern is especially clear in Svan (33): *m-* '1SG.B' blocks *x-* '2.A' in both 2SG>1SG normal verbs and 1SG>2SG inverse verbs — compare (**x-*)[*m-*]*amāre* 'you prepare me' (33a) and *m-*(**x-*)*alät* 'I love you' (33b). Likewise, *ǰ-* '2.B' always blocks *xw-* '1.A'.

¹⁷ The prefixes in this table all appear in slot -2 of the verbal template (30). Additional prefixal agreement can appear in slot -1: all four SC languages have an applicative morpheme whose shape is determined by the person features of the applied argument (*i-* for local-persons, *u/o-* for third-persons). Arguably, certain preverb alternations (in slot -3) may also qualify as agreement (e.g., *mo-m-cem-s* 's/he will give it to me' vs. *mi-s-cem-s* 's/he will give it to him/her'; see Aronson 1990:174, 406–407).

¹⁸ The prefix *x-* '2.A' in Georgian is marginal, appearing only in a few irregular verb forms; likewise for *l-* '3.A' in Svan. Also, note that only the Upper Bal dialects of Svan make an inclusive–exclusive distinction (Topuria 1967, Tuite 1998); other dialects lack the *l-* '1IN.A' and *n-* '1EX.B' prefixes.

(33) Prefixal competition in Svan (Upper Bal dialect, Topuria 1967:21–22)

a. ‘x prepares y’ (Normal Agreement)

	1SG.DAT	2SG.DAT	3SG.DAT
1SG.NOM	—	j-amāre	xw-amāre
2SG.NOM	m-amāre	—	x-amāre
3SG.NOM	m-amāre	j-amāre	amāre

b. ‘x loves y’ (Inverse Agreement)

	1SG.NOM	2SG.NOM	3SG.NOM
1SG.DAT	—	m-alät	m-alät
2SG.DAT	j-alät	—	j-alät
3SG.DAT	xw-alät	x-alät	x-alät

Ditransitives are another construction in which agreement prefixes can block one another. Consider the following X.SUBJ>3.IO>3.DO verbs from Georgian (34). In the 3>3>3 and 2>3>3 forms, there’s no competition; only the 3rd person indirect object can control a prefix (namely the s- allomorph of 3.C). But in the 1>3>3 context, there are two candidates for agreement: v- ‘1.A’ or s- ‘3.C’. The subject prefix alone appears, showing that Set A prefixes block the 3.C prefix.¹⁹

(34) Forms for Georgian ‘x will give it to y’ (after Aronson 1990:173–174)

	3SG.SUBJ	2SG.SUBJ	1SG.SUBJ
3SG.IO	mi-s-cem-s	mi-s-cem	mi-v-cem

One might imagine that two Set B prefixes could compete in 3>L>L ditransitives. At least for Georgian and Svan, such argument combinations are ruled out independently by a Person–Case Constraint (Harris 1981: Ch. 3; Bonet 1991:214–217; Wier 2011:247–261). However, there’s no such PCC in Laz, and it appears that dialects of this language vary in what principles they use to resolve 3>L>L agreement. In the Pazar dialect, agreement with indirect objects blocks agreement

¹⁹ In archaic and nonstandard varieties of Georgian, however, both prefixes can appear.

(i) Ø Ø še-v-h-mtxw-evodet
 pro:1PL.NOM pro:3SG.DAT PV-1.A-3.C-meet-PERF.SBJV.AGR
 ‘had we met him/her’

(Tuite 1998:13)

with direct objects (35). But in the Arhavi dialect, the agreement controller is apparently whichever object is first person; i.e., *m*– ‘1.B’ always blocks *g*– ‘2.B’ (36).

(35) Ditransitive agreement in Pazar Laz

- a. *Himu-k ma si g-o-ts'ir-u*
 3SG-ERG 1SG(.NOM) **2SG(.DAT)** **2.B-VAL-show-PST.3SG**
 ‘S/he showed me to you.’ (Öztürk & Pöchtrager 2011:47)
- b. *Ø Ø Ø m-o-dzir-u*
pro:3SG.ERG pro:2SG.NOM pro:1SG.DAT 1.B-VAL-show-PST.3SG
 ‘S/he showed you to me.’ (Atlamaz 2013:26)

(36) Ditransitive agreement in Arhavi Laz

- a. *baba-skani-k si ma va mo-m-ç-ase.*
 father-2SG.POSS-ERG 2SG(.NOM) **1SG(.DAT)** NEG PV-**1.B-give-FUT.3SG**
 ‘Your father will not give you to me [i.e., as a wife].’
 (Lacroix 2009:700, citing Duzémil 1937)
- b. *baba-k Ø Ø var me-m-ç-am-s.*
 father-ERG **pro:1SG.NOM** *pro:2SG.DAT* NEG PV-**1.B-give-THM-NPST.3SG**
 ‘My father will not give me to you.’ (Lacroix 2009:700)

Prefixal agreement blocking in SC languages, especially the monotransitive pattern in Georgian, has attracted much theoretical attention, in both the syntactic and morphological literature. Syntactic accounts generally take agreement blocking as evidence for an elaborated theory of the syntactic operation Agree (Béjar 2003, Béjar & Rezac 2009, Lomashvili & Harley 2011, Nevins 2011, Atlamaz 2013). Morphological accounts use the blocking patterns to articulate operations that map syntactic features to morphemes (Anderson 1992, Halle & Marantz 1993, McGinnis 1996, Trommer 2001, Blix 2016, Foley 2017).

4.2 Suffixal agreement

Agreement suffixes appear in slots +2 and +3 of the SC verbal complex (30). Suffixes can express agreement in person or number, as well as TAM features. Interactions between these morphemes are very complex, and are subject to much microvariation. Only a slice of these phenomena can be covered here, but an extremely thorough description of the patterns can be found in Tuite (1998).

In most SC languages, agreement expressed by TAM suffixes (slot +2) is always (at least partially) controlled by the argument that could control a Set A prefix: subjects in normal contexts (37a), and direct objects in inverse contexts (37b) (cf. the paradigm (31)). However, the pattern in Pazar Laz is different:²⁰ in normal environments, TAM suffixes still register subjects (37c). But in

²⁰ The Arhavi dialect behaves more like the other SC languages (Lacroix 2009, Section 9.4.5).

inverse environments, they fail to agree with objects. Instead, default 3SG agreement appears (37d). In this respect, Laz isn't unusual — crosslinguistically, dative subjects often impede agreement with other arguments (e.g., in Icelandic, Sigurðsson 1996). Strikingly, though, an inverse object that is focused *can* control suffixal agreement (37e).²¹

(37) Suffixal agreement in Georgian vs. Laz

- a. *šen* *me* *m-nax-e*
 2SG(.ERG) 1SG(.NOM) 1.B-see-PST.L
 'You saw me.' (Georgian, after Aronson 1990:169–170)
- b. *me* *šen* *unda m-enax-e*
 1SG(.DAT) 2SG(.NOM) MODAL 1.B-see.PLU-PST.L
 'I should have seen you.' (Georgian, after Aronson 1990:169–170)
- c. *ši* *ma* *ce-m-ç-i*
 2SG(.ERG) 1SG(.NOM) PV-1.B-beat-PST.L
 'You beat me.' (Pazar Laz, Öztürk & Pöchtrager 2011:46)
- d. *ma* *ši* *ce-m-a-ç-u*
 1SG(.DAT) 2SG(.NOM) PV-1.B-APPL-beat-PST.3SG
 'I was able to beat you.' (Pazar Laz, Öztürk & Pöchtrager 2011:62)
- e. *ma* *ši* *ce-m-a-ç-i*
 1SG(.DAT) 2SG(.NOM) PV-1.B-APPL-beat-PST.L
 'I was able to beat YOU.' (Pazar Laz, Öztürk & Pöchtrager 2011:63)

The primary expression of number agreement in SC languages is suffixal. As an illustration, take the following partial paradigms, which give certain forms in Georgian (Aronson 1990:172), Mingrelian (Chikobava 1936:164–165; Laz behaves identically), and Becho Svan (after Topuria 1967:22, 93; Gudjedjani & Palmaitis 1986:63, 69).

²¹ In a 2.DAT>1 verb with a focused object, the object controls both suffixal *and* prefixal agreement (ia). This means that the Set A prefix *v-* '1.A' blocks the Set B prefix *g-* '2.B', subverting the normal blocking pattern (ib).

(i) 2>1 inverse agreement in Pazar Laz (Öztürk 2016:5, cf. Öztürk & Pöchtrager 2011:62)

- a. *ši* *MA* *v-a-cer-i*
 2SG(.DAT) 1SG(.NOM) 1.A-APPL-believe-PST.L
 'You believed ME [not someone else].'
- b. *ši* *ma* *g-a-cer-u*
 2SG(.DAT) 1SG(.NOM) 2.B-APPL-believe-PST.3SG
 'You believed me.'

(38) Number agreement syncretisms across SC languages.

Georgian: ‘x saw y’			Mingr.: ‘x measured y’			Svan: ‘x was preparing y’		
	2SG.O	2PL.O		2SG.O	2PL.O		2SG.O	2PL.O
1SG.S	<i>g-nax-e</i>		1SG.S	<i>r-zim-i</i>		1SG.S	<i>ǰ-amara-sgw</i>	
1PL.S	<i>g-nax-e-t</i>		1PL.S	<i>r-zim-i-t</i>		1PL.S	<i>ǰ-amara-d</i>	
3SG.S	<i>g-nax-a</i>	<i>g-nax-a-t</i>	3SG.S	<i>r-zim-u</i>		3SG.S	<i>ǰ-amara</i>	
3PL.S	<i>g-nax-es</i>		3SG.S	<i>r-zim-es</i>		3PL.S	<i>ǰ-amara-x</i>	

First compare the upper halves of the paradigms (1>2 forms). In both Georgian and Mingrelian, there’s a reversed-L shaped syncretism. This is a case of omnivorous number agreement (Nevins 2011): the suffix *-t* ‘PL’ will happily reflect a plural subject (in the 1PL>2SG context), a plural object (1SG>2PL), or both (1PL>2PL). Note that the cognate suffix in Svan does not have an omnivorous distribution; instead we see horizontal 1SG>2 and 1PL>2 syncretisms. Descriptively, Svan TAM suffixes controlled by L.SG arguments (including *-sgw* ‘IMP.L.SG’) block *-d* ‘L.PL’.

Next consider the lower 3>2 cells. In Mingrelian and Svan, we see another reversed-L syncretism. The omnivorous suffix here (*-es* ‘PST.3PL’ or *-x* ‘3PL’) indicates that the subject is third person, and that one or another argument is plural. Georgian’s *-es* ‘PST.3PL’ suffix, though, is not so flexible — it’s only licensed by a 3PL subject. Consequently, 3SG>2PL combinations trigger two distinct suffixes: the TAM suffix for 3SG subject agreement, and the suffix *-t* to express the 2PL object’s number feature.²² Finally, notice the lack of *-t* ‘PL’ in the 3PL>2PL cell (**gnaxest*), showing that 3PL TAM suffixes (including *-es* ‘PST.3PL’) block *-t* ‘PL’.

In inverse agreement contexts, many of these interactions between suffixes hold — though, of course, the syntactic roles of their controllers are reversed. In Svan, for instance, a 2PL object normally fails to control number agreement given a 1st person subject. But in inverse contexts, number agreement with a 2PL *subject* fails given a 1st person *object* (39b).

²² There are TAMs where 3SG TAM suffixes and *-t* ‘PL’ do not cooccur. As a rule, if the 3SG agreement suffix ends in /s/, that segment will delete before *-t* ‘PL’. Compare *g-naxav-s* ‘s/he will see you.SG’ and *g-naxav(-*s)-t* ‘s/he will see you.PL’. See Blix (2016) for an analysis of this asymmetry, and Tuite (1998, esp. 136–137) for details on dialectal and diachronic variation.

(39) Inverse 2>1SG agreement in Svan (Lent'ex dialect, Topuria 1967:21)

- a. *si* *mi* *j-alät-xwi*
 2SG(.DAT) 1SG(.NOM) 2.B-love.PRES-STAT.1
 'You.SG love me.'
- b. *sgäy* *mi* *j-alät-xwi* / *...-*d*
 2PL(.DAT) 1SG(.NOM) 2.B-love.PRES-STAT.1 / *...-L.PL
 'You.PL love me.'

However, not every pattern inverts so neatly in dative subject constructions. In particular, third person arguments control number agreement in surprising ways. One reason for this is that third person direct objects across the family generally fail to control any agreement.²³ In normal agreement contexts, this isn't consequential, as there are no morphemes which even could be controlled by 3.DOs. However, since the objects of DSCs control TAM suffixes, and there are 3PL agreement suffixes for every non-inverse TAM, one might expect 3PL.DOs to control agreement in inverse contexts. But this is not the case. Compare the following aorist (regular) ~ pluperfect (inverse) pairs from Georgian. The first (40a ~ a') shows that when you move from one TAM to the other, and swap the subject and object's ϕ -features, the verb's agreement affixes are typically held constant (though the affixes' controllers swap). Given this observation, and the fact that the aorist 3PL.ERG>1SG verb is *m-nax-es* (40b), one would predict the corresponding pluperfect 1SG.DAT>3PL verb to be **m-enax-es*. However, suffixal agreement actually surfaces in the default

²³ There are a few exceptions. In some varieties of Svan (Topuria 1967:24) and nonstandard/archaic Georgian (Tuite 1998, Cherchi 1997), 3PL objects of DSCs can indeed control number agreement under certain circumstances (i). And, in Old Georgian, there was another suffixal slot for number agreement (Tuite 1998, Harris 1985), where nominative direct objects of all persons could control agreement (ii).

- (i) *gmert-s vašl-ni čamo-Ø-u-qrī-an.*
 god-DAT apple-PL.NOM PV-3.C-APPL.3-throw.PERF-STAT.3PL
 'God has thrown down apples.' (Georgian, Khevsureti dialect; Tuite 1998:146)
- (ii) *çar-avlin-n-a mona-ni twis-ni*
 PV-send.AOR-PL-PST.3SG servant-PL.NOM own-PL.NOM
 'He sent his servants away.' (Old Georgian; Tuite 1998:101)

As for third person indirect objects, these too can occasionally control number agreement in nonstandard/colloquial Georgian (e.g., Tuite 1998:122–124) and apparently also in Laz (Tuite 1998:211, citing von Erckert 1895:349, 353).

- (iii) *am dro-s mat gamo-Ø-e-laparaḱ-eb-a-t es morige.*
 this time-DAT 3PL.DAT PV-3.C-APPL-speak-THM-NPST.3SG-PL this duty_officer.NOM
 'At this point the officer on duty converses with them.'

(colloquial Georgian, Tuite 1998:122)

Tuite observes 3PL IOs that are topical, pronominal, and/or null are more likely to control such agreement, at least for Georgian.

3SG form (40b'), showing that whatever constraint which prevents 3.DOs from controlling agreement holds even in inverse contexts.

(40) Avoiding agreement with 3PL objects in Georgian (after Aronson 1990)

- a. *šen me m-nax-e*
2SG(.ERG) 1SG(.NOM) 1SG.B-see-PST.L
 'You saw me'
- a'. *me šen unda m-enax-e*
 1SG(.DAT) **2SG(.NOM)** MODAL 1SG.B-see.PLU-PST.L
 'I should have seen you'
- b. *mat me m-nax-es*
3PL.ERG 1SG(.NOM) 1SG.B-see-PST.3PL
 'They saw me'
- b'. *me isini unda m-enax-a / ...-*es*
 1SG(.DAT) **3PL.NOM** MODAL 1SG.B-see.PLU-PST.**3SG** / ...-***PST.3PL**
 'I should have seen them'

Conversely, since objects control TAM suffixes in the inverse agreement pattern, 3PL.DAT subjects need to resort to other morphemes (a suffix, either in slot +2 or +3) to express their plurality. But across the SC family, 3PL.DAT subjects can only control number agreement if the object is also third person.²⁴

(41) 1/2SG objects blocking 3PL.DAT number agreement

Georgian: 'x needs y' (after Aronson 1990:335–336)

	1SG.NOM	2SG.NOM	3.NOM
3SG.DAT	v-čirdeb-i	s-čirdeb-i	s-čirdeb-a
3SG.DAT			s-čirdeb-a-t

Arhavi Laz: 'x has seen y' (Lacroix 2009:315;
 cf. Mingrelian, Qipshidze 1914:84–85)

	1SG.NOM	2SG.NOM	3.NOM
3SG.DAT	b-u-dziru-Ø	u-dziru-Ø	u-dziru-n
3SG.DAT			u-dziru-nan

²⁴ This generalization, too, has exceptions. Tuite (1998:176, fn.73; citing Tschenkéli 1958:461) reports forms like *vuqvarvar-t* 'they.DAT love me' to occur in colloquial Georgian.

Lent'ex Svan: 'x loves y' (Topuria 1967:21)

	1SG.NOM	2SG.NOM	3.NOM
3SG.DAT	xw-alät-xwi	x-alät-xi	x-alät
3SG.DAT			x-alät-x

Certain aspects of SC suffixal agreement, in particular the omnivorous distributions of agreement –*t* 'PL' in Georgian and –*es* 'PST.3PL' in Laz, have attracted theoretical attention (Nevins 2011, McGinnis 2013, Blix 2016). Other patterns, and especially the microvariation observed across the SC languages, have yet to be grappled with theoretically.

5. Conclusion and open questions

In terms of agreement, there is an embarrassment of riches in the Caucasus. Individual phenomena attested in each of the language families are not wholly unique — for example, promiscuous agreement parallel to the Northeast Caucasian languages' can be seen in dialects of Italian (Antrim 1994); polysynthetic agreement like Northwest Caucasian can be seen in Yimas (Upper Sepik, YEE; Foley 1991, Phillips 1993); morpheme blocking relationships as complex as South Caucasian are found in Algonquian (Oxford 2014). But the sheer density of these unusual agreement patterns within these families makes the languages of the Caucasus a prime target for future investigation on the typological and theoretical properties of agreement. Open questions include: To what extent does the syntactic structure underlying long-distance agreement and biabsolute constructions vary across Northeast Caucasian? Are the agreement markers in Northwest Caucasian expressions of bona fide predicate–argument agreement, or are they incorporated pronouns — and is the answer to that question the same throughout the family? What theoretical ramifications does the intricate variation in number agreement across South Caucasian have?

As for experimental work, only a handful of agreement-related studies have been conducted on Caucasian languages to date (Harris & Samuel 2011, Gagliardi & Lidz 2014). Further experimentation on Caucasian agreement may be a fruitful endeavor, since phenomena in the three language families are relevant many issues in psycholinguistics. For example, how might *wh*-agreement in the NWC languages effect the real-time comprehension of filler–gap dependencies (cf. Chamorro: Wagers et al. 2015)? How, if at all, are subject- and object-agreement processed differently in South Caucasian (cf. Basque: Zawiszewski & Friederici 2009, Chow et

al. 2018)? Clearly, the languages of the Caucasus hold much opportunity for research on agreement.

Abbreviations

1, 2, 3 – first, second, third person; I, II, III, etc. – gender categories (NEC family); A/B/C – Set A/B/C agreement affixes (SC family); ABS – absolutive; ABST – abstract; ADV – adverbial; AFF – affirmative; AGR – agreement; AOR – aorist (perfective past); APPL – applicative; ATTR – attributive; AUX – applicative; BEN – benefactive; CAUS – causative; COM – comitative; CONT – concessive; CVB – converb; DAT – dative; DET – determiner; DO – direct object; DSC – dative-subject construction; DYN – dynamic; ELA – elative; EMPH – emphatic; ERG – ergative; EVID – evidential; EX – exclusive; F – feminine; FUT – future; GEN – genitive; GER – gerund; HPL – human plural; IMPF – imperfect (imperfective past); IN – inclusive; INF – infinitive; IO – indirect object; IPFV – imperfective; INST – instrumental; L – local (1st or 2nd) person; LAT – lative; LOC – locative; LV – light verb; M – masculine; NEG – negative; NFIN – nonfinite; NH – nonhuman; NMLZ – nominalizer; NOM – nominative; O/OBJ – object; NPL – nonhuman plural; NPST – nonpast; PERF – perfect; PFV – perfective; PL – plural; PLU – pluperfect; POSS – possessive; POT – potential; PRES – present; *pro* – silent pronoun; PROG – progressive; PST – past; PTCP – participle; PV – preverb; Q – question; QUOT – quotative; RES – resultative; REV – reversative; S/SUBJ – subject; SBJV – subjunctive; SG – singular; SPRESS – superessive; STAT – stative; TAM – tense–aspect–mood; THM – thematic suffix; WH – *wh*-agreement; WHQ – *wh*-question; WPST – witnessed past; # – number; X>Y – subject (*x*) acting on object (*y*); X>Y>Z – subject (*x*) acting on indirect object (*y*) and direct object (*z*)

Appendix

(42) Person agreement in Dargi (van den Berg 1999:158, 164)

	1SG.ABS	2SG.ABS	3SG.ABS
1SG.ERG			○-iti-ra
2SG.ERG	○-iti-ra	○-iti-ri	○-iti-ri
3SG.ERG			○-iti-b

The symbol ○ indicates a slot for gender agreement, controlled by the absolutive object.

- (43) Person agreement in Tabasaran (Kibrik & Seleznev 1982:28)

	1SG.ABS	2SG.ABS	3SG.ABS
1SG.ERG	<i>uvčunu-za</i>	<i>uvčunu-za</i> , <i>uvčunu-zu-vu</i>	<i>uvčunu-za</i>
2SG.ERG	<i>uvčunu-va</i>		
3SG.ERG	<i>uvčun-uv</i> , <i>uvčunu-za</i>	<i>uvčun-uv</i> , <i>uvčunu-va</i>	<i>uvčun-uv</i>

- (44) Normal agreement in Georgian: *x* saw *y* (after Aronson 1990)

	1SG.O	1PL.O	2SG.O	2PL.O	3.O
1SG.S	—		g - <i>nax</i> - e	—	<i>v</i> - <i>nax</i> - e
1PL.S			g - <i>nax</i> - e - <i>t</i>		<i>v</i> - <i>nax</i> - e - t
2SG.S	m - <i>nax</i> - e	gv - <i>nax</i> - e	—		<i>nax</i> - e
2PL.S	m - <i>nax</i> - e - t	gv - <i>nax</i> - e - t			<i>nax</i> - e - t
3SG.S	m - <i>nax</i> - a	gv - <i>nax</i> - a	g - <i>nax</i> - a	g - <i>nax</i> - a - t	<i>nax</i> - a
3PL.S	m - <i>nax</i> - es	gv - <i>nax</i> - es	g - <i>nax</i> - es		<i>nax</i> - es

- (45) Inverse agreement in Georgian: *x.DAT* needs *y* (after Aronson 1990:275)

	1SG.O	1PL.O	2SG.O	2PL.O	3.O
1SG.S	—		<i>m-čirdeb-i</i>	<i>m-čirdeb-i-t</i>	<i>m-čirdeb-a</i>
1PL.S			<i>gv-čirdeb-i</i>	<i>gv-čirdeb-i-t</i>	<i>gv-čirdeb-a</i>
2SG.S	<i>g-čirdeb-i</i>	—			<i>g-čirdeb-a</i>
2PL.S	<i>g-čirdeb-i-t</i>				<i>g-čirdeb-a-t</i>
3SG.S	<i>v-čirdeb-i</i>	<i>v-čirdeb-i-t</i>	<i>s-čirdeb-i</i>	<i>s-čirdeb-i-t</i>	<i>s-čirdeb-a</i>
3PL.S					<i>s-čirdeb-a-t</i>

- (46) Normal agreement in Svan: x was preparing y (Upper Bal dialect, after Topuria 1967, Gudjedjiani & Palmaitis 1987)

	1SG.O	1EX.O	1IN.O	2SG.O	2PL.O	3.O
1SG.S	—			$\check{j}$ -amārā-s		xw -amārā-s
1EX.S				$\check{j}$ -amāra-d		xw -amāra-d
1IN.S						l -amāra-d
2SG.S	m -amār-ās	n -amār-ās	—			x -amārā-s
2PL.S	m -amār-ad	n -amār-ad				x -amāra-d
3SG.S	m -amāra-Ø	n -amāra-Ø	gw -amāra-Ø	$\check{j}$ -amāra-Ø	amāra	
3PL.S	m -amāra-x	n -amāra-x	gw -amāra-x	$\check{j}$ -amāra-x	amāra-x	

- (47) Inverse agreement in Svan: x .DAT loves y (Lent'ex dialect, Topuria 1967)

	1SG.O	1PL.O	2SG.O	2PL.O	3.O
1SG.S	—		m -alät-xi	m -alät-d	m -alät-Ø
1PL.S			gw -alät-xi	gw -alät-d	gw -alät-Ø
2SG.S	$\check{j}$ -alät-xwi	$\check{j}$ -alät-d	—		$\check{j}$ -alät-Ø
2PL.S					$\check{j}$ -alät-x
3SG.S	xw -alät-xwi	xw -alät-d	x -alät-xi	x -alät-d	x -alät-Ø
3PL.S					x -alät-x

- (48) Normal agreement in Mingrelian: x measured y (after Chikobava 1936:163–164)

	1SG.O	1PL.O	2SG.O	2PL.O	3.O
1SG.S	—		r -zim-i		b -zim-i
1PL.S			r -zim-i-t		b -zim-i-t
2SG.S	b -zim-i	—			zim -i
2PL.S	b -zim-i-t				zim -i-t
3SG.S	b -zim-u	—			zim -u
3PL.S	b -zim-es				zim -es

(49) Inverse agreement in Mingrelian: x .DAT wanted y (Qipshidze 1914:84–85)

	1SG.O	1PL.O	2SG.O	2PL.O	3.O	
1SG.S	—		<i>m-oḵo(r)d-i</i>	—	<i>m-oḵo(r)d-u</i>	
1PL.S			<i>m-oḵo(r)d-i-t</i>		<i>m-oḵo(r)d-es</i>	
2SG.S	<i>g-oḵo(r)d-i</i>	<i>g-oḵo(r)d-i-t</i>	—		<i>g-oḵo(r)d-u</i>	
2PL.S					<i>g-oḵo(r)d-es</i>	
3SG.S	<i>v-oḵo(r)d-i</i>	<i>v-oḵo(r)d-i-t</i>	<i>oḵo(r)d-i</i>	<i>oḵo(r)d-i-t</i>	<i>oḵo(r)d-u</i>	
3PL.S					<i>oḵo(r)d-es</i>	

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