

Chapter 21

Binding and Indexicality in the Caucasus

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Classic Binding Theory draws a distinction between *anaphors*, *pronominals*, and *full (referential) DPs* depending on whether these items can (or must) be bound in a syntactic domain and where the binding element (*antecedent*) can (or must) be located in the syntactic structure (Chomsky 1981). This chapter provides an overview of the syntactic properties of anaphoric expressions found in languages of the Caucasus. Pronominals are discussed only in passing insofar as they are related to anaphors. Since it is impossible to cover all the details of cross-linguistic variation in this survey, we only aim to address the basics of binding and indexicality from a comparative perspective without providing full details on particular languages. The discussion is based on published sources, such as grammatical descriptions and articles on the phenomena in question, as well as on our own field notes, especially concerning Nakh-Dagestanian languages.

In Section 1, we provide an overview of pronoun inventories. Section 2 discusses restrictions on locality domains observed for anaphors. Section 3 considers the range of possible antecedents in those locality domains. Section 4 presents exempt anaphoric and logophoric uses of reflexives. Section 5 introduces non-reflexive functions of reflexive pronouns. Section 6 discusses the use of personal pronouns and reflexives in embedded attitude reports.

1. Pronouns

We distinguish the following types of overt pronouns: (i) first- and second-person pronouns, (ii) third person pronominals which are either pronouns proper or demonstratives, (iii) reflexive pronouns, (iv) reciprocal pronouns.

1.1 Nakh-Dagestanian

1.1.1 Pronominal inventory

Nakh-Dagestanian languages have fairly uniform pronominal inventories. All languages of the family have first- and second-person pronouns, but most lack dedicated third-person pronouns, using instead demonstrative pronouns (Chapter 3). Avar and Tabasaran are more of an exception, both having a dedicated third-person pronoun, historically derived from demonstrative pronouns. In other Nakh-Dagestanian languages one of the demonstrative pronouns typically takes over the function of the third-person pronominal. For example, in Agul, the demonstrative pronoun *ge* ‘that lower than the speaker’ is the default third person pronominal without an implication that its referent is located lower on the vertical axis than the deictic center, whereas other demonstratives are strongly associated with their deictic meanings, even when used anaphorically (Ganenkov et al. 2009). Virtually all Nakh-Dagestanian languages have a dedicated reflexive pronoun. Three types of reflexive anaphors are distinguished across Nakh-Dagestanian: bare/simple reflexives, emphatic reflexives, and complex reflexives.

Simple reflexive pronouns represent the bare reflexive stem inflected at least for case, but often number and gender also. Emphatic reflexives consist of the bare reflexive stem and an emphatic/focus clitic. The third type of reflexive pronouns—complex reflexives—consist of two occurrences of the reflexive pronoun, either simple or emphatic.

Khwarshi and Tsez (closely related) lack dedicated reflexive stems (Khalilova 2009; Polinsky 2015b). Instead, they form reflexive pronouns with a demonstrative pronoun plus the

focus clitic (historically this demonstrative pronoun goes back to the common Tsezic reflexive stem). Table 1 shows a selection of reflexive pronouns in Nakh-Dagestanian.

Table 1. Reflexive Pronouns in Nakh-Dagestanian Languages

	Simple	Emphatic	Complex (ERG-ABS)	Source
Tabasaran	<i>čav</i>	—	<i>čav čav</i>	the authors' fieldnotes
Tsakhur	<i>wuž</i>	—	<i>wuže: wuž</i>	Toldova 1999
Udi	<i>ič</i>	—	<i>iču ič</i>	the authors' fieldnotes
Aqusha	<i>sa-j</i>	—	<i>suneni sa-j</i>	the authors' fieldnotes
Lak	<i>cu</i>	<i>cuwəa</i>	<i>cala cuwəa</i>	Zhirkov 1955
Avar	<i>ži-w</i>	<i>ži-w=go</i>	<i>žinc:a=go ži-w=go</i>	Testelefs & Toldova 1998
Hinuq	<i>zo</i>	<i>zo=tow</i>	<i>zoni-zo</i>	Forker 2013a
Khwarshi	—	<i>žu=č</i>	<i>žužu=č</i>	Khalilova 2009
Bagvalal	<i>e-w</i>	<i>e-w=da</i>	<i>in̄kir=da e-w=da</i>	Lyutikova 2001
Akhvakh	<i>žiwə</i>	<i>žiwə=da</i>	<i>in̄s:we=da žiwə=da</i>	Creissels 2016
Ingush	<i>shie</i>	—	—	Nichols 2011

The clitic used to build emphatic reflexives is often a focus clitic indicating choice out of a closed set of alternatives; see Edmondson and Plank (1978), König (2001), König and Siemund (2000) on the cross-linguistic tendency to associate reflexives with emphasis, and Lyutikova (2000) on the relation between emphasis and reflexives in Tsakhur. The focus function of the enclitic *-go* in Avar is illustrated in example (1); cf. the same enclitic in the Avar emphatic reflexive in Table 1.

- (1) Avar
he-b di-c:a=go la-za-b-ila.
 DEM-N.SG 1SG-ERG=EMPH know-CAUS-N.SG-FUT
 'I will let (them) know that myself.'

In the languages that have an emphatic reflexive, the complex reflexive is usually built on it, as in Avar, whereas the bare stem is used to form the complex reflexive in languages that have only simple, but not emphatic reflexives (see Tabasaran in Table 1).

Reciprocal pronouns are almost always complex. In some languages, such as Avar, the reciprocal pronoun is a single morphological unit with a reduplicated stem (most often the numeral 'one'). In other languages, such as Lezgian, the reciprocal pronoun is syntactically complex, consisting of two units (again, most often two occurrences of the numeral 'one' or a combination of the numeral 'one' with 'another'). Finally, some languages, such as Chirag, have both simple and complex reciprocal pronouns. Udi (Lezgian) and Nakh languages stand apart from the rest of Nakh-Dagestanian in having non-reduplicative reciprocal pronouns. Table 2 shows variations of Nakh-Dagestanian reciprocal pronouns.

Table 2. Reciprocal Pronouns in Nakh-Dagestanian Languages

	Simple	Complex (ERG-ABS)	Source
Tabasaran	<i>sarsar</i>	—	the authors' fieldnotes
Avar	<i>coca-</i>	—	Alekseev et al. 2014
Udi	<i>sun-</i>	—	the authors' fieldnotes
Ingush	<i>sheila</i>	—	Nichols 2011
Lezgian	—	<i>sada sad</i>	Haspelmath 1993
Aqusha	—	<i>calini ca</i>	the authors' fieldnotes

Hinuq	—	<i>sedi hes</i>	Forker 2013a
Lak	—	<i>cannal ca</i> (<‘one’)	Kazenin 2013b
		<i>kunnal kuw</i> (<‘other’)	
Chirag	<i>sur-sur-</i>	<i>cale ca</i>	the authors’ fieldnotes

The complex reflexive pronoun in the plural can often also serve as a reciprocal pronoun, as in (2).

(2) Northern Tabasaran

č̣-jar-i *č̣vi* *č̣vi-s* *kümek* *ap’-nu*.
brother-PL-OBL.ERG self:PL.ERG self:PL-DAT help.ABS do-AOR
‘The brothers helped each other.’

Note, however, that this is not the case in all Nakh-Dagestanian languages. Some of them appear to lack a reciprocal interpretation of the plural reflexive, as in Chirag below.

(3) Chirag Dargwa

gal-a-d *č̣u-d* *č̣u-la* *dik’-l-ak:u*.
boy-PL-ERG self:PL-ERG self:PL-GEN care-PRS-NEG
i. ^{OK} ‘The boys do not take care of themselves.’
ii. * ‘The boys do not take care of each other.’

Finally, all Nakh-Dagestanian languages also have a variety of silent categories. We identify a discourse anaphoric pronoun (*pro*), obligatorily controlled PRO in non-finite or, more rarely, finite control, and a null element occurring inside relative clauses and in raising constructions. The examples in (4) give a general idea of these elements.

(4) Northern Tabasaran

- a. *pro_i* *še?* *b-is-nu*.
pro.ERG bear.ABS N.SG-catch-AOR
‘He_i / she_i / it_i / they_i caught a bear.’
- b. *rasul-di-x-an_i* [*PRO_i* *guẓ̌u-s*] *ga-v-x-un-dar*.
Rasul-OBL-AD-ELAT PRO.ABS (H.SG)stand-INF PFV-N.SG-manage-AOR-NEG
‘Rasul could not stand up.’
- c. [_____i *šid* *g-a(v)χ-i*] *riš_i* *je(r)g-nu*.
ERG water.ABS PFV-⟨N.SG⟩bring-PFV.PART girl.ABS ⟨H.SG⟩tire-AOR
‘The girl who brought the water got tired.’

1.1.2 Systems of Reflexive Marking

Depending on the exact inventory of the reflexive pronouns, the majority of Nakh-Dagestanian languages have either a two- or three-way system of reflexive encoding. As Table 1 shows, Lezgian and Dargwa languages (represented by Tabasaran, Tsakhur, Udi, and Aqusha) have two-dimensional systems, while languages of the Avar-Andic and Tsezic branches (exemplified by Avar, Bagvalal, Akhvakh, and Hinuq), as well as Lak, feature three-dimensional systems of reflexive marking. Ingush and possibly other Nakh languages apparently have only a simple long-distance reflexive, thus falling outside of the most common Nakh-Dagestanian patterns.

Tabasaran exemplifies the two-dimensional reflexive system. The simple reflexive *čav*, inflected for number and case, is most typically used as a long-distance anaphor, while the complex reflexive *čav čav* functions as a local anaphor. (5a) shows a baseline example of the

sentence with the transitive complex predicate *kümek ap'us* 'help' and two arguments: the ergative subject and the dative recipient. In (5b), the simple reflexive in the recipient position of the embedded clause is bound long-distance by the matrix subject. In (5c), the complex reflexive illustrates a local reflexive relationship between two arguments of the same verb.

(5) Northern Tabasaran

- a. *ma'ha'mad-ri rasul.di-s kümek ap'-nu.*
 Mahamad-OBL.ERG Rasul-DAT help.ABS do-AOR
 'Mahamad helped Rasul.'
- b. *ma'ha'mad-ri-s_i [gaga-q'ar-i ča-s_i kümek
 Mahamad-OBL-DAT father-ASSOC.PL-OBL.ERG self-DAT help.ABS
 ip'-ru-v] a'ka'.*
 do-PTCP.FUT-N.SG know.PRS
 'Mahamad_i knows that the parents will help him_i.'
- c. *ma'hama'd-ri_i čav ca-s_i kümek ap'-nu.*
 Mahamad-OBL.ERG self.ERG self-DAT help.ABS do-AOR
 'Mahamad_i helped himself_i.'

Avar in (6) represents the three-dimensional pattern: apart from the simple reflexive *ži-w* in (6a) and the complex reflexive *žinc:a-go ži-w-go* in (6c), Avar also features the emphatic reflexive, which consists of the reflexive stem accompanied by the focus clitic *-go*, as in (6b).

(6) Avar

- a. *šali-c:a_i ab-una wac:a-s_j žind-ije_{i/*j} mina bos-an=ilan.*
 Ali-ERG say-AOR brother-ERG self-DAT house.ABS buy-AOR=QUOT
 'Ali_i said that his brother_j would buy him_{i/*j} a house.'
- b. *šali-c:a_i ži-w-go_i luq'-ana.*
 Ali-ERG self-M.SG.ABS=EMPH wound-AOR
 'Ali_i wounded himself_i.'
- c. *šali-c:a_i žin-c:a-go ži-w-go_i luq'-ana.*
 Ali-ERG self-ERG=EMPH self-M.SG.ABS=EMPH wound-AOR
 'Ali_i wounded himself_i.' (Testelefs and Toldova 1998: 45, 48)

1.1.3 Case Marking and Constituent Order in Complex Reflexives and Reciprocals

In most Nakh-Dagestanian languages, each of the two components of the complex reflexive bears its own case marking appropriate for the two syntactic positions in the reflexive relationship. The examples in (7) illustrate.

(7) Lezgian

- a. *fat'imat-a_i wič-i wič_i sekin-ar-na.*
 Fatima-OBL.ERG self-OBL.ERG self.ABS calm-TR-AOR
 'Fatima_i calmed herself_i.'
- b. *bednazar-a_i wič-i wič-i-z_i sual χ-ga-na.*
 Bednazar-OBL.ERG self-OBL.ERG self-OBL-DAT question.ABS RE-give-AOR
 'Bednazar_i asked himself_i again.'
- c. *a-m_i wič wič-i-q_i aka-nwa-č-ir.*
 DEM-ABS self.ABS self-OBL-POST believe-PERF-NEG-PST
 'He_i did not believe himself_i.'

Example (7)a) shows a transitive sentence with the ergative subject and absolutive direct object in the reflexive relationship; (7)b) is a transitive sentence with the ergative subject and dative object; (7)c) shows the verb *axun* ‘believe’ subcategorizing for the absolutive subject and the locative (post-essive) oblique argument. In each of these examples, the two components of the complex reflexive bear different case marking as appropriate to the two syntactic positions in the reflexive relationship: the first part is always in the case of the subject antecedent (antecedent), whereas the second component bears the case of the reflexivized (bound) argument.

The linear word order of the two components of the complex reflexive is strict, such that they cannot change their position relative to each other; neither can they be separated by any intervening material. As shown above, Lezgian always requires the first component to bear the morphological case of the subject. The order of morphological cases within the complex reflexives thus reflects structural prominence: the case of the c-commanding argument is on the first component, the case of the c-commanded argument is on the second component. Other languages, such as Aqusha Dargwa, may follow the same pattern in the reflexive constructions that do not involve an absolutive argument. As shown in (8)a), the reflexive relationship is established between the ergative subject and the dative indirect object, and the linear order of case marking reflects their relative structural prominence. However, in reflexive constructions with an absolutive argument, the absolutive case is always on the second part of the complex reflexive, irrespective of whether it is the subject or direct object: in (8)b), the ergative subject binds the absolutive direct object, whereas in (8)c), the absolutive subject binds the dative oblique argument. In both examples, the second part of the complex reflexive bears absolutive case.

(8) Aqusha Dargwa

- a. *rasul-li_i sune-ni sune-s_i qul-ri as-ib.*
 Rasul-OBL.ERG self-ERG self-DAT house-PL.ABS buy:PFV-AOR
 ‘Rasul_i bought himself_i a house.’
- b. *il-i-ni_i sune-ni sa-j_i parkat kajr-ul-ri.*
 DEM-OBL-ERG self-ERG self-M.SG.ABS calm set:IPFV-CVB-PST
 ‘He_i was calming himself_i down.’
- c. *rasul_i sune-či sa-j_i dukar-w-irh-uli sa-j.*
 Rasul.ABS self-SUPER.LAT self-M.SG.ABS laugh-M.SG-LV:IPFV-CVB AUX-M.SG
 ‘Rasul_i is laughing at himself_i.’

Tsez and Khwarshi case-mark only one component of the complex reflexive, while the other is unchanging, as in (9) where the second component has the case marking appropriate to the lower (bound) argument, while the first component is always in the same form *nel-ä*.

(9) Tsez

- a. *eni-y-ä_i nel-ä ža_i dudu-y-ir-xo.*
 mother-OBL-ERG DEM.NI-ERG DEM.ABS berate-CAUS-PRS
 ‘Mother_i is berating/scolding herself_i.’
- b. *madina_i nel-ä nela-λ'o-r_i y-ezu-s.*
 Madina.ABS DEM.NI-ERG DEM.NI-SUPER-LAT II-look-PST.WIT
 ‘Madina_i looked at herself_i.’ (Polinsky 2015b)

In a similar way, reciprocal pronouns can have either single or double case marking, depending on their structure. In languages like Avar where the reciprocal is one morphological word, the required case marking is attached to the whole word, as in (10).

(10) Avar

[*saxrat=gi* *abakar=gi*]_i *coca-q_i r-alah-ana*.
Sakhrat.ABS=ADD Abakar.ABS=ADD REC-AD PL-look-PST
‘[Sakhrat and Abakar]_i looked at each other_i.’ (Yamada 2013)

Here, the reciprocal relationship is between the absolutive subject and the locative indirect object of the intransitive verb *balahize* ‘look’. The reciprocal pronoun is thus in the locative case as required for the indirect object with this verb.

In other Nakh-Dagestanian languages, one component of the complex reciprocal matches the case of the antecedent, and the other appears in the case called for by the function of the bound element in a given clause. Consider the following examples from Lezgian, whose reciprocal pronoun consists of two occurrences of the numeral *sad* ‘one’. In (11)a), the reciprocal relationship is established between the absolutive subject and the dative indirect object of the intransitive verb *kiligun* ‘look’. Case marking on the first component of the reciprocal is absolutive, reflecting the case of the subject, and case marking on the second component of the reciprocal is dative, corresponding to the case of the indirect object. In (11)b), the subject is ergative and the bound constituent is in a spatial form. Accordingly, the first component of the reciprocal is ergative, reflecting the case of the subject; the second component is in the ad-elative form, corresponding to the case of the source (the person asked) argument.

(11) Lezgian

- a. [*šahgerej=ni* *bednazar*]_i *sad* *sad-a-z_i* *kilig-na*.
Shahgerey.ABS=ADD Bednazar.ABS one.ABS one-OBL-DAT look-AOR
‘[Shahgerey and Bednazar]_i looked at each other_i.’
b. *gada-jr-i_i* *sad-a* *sad-a-w-aj_i* *χabar* *q’u-na*.
boy-PL-OBL.ERG one-OBL.ERG one-OBL-AD-ELAT news.ABS take-AOR
‘The boys_i asked one another_i.’ (Lezgian Corpus)

Reciprocal pronouns in Ingush, unlike in closely related Chechen and the rest of Nakh-Dagestanian, do not inflect for case, as shown in (12).

(12) Ingush

caar_i *sheila_i* *soughatazh dannad*.
3PL.ERG REC gift.PL D.give.nWIT.D
‘They give each other gifts.’ (Nichols 2011: 655)

1.1.4 Person and Gender Features in Reflexive Pronouns

In reflexives with first and second persons in Nakh-Dagestanian, the appropriate personal pronouns have to appear in the antecedent position and in the bound position:

(13) Northern Tabasaran

ivu *ivu-s* *kümek* *ap’-nu-dar=va*.
2SG.ERG 2SG-DAT help.ABS do-AOR-NEG=2SG
‘You did not help yourself.’

Languages where the reflexive stem combines with an emphatic clitic in third-person contexts also place such an emphatic clitic on the bound personal pronoun in first/second-person reflexive contexts, as illustrated in (14).

- (14) Avar
di-c:a di-r=(go) was:-as-da tunk-ana.*
 1SG-ERG 1SG -GEN=EMPH son-OBL-SUPER hit-AOR
 ‘I hit my son.’ (Testelefs and Toldova 1998: 45)

Lezgian and Agul have a dedicated reflexive pronoun for first and second person which is used only with singular pronouns (Haspelmath 1993: 185 on Lezgian).

- (15) Lezgian
 a. *wun_i sadra žuw-a-z_i kilig.*
 2SG.ABS first self.1/2-OBL-DAT look.IMP
 ‘Look first at yourself.’
 b. **kūn_i sadra žuw-a-z_i kilig.*
 2PL.ABS first self.1/2-OBL-DAT look.IMP
 Intended: ‘Look first at yourselves.’

The existence of a dedicated first/second person reflexive does not exclude personal pronouns from reflexive contexts, as shown in (16).

- (16) Lezgian
wun-a wun req’i-mir.
 2SG-ERG 2SG.ABS kill-PROH
 ‘Don’t kill yourself.’ (Haspelmath 1993: 185)

Person distinctions illustrated above for simple reflexives are also observed with complex reflexives. First- and second-person antecedents cannot bind a third-person complex reflexive and instead require a first/second-person singular reflexive (or a personal pronoun) in the bound position:

- (17) Lezgian
 a. **zun_i wič wič-i-q_i aβa-nwa-č-ir.*
 1SG.ABS self.ABS self-OBL-POST believe-RES-NEG-PST
 Intended: ‘I did not believe myself.’
 b. *zun_i žuw žuw-a-q_i aβa-nwa-č-ir.*
 1SG.ABS self.1/2.ABS self.1/2-OBL-POST believe-RES-NEG-PST
 ‘I did not believe myself.’

Reflexive pronouns in many Nakh-Dagestanian languages employ irregular or suppletive stems in the plural, thus reflecting the number, as shown for Tabasaran.

- (18) Northern Tabasaran
 a. *rasul-di čav dumu ap’-nu.*
 Rasul-OBL.ERG self.ERG 3SG.ABS do-AOR
 ‘Rasul did it himself.’
 b. *bic’i-dar-i čvi dumu ap’-nu.*

small-PL-OBL.ERG self:PL.ERG 3SG.ABS do-AOR
‘The children did it themselves.’

Reflexive stems often distinguish genders in Nakh-Dagestanian. In some languages, the difference is only visible in a fragment of case paradigm. In Aqusha, for example, the difference is seen only in the absolutive case; in other cases, including the ergative, the reflexive stem shows no gender distinctions. Table 3 shows a partial paradigm of the reflexive stem in Aqusha, and (19) shows examples with the complex reflexive. As is common with complex reflexives, one component bears the case of the antecedent (ergative), and the other shows the case of the bound position (absolutive). The ergative component remains invariant, whereas the absolutive component reflects the gender of the antecedent.

Table 3. Partial Paradigm of the Reflexive *sa<CL>i* in Aqusha

	M.SG	F.SG	N.SG	M/F.PL	N.PL
ABS	<i>sa-j</i>	<i>saɾi</i>	<i>saɓi</i>	<i>saɓi</i>	<i>saɾi</i>
OBL	<i>sune-</i>			<i>ču-</i>	

(19) Aqusha Dargwa

- a. *rasul-li_i* *sune-ni* *sa-j_i* *aħera* *w-ir-uli* *aħen*.
Rasul-OBL.ERG self-ERG self-M.SG.ABS care M.SG-do:IPFV-CVB AUX.NEG
‘Rasul_i does not take care of himself_i.’
- b. *madina-ni_i* *sune-ni* *sa-r_i* *aħera* *r-ir-uli* *aħen*.
Madina-ERG self-ERG self-F.SG.ABS care F.SG-do:IPFV-CVB AUX.NEG
‘Madina_i does not take care of herself_i.’

In other Nakh-Dagestanian languages, gender distinctions may be seen across the whole case paradigm, as shown in Table 4 for Tsakhur, where irregular alternations and suppletion are employed to convey gender and number distinctions on the reflexive stem.

Table 4. Partial Paradigm of the Reflexive *wuž* in Tsakhur (Sosenskaja 1999: 132)

	I.SG	II.SG	III.SG	IV.SG	I/II.PL	III/IV.PL
ABS	<i>wuž</i>	<i>již</i>	<i>wuž</i>	<i>již</i>	<i>žo</i>	<i>již-bi</i>
ERG	<i>wuž-e:</i>	<i>již-e:</i>	<i>či-s:e:</i>		<i>žo</i>	<i>či-s:e:</i>
OBL	<i>žu-</i>	<i>že-</i>	<i>či-</i>		<i>žo-</i>	<i>či-</i>

1.2 Kartvelian

Like Nakh-Dagestanian, Kartvelian languages have first- and second-person pronouns and employ demonstratives to index third person, with the distal demonstrative ‘that’ functioning as the default pronominal. In Georgian, the third person pronominal *is*, while also historically related to the distant demonstrative *igi*, is probably better considered separate from the latter. Kartvelian languages also have one or two reflexive pronouns, several variants of the reciprocal pronoun, and null pronouns (Harris 1981; Amiridze 2006, and Chapter 11 of this volume).

Reciprocal pronouns in Kartvelian are mostly bipartite, based on the numeral ‘one’, see Table 5.

Table 5. Reciprocal Pronouns in Kartvelian

	Reciprocal	Source
Mingrelian	<i>arti-ani</i> (< <i>arti</i> ‘one’ + <i>ani</i> ‘kind of, having a property’)	Harris 1991b

Georgian	<i>arti-mažira-</i> (< <i>arti</i> ‘one’ + <i>mažir-</i> ‘second’) <i>ertman-et-</i> (<i>ert-man</i> ‘one-ERG’ + <i>et-</i> ‘one’) <i>erti-meore-</i> (<i>ert-i</i> ‘one-NOM’ + <i>meore-</i> ‘another’)	Amiridze 2006
Laz	<i>artikati</i> (< <i>arti</i> ‘one’ + <i>kati</i> ‘???’)	Lacroix 2009
Svan	<i>uščwar</i> (< ???)	Schmidt 1991

Kartvelian reciprocals inflect as a single word even though they may contain historical case suffixes inside them, as is the case with the ergative suffix in the Georgian pronoun *ertmanet-*.

(20) Georgian

čven_i { *ertmanet-s_i* / *ertimeore-s_i* } *šaršan* *še-v-xvd-i-t.*
 1PL.NOM REC-DAT REC-DAT last.year PV-1A.NOM.SG-meet-AOR.IND-
 PL.NOM
 ‘We_i met each other_i last year.’ (Amiridze 2006: 113)

Öztürk and Pöchtrager (2011) do not list reciprocal pronouns in Pazar Laz but identify a verbal reciprocal construction formed by means of the applicative marker *-i-* (see below) and the associative preverb *ok’o-* ‘together’, as shown in (21).

(21) Pazar Laz

šk’u *ok’o-v-i-dzir-i-t.*
 1PL.NOM REC-A.1-REFL-see-PST.A.1-PL
 ‘We saw each other.’ (Öztürk and Pöchtrager 2011: 60)

Unlike Nakh-Dagestanian, where reflexive stems have no obvious lexical sources, in the Kartvelian languages the reflexive is based on the noun ‘head’, used with a possessive modifier (see Chapter 11). Table 6 shows possessive modifiers used with the element *tav-* ‘head’ in Georgian reflexives; other Kartvelian languages employ a similar set of possessives.

Table 6. Georgian Possessive Modifiers within the Complex Reflexive (Amiridze 2006: 67)

<i>čem-</i>	1POSS.SG	‘my’
<i>šen-</i>	2POSS.SG	‘your’
<i>tavis-</i>	3REFL.POSS.SG	‘his/her/its’
<i>čven-</i>	1POSS.PL	‘our’
<i>tkven-</i>	2POSS.PL	‘your’
<i>taviant-</i>	3REFL.POSS.PL	‘selves’

The possessive modifier reflects the person and number features of the antecedent: a personal possessive pronoun with first- and second-person antecedents, as in (22)a), or the possessive form of the same stem *tavi* in third person, as in (22)b).

(22) Georgian

a. *me_i* *čem-i* *tav-i_i* *v-a-k-e.*
 1SG.ERG 1POSS.SG-NOM self-NOM 1A.ERG.SG-VERS-praise-AOR.IND
 ‘I praised myself.’
 b. *k’ac-ma_i* *Ø-a-k-o* *tavis-i*
 man-ERG 3B.NOM.SG-VERS-praise-3A.ERG.SG.AOR.IND 3REFL.POSS.SG-NOM
tav-i_i.

self-NOM
 ‘The man_i praised himself_i.’ (Amiridze 2006: 97, 55)

The possessive modifier can be omitted under certain circumstances, in which case the reflexive *tav-* does not show person or number distinctions, as in (23).¹

(23) Georgian

- a. *me_i tav-s_i bakar-i ay-v-u-çer-e.*
 1SG.ERG self-DAT Bakar-NOM PV-1A.ERG.SG-VERS-describe-AOR.IND
 ‘I described Bakar to myself.’
- b. *šen_i tav-s_i bakar-i da-Ø-u-xasiat-e.*
 2SG.ERG self-DAT Bakar-NOM PV-2A.ERG.SG-VERS-characterize-AOR.IND
 ‘You characterize Bakar to yourself.’ (Amiridze 2006: 95)

Nominal reflexive expressions in Svan, Laz, and Megrelian are also based on the noun ‘head’ with the possessive modifier reflecting the features of the antecedent (Boeder 2014 on Svan; Holisky 1991, Lacroix 2009, Öztürk & Pöchtrager 2011 on Laz). Megrelian *mu* and Laz *muk* have the reflexive interpretation when they appear as possessive modifiers or objects of postpositions, as in (24).²

(24) Arhavi Laz

- biç’-epe-k_i bozo-pe mutepe-s_i k’ala mend-o-on-es*
 boy-PL-ERG girl-PL 3PL-GEN with PV-VERS-bring-AOR.3PL
 ‘The boys_i brought the girls with them_i.’ (Lacroix 2009: 158)

Unlike Nakh-Dagestanian, all Kartvelian languages also employ verbal morphology to express reflexivity, as shown below. Example (25)a) presents a regular transitive sentence; in (25)b), the marker *-i-* introduces a bound reflexive indirect object. This marker belongs to the set of applicative markers (also known as *versionizers*) and shows complex patterns of interaction with other applicatives and nominal reflexives (see Harris 1981, Holisky 1981, Amiridze 2006, Nash 2016 on Georgian; Lacroix 2009, 2012 on Laz).

(25) Georgian

- a. *me mo-v-č’er-i namcxvar-i.*
 1SG.ERG PV-1A.ERG.SG-cut-AOR.IND cake-NOM
 ‘I cut a cake.’
- b. *me mo-v-i-č’er-i namcxvar-i.*
 1SG.ERG PV-1A.ERG.SG-VERS.REFL-cut-AOR.IND cake-NOM
 ‘I cut myself a cake.’ (Amiridze 2006: 159)

¹ While the possessive modifier can sometimes be simply omitted without any change in syntax or interpretation, Amiridze (2006) argues that the variants with and without the possessive modifier are two different reflexive pronouns. The omission of possessive modifiers in Georgian reflexives requires further study.

² These pronouns seem to be rarely used in other positions, but when they are, they point to “the central protagonist in a context where there are several possible [third person—DG-NB] referents” (Lacroix 2009: 161), which suggests that they function as third-person pronominals. Boeder (2014) discusses the Svan third-person pronoun *ža* with similar properties.

Simple reflexive pronouns with transitive verbs obligatorily require the applicative marker *-i-* on the verb, whereas the complex reflexive only optionally co-occurs with the applicative, yielding, in that case, the focused (intensified) reading (Amiridze 2006: 99).

In Georgian, *-i-* cannot reflexivize the direct object on its own (Amiridze 2006: 157-158). Instead, it must co-occur with the simple nominal reflexive; with the complex nominal reflexive, it is optional. In Pazar Laz, however, as Öztürk and Pöchtrager (2011) show, the cognate applicative reflexivizes direct objects and is incompatible with the nominal reflexive expression, as shown below:

(26) Pazar Laz

- a. *ti šk'imi yali-s b-dzir-em-Ø.*
 head.NOM my mirror-DAT A.1-see-TS-PRS.1SG
 'I see myself in the mirror'
- b. *ma (*ti šk'imi) yali-s v-i-dzir-er-Ø.*
 1SG.NOM head my mirror-DAT A.1-VERS.REFL-see-TS-PRS.1SG
 'I see myself in the mirror' (lit. 'I appear in the mirror.') (Öztürk and Pöchtrager 2011: 59)

Example (26)a) shows the common Kartvelian pattern with the reflexive based on the noun 'head'; no applicative marker *-i-* appears on the verb. In contrast, example (26)b) shows the verbal reflexive, which cannot co-occur with the nominal reflexive.

1.3 Northwest Caucasian

The form and structure of reflexive and reciprocal constructions in Northwest Caucasian languages vary across the family. In the Circassian branch, reflexive and reciprocal meanings are mainly expressed by the verbal prefix *zə-* and the verbal prefix *zere-*, respectively; no reflexive anaphors are attested (Kazenin 2007; Letuchiy 2007; Chapter 9 of this volume). The reflexive/reciprocal prefixes appear in the verbal agreement slot, where the bound (reflexified/reciprocized) argument is cross-referenced. In (27)b), the reciprocal prefix indexes the absolutive subject.

(27) Kabardian

- a. *fə l'əž-əm fə-Ø-psa:l-a:-s'.*
 2PL.ABS old.man-OBL 2PL.ABS-3SG.OBL-speak-PST-ASSERT
 'You spoke to the old man.'
- b. *fə-ra l'əž-əm-ra fə-za-ps:al-a:-s'.*
 2PL.ABS-and old.man-OBL-and 2PL.ABS-REC-speak-PST-ASSERT
 'You and the old man spoke to each other.' (Kazenin 2007: 743)

The verbal marking is the only way to mark reflexivity in Circassian. However, these languages do have the reciprocal pronoun *zə-m zə-r* based on the numeral 'one', which can be used on its own, without reciprocal marking on the verb, or co-occur with the latter, as shown in (28).

(28) Adyghe

- a. *te_i zə-m zə-r_i tə-zer-e-λeβ^wə-ž'ə.*
 1PL.ABS one-OBL one-ABS 1PL.ABS-REC.ERG-DYN-see-REPET
 'We_i see each other_i.'
- b. *te_i zə-m zə-r_i t-e-wəʔa-ž'ə-x*

1PL.ERG one-OBL one-ABS 1PL.ERG-DYN-wound-REPET-PL
 ‘We_i wound each other_i.’ (Letuchiy 2007: 802-803)

In (28)a), the reciprocal pronoun co-occurs with the reciprocal prefix on the verb, whereas in (28)b), the null agreement prefix corresponding to the third person reciprocal pronoun in the direct object position appears without reciprocal marking. The ‘one’-based reciprocal pronoun in Northwest Caucasian languages is not specified for person, number, or gender.

In Abkhaz, reflexivity and reciprocity are also marked by verbal prefixes. Reciprocal pronouns can also be used along with the reciprocal prefix, but not on their own. Abkhaz nominal reciprocals include the reduplicated numeral ‘one’ and reduplicated personal pronouns, illustrated below:

- (29) Abkhaz
 { à-j ʔə-y~à-j ʔə-y / darà~darà } Ø-eybà-r-ḥ ʔe-yt’.
 DEF-one-ADD~DEF-one-ADD 3PL~3PL 3SG.ABS-REC.IO-3PL.ERG-say-FINITE
 ‘They said it to each other.’ (Hewitt 1979a: 89)

Abkhaz also has a nominal reflexive like Georgian: the noun ‘head’, which bears a possessive prefix, reflecting the agreement features of the antecedent, and which functions as reflexivizer; no verbal reflexive prefix appears in this case, (30).

- (30) Abkhaz
 wə-xà Ø-wə-bè-yt’.
 2SG.POSS-head 3SG.ABS-2SG.ERG-see-FINITE
 ‘You saw yourself.’ (Hewitt 1979a: 77)

2. Locality Domains

Anaphoric expressions can differ with respect to their locality domain, that is, the phrase within which they must be bound. Generalizing over the behavior of reflexives in Avar-Andic languages and in Tsakhur, Testelets and Toldova (1998) show that the binding of reflexives in their sample languages obeys a hierarchy of syntactic positions akin to those of Keenan and Comrie (1977), shown in (31).

- (31) Binding Hierarchy (Testelets and Toldova 1998)
 clause-mate transitive direct object > clause-mate ditransitive direct object >
 clause-mate oblique argument > clause-mate adjunct or sub-constituent of clause-
 mate argument > argument of a non-finite embedded clause > argument of a finite
 embedded clause

This hierarchy is constructed to make predictions about the distribution of reflexive pronouns in Nakh-Dagestanian languages. First, the hierarchy states that if a reflexive pronoun can be used in discontinuous positions A and B, then it can also be used in all the positions between A and B. Second, Testelets and Toldova (1998) relate the morphological complexity of reflexive pronouns to their locality domains; if reflexive X is morphologically more complex than reflexive Y, then the hierarchical positions where X is available cannot be to the right of the positions where Y is available. Testelets and Toldova (1998) illustrate this hierarchy using data from Avar, Tsakhur, and Godoberi.

- (32) Distribution of Reflexive Pronouns in Three Nakh-Dagestanian Languages (Testeleits and Toldova 1998: 53)³

DO_{TR} DO_{DTR} OBL ADJUNCT DP_{NON-FIN} DP_{FIN}

Avar

complex reflexive *žinc:ago žiwgo*

emphatic reflexive *žiwgo*

simple reflexive *ži-w*

Tsakhur

complex reflexive *wuže: wuž*

simple reflexive *wuž*

Godoberi

complex reflexive *inšuda žiwda*

emphatic reflexive *žiwda*

simple reflexive *ži-w*

Simple reflexive pronouns are thus long-distance anaphors in Nakh-Dagestanian languages; consider example (33), where any of the three subjects can antecede the reflexive in the most deeply embedded clause.

- (33) Northern Tabasaran

rasul_i [*fatima-ji-s_j* [*murad-li_k* *ča-s_{i/j/k}* *mašin*
 Rasul.ABS Fatima-OBL-DAT Murad-OBL.ERG self-DAT car.ABS
q:ara<v>q:-u-v] *aʕB-uʕ-v*] *kawurdi?* *aq-nu*.
 <N.SG>buy-PTCP.PFV-N.SG know-PTCP-N.SG to.understanding fall-AOR
 ‘Rasul_i realized that Fatima_j knew that Murad_k had bought himself_k / her_j / him_i a car.’

Two clause-mate long-distance anaphors can, in principle, be bound by different antecedents, as in (34), where the most deeply embedded clause contains two simple reflexives. Each of those reflexives can be bound by either of the two higher subjects, thus yielding four different interpretations.

- (34) Aqusha Dargwa

rasul-li_i *qumkart-ur-li-ri* [*madina-ni_j* *b-al-ni*
 Rasul-OBL.ERG forget:PFV-AOR-CVB-PST Madina-ERG N.SG-know:IPFV-NMLZ
 [*sune-la_{i/j}* *uzi-ni* *sune-s_{i/j}* *kumek* *b-ar-ni*]].
 self-GEN brother-ERG self-DAT help.ABS N.SG-do:PFV-NMLZ
 i. ‘Rasul_i forgot that Madina_j knew that her_j brother helped her_j.’
 ii. ‘Rasul_i forgot that Madina_j knew that her_j brother helped him_i.’

³ The dotted line shows less acceptable positions of a reflexive pronoun.

- iii. ‘Rasul_i forgot that Madina_j knew that his_i brother helped him_i.’
- iv. ‘Rasul_i forgot that Madina_j knew that his_i brother helped her_j.’

With regard to the distribution between the simple reflexive and the emphatic reflexive in tripartite reflexive paradigms, Testelefs and Toldova (1998) show that the emphatic reflexive is the basic long-distance anaphor universally available in cross-clausal anaphora. The scope of the simple reflexive pronoun is restricted to embedded finite clauses. Since embedded reports under verbs of speech and thought are the only type of finite embedded clauses in Nakh-Dagestanian, some authors assume (Kibrik 1996; Lyutikova 2001; Daniel 2015) that the bare reflexive in tripartite paradigms is actually a logophoric pronoun.

Complex reflexives are local anaphors that require a clausemate antecedent. Usually, they cannot be used in biclausal constructions, including non-finite structures, such as infinitival complements, as shown in (35).

(35) Northern Tabasaran

rasul-di-x-an { **ča-x-an* / ^{OK}*čav* } *ča-s* *kümek* *ap’u-s*
 Rasul-OBL-AD-ELAT self-AD-ELAT self.ERG self-DAT help.ABS do-INF
šul-dar.
 manage-PRS.NEG
 ‘Rasul cannot help himself.’

In this example, the first complex reflexive component can only be in the ergative case, as is required by the embedded transitive verb ‘help’, thus representing local binding by a null embedded subject. The ad-elative case that would be required by the matrix subject is ungrammatical on the first component of the complex reflexive.

Unlike in Nakh-Dagestanian languages, reflexives in Kartvelian are strictly local (Harris 1981; Amiridze 2006; Chapter 11). The two Georgian reflexives seem to be in free variation in clauses with ditransitive verbs, both lexical and derived (Amiridze 2006: 97). Intransitive clauses are incompatible with simple reflexives:

(36) Georgian

k’ac-i_i *Ø-e-laparak’-eb-od-a* **(tavis)* *tav-s_i*
 man-NOM 3B.DAT.SG-PV-talk-TS-IMPRF-3A.NOM.SG 3REFL.POSS.SG self-DAT
 ‘The man_i was talking to himself_i.’ (Amiridze 2006: 108)

By contrast, with transitive verbs “referring to physical destruction, acts of violence and activities which are very unlikely to be committed by a person towards himself/herself” (Amiridze 2006: 104-105), only the simple reflexive is grammatical:

(37) Georgian

- a. *k’ac-ma_i* *mo-Ø-i-k’l-a* **(tavis-i)*
 man-ERG PV-3B.NOM.SG-VERS.REFL-kill-3A.ERG.SG.AOR.IND 3REFL.POSS.SG-NOM
 tav-i_i
 self-NOM
 ‘The_i man killed himself_i.’
- b. **k’ac-ma_i* *mo-Ø-k’l-a* *(tavis-i)* *tav-i_i*
 man-ERG PV-3B.NOM.SG-kill-3A.ERG.SG.AOR.IND 3REFL.POSS.SG-NOM self-NOM
 ‘The man_i killed himself_i.’ (Amiridze 2006: 105)

Verbal reflexive marking in Northwest Caucasian languages is freely available in monoclausal structures, as in examples (27) through (29) above (see also Hewitt 1979a, Kazenin 2007, Letuchiy 2007). To the best of our knowledge, nothing has ever been reported on Northwest Caucasian constructions expressing the reflexive relationship between the matrix subject and an argument of a complement clause. Given two factors—(i) the matrix clause and the embedded clause usually constitute separate agreement domains (Kumakhov & Vamling 1998; Serdobolskaya & Motloxov 2009), and (ii) verbal reflexive marking is part of the agreement system (see 1.3 above)—we would expect that long-distance reflexivization must be unavailable in the majority of embedded clauses in Northwest Caucasian.

Reciprocal pronouns in all the three families appear to be strictly locally bound.

3. Antecedents

3.1 Nakh-Dagestanian Languages

3.1.1 Complex Reflexives

Complex reflexive pronouns in Nakh-Dagestanian usually have either the local subject or a clausemate non-subject argument as their antecedent, for example:

(38) Northern Tabasaran

- a. *rasul-di_i čav čav_i bijabur ap'-nu.*
 Rasul-OBL.ERG self.ERG self.ABS shame do-AOR
 'Rasul_i brought shame on himself_i.'
- b. *ma^hha^hmad-ri rasul-di-s_i ča-s čav_i ulup-nu.*
 Mahamad-OBL.ERG Rasul-OBL-DAT self-DAT self.ABS show-AOR
 'Mahamad showed Rasul_i to himself_i.'

In (38)a), the antecedent appears in the ergative subject position, whereas the complex reflexive shows ergative case marking on one component, corresponding to the case of the antecedent, and absolutive case marking on the other, as required in the reflexivized position. In (38)b), the dative argument functions as the antecedent; thus the first component of the complex reflexive is dative, and the second part is absolutive, required for the direct object.

3.1.2 Simple and Emphatic Reflexives

In local configurations, simple and emphatic reflexive pronouns in Nakh-Dagestanian can be co-indexed with the subject or a non-subject argument, as in (39) where the reflexive in the direct object position can be interpreted with either the ergative subject or the dative argument as its antecedent.⁴

(39) Northern Tabasaran

- rasul-di_i ma^hha^hmad-ri-s_j čav_{i/j} ulup-nu.*
 Rasul-OBL.ERG Mahamad-OBL-DAT self.ABS show-AOR
 'Rasul_i showed Mahamad_j himself_i / him_j.'

⁴ Effects of linear order need to be considered. Non-subject antecedents of reflexives in Tabasaran and other languages may only be available when the non-subject antecedent linearly precedes the reflexive.

As long-distance anaphors, simple and emphatic reflexives are usually more restricted in their interpretation. In (40), the long-distance reflexive can refer only to the matrix subject.

(40) Northern Tabasaran

*rasul-di_i ma^hha^hmad_j [čav_{i/*j} u^hʀχu-s] d-is-nu.*
 Rasul-OBL.ERG Mahamad.ABS self.ABS <H.SG>save-INF H.SG-catch-AOR
 ‘Rasul_i grabbed a hold of Mahamad_j to save himself_i / *him_j.’

3.1.3 Non-Canonical Antecedents in Reflexive Constructions: Coreference vs. Binding

Nakh-Dagestanian languages are known for having non-canonical reflexive constructions where the reflexive pronoun apparently appears in a position that is not c-commanded by the antecedent, described as early as in Kibrik (1979/2003), as shown in (41).

(41) Tindi

a. *wac:^wi_i ewa_i L^wawo.*
 brother.ERG self.M.SG.ABS beat.PST
 b. *wac:_i iš^wi_i L^wawo.*
 brother.ABS self.ERG beat.PST
 ‘Brother_i beat himself_i.’ (Kibrik 1979/2003: 629)

These examples illustrate two reportedly grammatical options in Tindi. (41)a) presents the standard configuration with the antecedent c-commanding the reflexive; (41)b) shows the reverse pattern: the reflexive is in the ergative subject position, whereas the antecedent is in the absolutive direct object position c-commanded by the subject (see 3.2 for a discussion of a similar pattern in Kartvelian). Examples like the latter, attested across Nakh-Dagestanian, led Kibrik (1997a, 1999, 2003) to the conclusion that structural asymmetries play no role in reflexive binding in Nakh-Dagestanian and that the distinction between subject and other clausal arguments is absent from Nakh-Dagestanian languages altogether (see also Forker 2014 for a similar analysis of Sanzhi Dargwa).

We suggest, however, that a less radical account of the non-canonical pattern should be explored first. Specifically, we contend that in examples like (41)b), syntactic binding of the reflexive by a full noun phrase is replaced by simple coreference, whereby the two arguments (the antecedent and the reflexive) acquire the same reference independently (Reinhart 1983; Büring 2005). As discussed in Section 4 below, Nakh-Dagestanian languages allow exempt anaphoric uses of long-distance reflexives, thus suggesting that the latter need not be syntactically bound and can refer to an antecedent outside their sentence. The distinction between binding and coreference has, so far, been neglected in discussions of Nakh-Dagestanian non-canonical reflexive constructions. In at least some languages, non-canonical configurations such as (41)b) appear only with a full antecedent preceding the reflexive, but are disallowed with the reverse word order or with quantified expressions or *wh*-pronouns used as the antecedent.

However, syntactic binding cannot account for all cases of non-canonical configurations in Nakh-Dagestanian. We know of at least one systematic exception observed in a number of Nakh-Dagestanian languages, where reverse binding is indeed a grammatical option. Sentences with the subject and the direct object in the reflexive relationship often allow the reverse pattern with the antecedent in the absolutive case as required in the direct object position, even in configurations where the nature of the antecedent is controlled for, as shown in (42).

- (42) Mehweb Dargwa
 {*hinija_i* / *čija_i*} *sune-jni=jal* *sa(w)i=jal_i* *haraq'e*
 who.ERG who.ABS self-ERG=EMPH self<M.SG>.ABS=EMPH forward
ih^w-es-a?
 throw:IPFV-FUT-Q
 'Who_i (what person) will deceive themselves_i?'

Further work is needed to account for the behavior of reflexives across Nakh-Dagestanian.

3.1.4 Demonstrative Pronouns

Demonstrative pronouns in Nakh-Dagestanian languages can never be bound locally or non-locally by a subject, but they can be bound by absolutive direct objects and various kinds of oblique arguments, as shown below:

- (43) Northern Tabasaran
rasul-di_i *murad_j* *duka-s*_{i/j/k}* *ulup-nu.*
 Rasul-OBL.ERG Murad.ABS 3SG-DAT show-AOR
 'Rasul_i showed Murad_j to him*_{i/j/k}.'

As in constructions with reflexive pronouns, the distinction between binding and coreference may turn out instrumental (see 3.1.3), though detailed studies of specific languages are still missing. For example, in Chirag Dargwa, demonstrative pronouns can refer back to regular noun phrases, but not to quantified antecedents:

- (44) Chirag Dargwa
 a. *učit'el-le* *rus:-ba-j_i* *it:a-la_i* *dnevník'-e* *a^č-č:-ib.*
 teacher-ERG girl-PL-DAT DIST.PL-GEN grade.book-PL.ABS NEG-give:PFV-AOR
 'The teacher did not give the girls_i their_{i/k} grade books back.'
 b. *učit'el-le* *ši-k'al_i* *it:a-la*_{i/k}* *dnevník'-e* *a^č-č:-ib.*
 teacher-ERG who.DAT-INDEF DIST.PL-GEN grade.book-PL.ABS NEG-give:PFV-AOR
 'The teacher did not gave anybody_i their*_{i/k} grade books back.'

In (44)a), the demonstrative has both a free interpretation and an interpretation as co-indexed with the dative recipient, 'girls'. In (44)b), however, the negative-polarity pronoun 'anybody' is the dative recipient, and the demonstrative therefore cannot be co-indexed with it.

3.2 Kartvelian

According to Amiridze (2006), Georgian anaphors generally obey c-command and cannot be used as logophors or pronominals in either the subject or a non-subject position (see Section 4 below). The complex reflexive or the reciprocal in any position can be bound by the subject, as shown earlier; the anaphor in the direct object position can be bound by the indirect object:

- (45) Georgian
me *bakar-s_i* *tavis-i* *tav-i_i*
 1SG.ERG Bakar-DAT 3REFL.POSS.SG-NOM self-NOM
aγ-v-u-c'er-e.
 PV-1A.ERG.SG-PV-describe-AOR.IND
 'I described Bakar_i to himself_i.' (Amiridze 2006: 57)

The reverse pattern is generally ungrammatical, as the subject cannot generally be bound by a non-subject argument, and the indirect object cannot be bound by the direct object:

(46) Georgian

- a. **k'ac-i_i* *Ø-a-k-o* *tavis-ma*
 man-NOM 3B.NOM.SG-VERS-praise-3A.ERG.SG.AOR.IND 3REFL.POSS.SG-ERG
tav-ma_i.
 self-ERG
 Intended: 'The man_i praised himself_i.'
- b. **me* *bakar-i_i* *tavis* *tav-s_i*
 1SG.ERG Bakar-NOM 3REFL.POSS.SG self-DAT
aγ-v-u-c'er-e.
 PV-1A.ERG.SG-VERS-describe-AOR.IND
 Intended: 'I described Bakar_i to himself_i.' (Amiridze 2006: 55, 57)

However, as Amiridze (2006) discusses extensively, both the complex (possessive) reflexive and the reciprocal can sometimes appear in the position of the subject of a transitive verb as if they were bound by the direct object. Amiridze (2005, 2006) takes care to show a syntactic binding rather than coreferential relationship between the subject anaphor and the direct object antecedent and shows that the reverse pattern is possible with quantificational antecedents. In (47), the interpretation of the complex reflexive depends on the interpretation of the quantificational expression *qvela* 'everybody'.

(47) Georgian

- cxovreba-ši* *ertxel* *mainc* *tavis-ma* *tav-ma_i* *qvela_i*
 life-IN once at.least 3REFL.POSS.SG-ERG self-ERG everybody.NOM
šeizleba *da-Ø-a-prtx-o-s*.
 it.is.possible PV-3B.NOM.SG-VERS-scare-SUBJ-3A.ERG.SG
 'At least once in life, everybody_i can get scared of himself/herself_i.' (Amiridze 2006: 224)

The pattern is thus reminiscent of the reverse binding pattern described in the previous section for Nakh-Dagestanian. The reverse pattern in Georgian, however, is different in two respects from Nakh-Dagestanian. First, as Amiridze (2006) shows, the reverse pattern is possible not only with the subject and direct object in a reflexive/reciprocal relationship, but also with oblique arguments in ditransitive and intransitive clauses. Second, the reverse construction is not completely synonymous to the regular c-commanding configuration and does not imply a full referential identity between the subject and the direct object. Amiridze (2006) identifies two specific readings of the reverse pattern in Georgian: the *aspect/property* reading and the *image/representation* reading.

On the aspect/property reading, the subject anaphor is understood as a property of the antecedent that functions as the non-agentive causer of the event:

(48) Georgian

- a. *tavis-ma* *tav-ma_i* *še-Ø-a-šin-a* *k'ac-i_i*.
 3REFL.POSS.SG-ERG self-ERG PV-3B.NOM.SG-PV-scare-3A.ERG.SG.AOR.IND man-NOM
 'The man_i got scared because of something related to himself_i.' (lit. 'Himself scared the man.')
- b. *tavis-ma* *tav-ma_i* *da-Ø-γup-a*
 3REFL.POSS.SG-ERG self-ERG PV-3B.NOM.SG-ruin-3A.ERG.SG.AOR.IND

prezident'-i_i.

president-NOM

‘His_i own *positive/negative personal properties, and/or his past
*achievements/failures, etc. ruined the president_i.’ (lit. ‘Himself ruined the president.’)
(Amiridze 2006: 211, 222)

Commenting on (48)b), Amiridze (2006: 222) points out that the verb ‘ruin’ is interpreted metaphorically where ‘the only available reading is to have no way out of the hard situation rather than to be destroyed physically.’

On the image/representation reading, subject anaphors in Georgian are interpreted as a proxy of the antecedent, such as, for example, a mirror image, images on TV, voice recordings, or a twin. Consider the pair of examples below.

(49) Georgian

- a. *gogo-m_i tavis tav-s_i ga-Ø-u-γim-a*
girl-ERG 3REFL.POSS.SG self-DAT PV-3B.DAT.SG-VERS-smile-3A.ERG.SG.AOR.IND
sarķe-š_i.
mirror-IN
‘The girl_i smiled to herself_i in the mirror.’
- b. *tavis-ma tav-ma_i ga-Ø-u-γim-a*
3REFL.POSS.SG-ERG self-ERG PV-3B.DAT.SG-VERS-smile-3A.ERG.SG.AOR.IND
gogo-s_i sark'-i-dan.
girl-DAT mirror-GEN-from
‘The reflection of the girl_i smiled to her_i from the mirror.’ (lit. ‘Herself smiled to the girl from the mirror.’) (Amiridze 2006: 231-232)

Sentence (49)a) is a regular reflexive construction with the antecedent in the subject position and the reflexive in the indirect object position. By contrast, in (49)b), the reflexive in the subject position must be interpreted as a proxy, the mirror image of the referent. Example (50) illustrates the Georgian complex anaphor in a ‘Madame Tussaud’ context. The subject argument, expressed by the complex reflexive, must be interpreted as a proxy, while the direct object, expressed by a full noun phrase, can only be understood as the actual referent.

(50) Georgian

- tavis-i tav-i da-Ø-e-c-a*
3REFL.POSS.SG-NOM self-NOM PV-3B.DAT.SG-VERS-fall-PV-3A.NOM.SG.AOR.IND
ringo-s_i.
Ringo-DAT
‘The statue of Ringo fell on the actual Ringo.’ (lit. ‘Himself_i fell on Ringo_i.’)
(Amiridze 2006: 235)

Erschler (2016b) reports examples of reverse binding from Svan, where the reflexive and the reciprocal can also appear in the subject position in a transitive clause:

(51) Upper Bal Svan

- a. *miča txwim-d adqeca gela.*
3SG.POSS self-ERG destroyed Gela.NOM
‘Gela destroyed himself.’
- b. *ušxwa:re txwim-d apxnegær anbægex.*

REC self-ERG friend.NOM.PL encouraged
 ‘The friends encouraged each other.’ (Erschler 2016b)

In both examples, the anaphor appears in the subject position c-commanding the full DP; yet, both are interpreted as co-indexed. Erschler (2016b) indicates that, unlike Georgian, his consultants do not see any semantic difference between sentences with regular binding and those with reverse binding.

3.3 Northwest Caucasian languages

In Northwest Caucasian reflexive constructions, the antecedent is always in the case/position of the structurally higher argument, and the lower argument is left unexpressed, due to the absence of nominal anaphors. Instead, a special reflexive prefix appears in the verbal agreement slot where the features of the lower argument would appear in a non-reflexive construction (Chapters 9 and 10; see also Section 1.3 above). For example, in (52), the ergative noun phrase ‘neighbor’ determines ergative agreement on the verb. No overt absolutive nominal appears in the sentence, and the absolutive agreement slot hosts the reflexive *z-*, which results in a reflexive interpretation.

- (52) Adyghe
s-jə-b^wənek^wə-m z-jə-wəč^ʷə-ž^ʷə-κ
 1SG.IO-POSS-neighbor-ERG REFL.ABS-3SG.ERG-kill-REPET-PST
 ‘My neighbor killed himself.’ (Letuchiy 2007: 781)

The case and position of the antecedent in reciprocals in Circassian depends on whether the construction contains the nominal reciprocal or the verbal reciprocal. When no reciprocal morphology appears on the verb, the antecedent appears in a c-commanding position, and the nominal reciprocal shows the morphological case of both the antecedent and the bound argument, as in (28)b) above. When the verbal reciprocal prefix occurs without the nominal reciprocal, the situation is different. When the subject and an oblique argument form a reciprocal relationship, the antecedent appears in the morphological case of the subject and is indexed in its respective verbal agreement slot. The prefixal position where the agreement features of the oblique argument would appear hosts the reciprocal prefix *ze-*, as in (53).

- (53) Adyghe
 a. *te tə-ze-š^ʷə-guk^wə-ž^ʷə-x.*
 1PL.ABS 1PL.ABS-REC.IO-LOC-rely-ITER-PL.ABS
 ‘We rely on each other.’
 b. *te fotografija-xe-r ze-te-kelek^wə-ž^ʷə-x.*
 1PL.ERG photo-PL-ABS REC.IO-1PL.A-show-ITER-PL.ABS
 ‘We show photos to each other.’ (Letuchiy 2007: 788, 790)

With the subject and direct object of a transitive verb, however, the predicate becomes intransitive. Example (54)a) shows a typical transitive predicate with the verb ‘wound’, where the subject (ergative) and direct object (absolutive) are both indexed in their respective verbal agreement slots. Example (54)b) is the reciprocal minimal pair, where the antecedent appears in the absolutive case (see *tə-* in the absolutive agreement slot), whereas the ergative agreement slot hosts the reciprocal morpheme *zere-*.

- (54) Adyghe
 a. *se a-r Ø-sə-wəʔa-κ.*

- 1SG.ERG DEM-ABS 3SG.ABS-1SG.ERG-wound-PST
 'I wounded him/her.'
 b. *te tə-zere-wəʔa-ɤ.*
 1PL.ABS 1PL.ABS-REC.ERG-wound-PST-PL.ABS
 'We wounded each other.' (Letuchiy 2007: 786)

4. Exempt Anaphora

Cross-linguistically, reflexives are often not anaphors *sensu stricto*, also allowing non-bound uses without any c-commanding antecedent and receiving reference from prior context, both intra- and extra-sententially, by rules of discourse anaphora (Cole et al. 2006).

Nakh-Dagestanian languages have 'exempt anaphoric' (discourse-anaphoric) pronominal uses of long-distance reflexives. Testelefs and Toldova (1998) were the first to examine such use of the long-distance reflexive *wuʒ* in Tsakhur (Lezgian). They indicate that the choice between the long-distance reflexive and a demonstrative pronoun is determined by topic-focus articulation. Long-distance reflexives are only appropriate for the most prominent and activated third-person discourse participant, especially when they reintroduce such a participant into discourse. Other referents must be expressed either by full NPs or demonstrative pronouns.

Other reported studies of exempt uses of long-distance reflexives in Nakh-Dagestanian, however, present a different picture, converging on the conclusion that they can be described as logophoric; that is, they are used in embedded clauses to refer to the original speaker or attitude holder reporting the utterance (Hagège 1974; Clements 1975; Culy 1997; Huang 2000). Cross-linguistically, in addition to more familiar logophors which must be bound within their sentence, discourse logophors, which need not have a sentence-internal antecedent are attested, provided that the logophoric center is introduced earlier in discourse (cf. the difference between the sentential and discourse logophoric domains in Huang 2000: 183ff). Ganenkov et al. (2009) show that the long-distance reflexive in Agul belongs to this type of discourse logophor where the logophoric center need not even be overtly introduced. Consider the following example taken from a spontaneous narrative:

- (55) Agul
šawla=ra x-u-na-a=ɤaj čab, uq'-u-ne=ɤaj sa bic'i
 tired=ADD become-PFV-PRF-PRS=CIT self:PL.ABS sit-PFV-AOR=QUOT one little
čab.
 self:PL.ABS
 'They got tired and they took a seat for a while.'

req: lat:arx-u suman x-u-ne=ɤaj čp:.i-s.
 road.ABS get.away-PFV as.if become-PFV-AOR=CIT self:PL-DAT
 'It seemed to them that they had lost their way.' (Ganenkov et al. 2009)

In this example, the long-distance reflexive *čab* is not bound anywhere in the text; that is, there is no sentence in the narrative introducing the logophoric center (such as 'My grandmother told me that once she and her cousin...'). Instead, the use of the long-distance reflexive indicates that the participants themselves serve as the source of information about those events. When first told, this story was presented by the speaker talking about herself, and the current narrator knows the story having heard it from that person. Creissels (2007) describes a similar pattern in Akhvakh and proposes referring to this type of use of the long-distance reflexive as *non-local logophors*. Nichols (2001) discusses non-bound uses of the

long-distance reflexive in Chechen and Ingush, where it also requires a discourse-established logophoric center. Daniel (2015) deals with a similar phenomenon in Archi.

The pronominal use of a simple reflexive is possible in configurations where the reflexive is in the highest position in a clause; that is, when no potential c-commanding antecedent is found in the sentence, as shown below.

(56) Northern Tabasaran

čav_i rasul-di-s_j kümek ap'-nu.
 self.ERG Rasul-OBL-DAT help.ABS do-AOR
 'He_i helped Rasul_j.'

(57) Aqusha Dargwa

sune-ni_i rasul-li-s_j kumek b-ar-ib.
 self-ERG Rasul-OBL-DAT help.ABS N.SG-do:PFV-AOR
 'He_i helped Rasul_j.'

Nakh-Dagestanian languages vary with respect to the availability of exempt readings in the presence of a potential c-commanding antecedent. In Aqusha Dargwa, a non-bound interpretation is possible in the presence of a potential c-commanding antecedent, as shown in (58). Here, the long-distance reflexive in the indirect object position is c-commanded by the third person ergative DP in the subject position. The conditions for syntactic binding are satisfied, and the reflexive can have the bound interpretation. However, a disjoint reading is also available here whereby the reflexive refers to an extra-sentential antecedent.

(58) Aqusha Dargwa

rasul-li sune-s kumek b-ar-ib.
 Rasul-OBL.ERG self-DAT help.ABS N.SG-do:PFV-AOR
 i. 'Rasul_i helped himself_i.'
 ii. 'Rasul_i helped him_j.'

In contrast to Aqusha Dargwa, a disjoint reading of the simple reflexive in the presence of a c-commanding antecedent is impossible in Tabasaran:

(59) Northern Tabasaran

rasul-di ča-s kuč'al ap'-nu.
 Rasul-OBL.ERG self-DAT lies.ABS do-AOR
 i. 'Rasul_i deceived himself_i.'
 ii. *'Rasul_i deceived him_j.'

Georgian bans reflexive pronouns in exempt anaphoric or logophoric uses (Amiridze 2006). Other Kartvelian languages have not been reported to use the reflexive for these functions either.

5. Non-Reflexive Functions of Reflexive Pronouns

In Nakh-Dagestanian and Kartvelian languages, reflexive pronouns have additional functions. In Nakh-Dagestanian, the most prominent of these non-reflexive uses is the intensifier function, whereby the reflexive pronoun appears adjoined to a full DP to indicate focus and always bears the same morphological case as the focused constituent:

(60) Northern Tabasaran

a. *rasul-di čav dumu ap'-nu.*

Rasul-OBL.ERG self.ERG 3SG.ABS do-AOR
 ‘Rasul did it himself.’

- b. *šura-s ča-s sul g-a^č(v)q:-nu.*
 girl-DAT self-DAT fox.ABS PFV-⟨N.SG⟩see-AOR
 ‘The girl saw the fox herself.’

In a number of Nakh-Dagestanian languages, reflexive pronouns can function as resumptive pronouns inside of relative clauses. Normally, head nouns in Nakh-Dagestanian participial clauses relativize with a gap (Chapter 3) and a resumptive is not needed. However, when the relativized argument is inside an island, (61)a), or is deeply embedded, (61)b), a resumptive is necessary.

(61) Tanti Dargwa

- a. [*ʔa^čħmad-li=ra sun-ni=ra_i mura d-ert:-ib*] *admi_i*
 Ahmad-OBL.ERG=ADD self-ERG=ADD hay.ABS N.PL-mow:PFV-AOR man.ABS
 ‘the man_i that he_i and Ahmad mowed the hay’
- b. [[*sun-ni_i ekzamen ʃa^č-luk:-a ible*]
 self-ERG exam.ABS NEG-give:IPFV-FUT.3 COMP
dam han-b-irk-u-se] *rurs:i_i*
 1SG.DAT think-N.SG-LV:IPFV-PRS-ATTR girl.ABS
 ‘the girl_i (such) that I think that she_i will not pass the exam’
 (Sumbatova & Lander 2014: 195, 196)

Kartvelian reflexive pronouns are not used either in the resumptive function or as the intensifier, though the intensifier in Georgian is historically related to the reflexive (Amiridze 2006: 281-284). Kartvelian languages do use complex reflexives for a different function. Georgian has the Person-Case Constraint (PCC) which bans first/second-person direct objects in ditransitive constructions in the presence of a third-person indirect object (Harris 1981; Amiridze 2006; see also Chapters 18 and 20). In such contexts, the direct object is expressed by a complex reflexive whose possessive modifier reflects the features of the object argument:

(62) Georgian

- a. **šen mas me Ø-u-xat’-av.*
 2SG.NOM 3SG.DAT 1SG.DAT 2A.NOM.SG-VERS-draw/paint-TS
 Intended: ‘You draw/paint me for him/her.’
- b. *šen mas čem-s tav-s Ø-u-xat’-av.*
 2SG.NOM 3SG.DAT 1POSS.SG-DAT head-DAT 2A.NOM.SG-VERS-draw/paint-TS
 ‘You draw/paint me (lit. my head) for him/her.’ (Amiridze 2006: 183-184)

Other Kartvelian languages show a similar pattern, with the apparent exception of Laz, which does not have PCC effects (Lacroix 2009: 699-703 on Arhavi Laz; Öztürk & Pöchtrager 2011: 47-48 on Pazar Laz).

Northwest Caucasian languages have no special uses of nominal anaphoric expressions.

6. Indexicality

Personal pronouns and some other indexical expressions can receive two different interpretations in attitude reports: they can be interpreted either (i) in the context of the current speech act, from the speaker’s position, or (ii) in the context of the speech act denoted by the matrix verb, thus representing the position of the attitude holder. The switch from the more

usual reading (i) to the more unusual reading (ii) is known as *indexical shift* and has been attested in a number of unrelated languages (Anand & Nevins 2004; Shklovsky & Sudo 2014; Schlenker 2003; Sundaresan 2011; Deal 2018; Introduction to this volume).

Indexical shift in languages of the Caucasus has only very recently come to the forefront of research. Polinsky (2015a) is the first published study of indexical shift in a Nakh-Dagestanian language. Considering embedded attitude reports in Tsez, Polinsky (2015a) establishes that indexical expressions can undergo indexical shift, as shown in (63).

- (63) Tsez
irbahin-ä [*di* *ʕayibiyaw* *yot=lin*] *eli-x*.
 Ibrahim-ERG 1SG.ABS wrong be.PRS=QUOT say-PRS
 i. ‘Ibrahim says that I am wrong,’
 ii. ‘Ibrahim_i says that he_i is wrong.’ (Polinsky 2015a, ex. 27)

Indexical shift has been also attested in other Nakh-Dagestanian languages: Chechen and Ingush (Nichols 2001), Hinuq (Forker 2013a), Lak (Kazenin 2013b), Mehweb (Ganenkova 2019a), Aqusha Dargwa and Tabasaran (Ganenkova & Bogomolova 2018).

Like in other languages, the availability of the shifted interpretation of a personal pronoun is determined by two factors in Nakh-Dagestanian: the semantics of the matrix verb and the type of the complement clause. First, only finite embedded clauses allow indexical shift. Second, only matrix verbs of speaking and thinking subcategorize for finite embedded clauses.

In many Nakh-Dagestanian languages finite embedded clauses are introduced by the complementizer that diachronically goes back to (and is often synchronically identical to) a converbal form of ‘say’.

- (64) Northern Tabasaran
gaga.ji *dada.ji-s* [*rasul* *uʃ-nu* *k’udi*] *p-nu*.
 father-OBL.ERG mother-DAT Rasul.ABS go-AOR COMP say-AOR
 ‘Father told mother that Rasul had gone.’

Complementizers introducing embedded reports have no morphological slot for agreement in most languages. However, some Dargwa languages have agreeing complementizers, consider the minimal pair in (65) which shows that the prefixal agreement position within the complementizer co-varies with the gender-number features of the matrix subject:

- (65) Itsari Dargwa
 a. *pat’imat-il* [*arc* *d-a:ku*] *r-ik’wil* *b-urs-ib*.
 Patimat-ERG money.ABS N.PL-be.NEG F.SG-COMP N.SG-tell:PFV-AOR
 ‘Patimat said that there was no money.’
 b. *rabdan-ni* [*arc* *d-a:ku*] *ik’wil* *b-urs-ib*.
 Rabdan-ERG money.ABS N.PL-be.NEG (M.SG)COMP N.SG-tell:PFV-AOR
 ‘Rabdan said that there was no money.’ (Rasul Mutalov, pers. comm.)

Tsez and other Nakh-Dagestanian languages also obey the so-called Shift-Together Constraint (Anand & Nevins 2004), whereby all personal pronouns in an embedded report must be interpreted in the same context, either of the actual speech act or the attitude verb, as shown in (66).

- (66) Tsez
- | | | | | | |
|------------------------|--------------------|---|------------|------------------|--------------|
| <i>irbahin-ä</i> | <i>zarema-qo-r</i> | [| <i>di</i> | <i>dow-l'o-r</i> | <i>bixzi</i> |
| Ibrahim-ERG | Zarema-POSS-LAT | | 1SG.ABS(I) | 2SG-SUPER-LAT | angry |
| <i>oq-si=lin</i>] | <i>eli-s.</i> | | | | |
| (I)become-PST.WIT=QUOT | say-PST.WIT | | | | |
- i. ^{OK} ‘Ibrahim told Zarema that I was angry with you.’ *unshifted*
- ii. ^{OK} ‘Ibrahim told Zarema that he was angry with her.’ *shifted*
- iii. * ‘Ibrahim told Zarema that he was angry with you.’ *mixed*
- iv. * ‘Ibrahim told Zarema that I was angry with her.’ *Mixed*
- (Polinsky 2015a: ex. 54)

Only two out of four logically possible interpretations are available in (66); mixed interpretations, where one of the pronouns shifts while the other is interpreted in the context of the actual speech act, are unacceptable.

Not much is known about indexical shift in Northwest Caucasian languages. Hewitt and Crisp (1986) report that Abkhaz uses the special quotative particle *ħ^wa* (also from a form of the verb ‘say’) to introduce speech reports:

- (67) Abkhaz
- | | | |
|--------------------------------------|-----------------------|--------------------------------------|
| <i>š^w-an+b[a-]aa-wa-y</i> | <i>ħ^wa</i> | <i>d-rə+z-c'aa-yt'.</i> |
| 2PL-when+Q-come-DYN.PRS-Q | QUOT | 3SG.M.ERG-3PL.ABS+for-ask-FINITE.AOR |
- ‘He asked them_i when they_i (lit. you) would come.’ (Hewitt and Crisp 1986: 129)

The person marking on the embedded verb within the speech report in this example apparently suggests that indexical shift may be available in Abkhaz as well (see also Hewitt 1979a), though the syntactic status of the report (opaque quote or fully integrated complement clause) and details of the semantic interpretation of personal pronouns in Abkhaz and related languages clearly require further investigation.

In their work on Laz, Demirok and Öztürk (2015) investigate indexical shift in embedded reports. These reports are expressed by complement clauses introduced by a special complementizer which shows person agreement with the matrix subject, distinguishing between a 1SG-agreeing form, *ma*, and the elsewhere form *ya*:

- (68) Pazar Laz
- a. *ma* [*ali noseri on*] *ma p-t'k'v-i.*
- 1SG.ERG Ali smart 3.be 1SG.COMP 1-say-1.PST
- ‘I said that Ali is smart.’
- b. *arte-k* [*ma noseri vore*] *ya iduṣun-am-s.*
- Arte-ERG 1SG.ABS smart be.1SG COMP think-IPFV-3SG
- i. ‘Arte_i thinks that he_i is smart,’
- ii. * ‘Arte thinks that I am smart.’ (Demirok & Öztürk 2015: 46)

Personal pronouns in logophoric complements are subject to obligatory indexical shift, as seen from example (68)b), where the unshifted (=current speaker) interpretation of the first-person singular pronoun is impossible. Laz logophoric complements also respect the Shift-Together Constraint.

Other Kartvelian languages appear to have indexical shift; see (4) in the Introduction to this volume, and the example below:

(69) Georgian

utxari šen-s col-s, me ver moval-tko.
 say.to.her 2SG.POSS-DAT wife-DAT 1SG NEG.POT 1SG.come.FUT-QUOT
 i. ‘Tell your wife that I cannot come.’ *unshifted*
 ii. ‘Tell your wife that you cannot come.’ *shifted*
 (Boeder 2002: 15)

The phenomenon clearly calls for further investigation. Existing sources point out that reported speech is introduced by special quotative particles, diachronically related to the verb ‘say’ (Hewitt & Crisp 1986; Boeder 2002). In Georgian, for example, three such particles are in use. In Standard Georgian, according to Boeder (2002), *-tko* is used with verbs of speech in the imperative form (historically, the second person singular subjunctive of ‘say’), *-metki* is used in constructions with first person reporters (historically, the first person singular aorist of ‘say’), while *-o*, of unclear origin, is used in other contexts. It is the latter that seems to induce indexical shift. Svan has three complementizers *əž*, *rok(v)*, and *eser* with slightly different distributions.

Another phenomenon observed in verbal morphology of finite embedded reports is also related to person. As mentioned in Chapter 3, in at least some Nakh-Dagestanian languages, such as Tabasaran, whether or not an argument is indexed on the verb depends on the reference of that argument. Though known typologically (Nikitina 2012; Messick 2016), this phenomenon does not ever appear to have been reported in published sources on the languages of the Caucasus.

In Tabasaran, an argument co-indexed with a participant of the reporting event obligatorily triggers person agreement; the attitude holder triggers first-person agreement, and the addressee of the attitude holder triggers second-person agreement. Other arguments trigger third-person agreement. Such a system of logophoricity-based verbal marking may lead to mismatches between the person value of an argument and the person value indexed on the verb. Consider the following examples.

(70) Northern Tabasaran

- a. *rasul-di [izu derben-di-s aʕG-idi=za k’udi] p-nu.*
 Rasul-OBL.ERG 1SG.ABS Derbent-OBL-DAT go-FUT=1SG COMP say-AOR
 i. ^{OK} ‘Rasul_i said that he_i would go to Derbent.’ *shifted*
 ii. * ‘Rasul said that I would go to Derbent.’ *unshifted*
- b. *rasul-di [izu derben-di-s aʕG-idi k’udi] p-nu.*
 Rasul-OBL.ERG 1SG.ABS Derbent-OBL-DAT go-FUT COMP say-AOR
 i. * ‘Rasul_i said that he_i would go to Derbent.’ *shifted*
 ii. ^{OK} ‘Rasul said that I would go to Derbent.’ *unshifted*

Here, the first-person singular pronoun *izu* can co-occur with different person features on the verb. In (70)a), the first-person pronoun has a shifted interpretation, referring to the attitude holder, and the verb has the first-person clitic. In (70)b), the first-person pronoun is unshifted, indexing the speaker, and clitic doubling is impossible.

Another mismatch arises in reported speech constructions where the matrix subject (attitude holder/reporter) binds the long-distance reflexive inside the embedded report. The resulting configuration satisfies the condition on first-person clitic doubling in Tabasaran; therefore, another mismatch between the pronoun and verbal clitic can be seen, as in (71).

(71) Northern Tabasaran

rasul-di_i [čav_i derben-di-s aʕG-idi=(za) k’udi] p-nu.*

Rasul-OBL.ERG self.ABS Derbent-OBL-DAT go-FUT=1SG COMP say-AOR
 ‘Rasul said that he would go to Derbent.’

Nakh-Dagestanian languages differ with respect to the extent agreement shift is possible or obligatory in embedded reports. In Tabasaran, it is obligatory; clitic doubling is determined exclusively on the basis of co-indexation with the participants of the matrix speech act. There is evidence that other Nakh-Dagestanian languages have a similar, though not completely identical, pattern (see Ganenkov & Bogomolova 2018). Further work is clearly needed in this area.

7. Summary

The chapter introduces the inventory of anaphoric expressions attested in the languages of the Caucasus and discusses their basic properties. We show that Nakh-Dagestanian, Kartvelian, and Northwest Caucasian differ in the division of labor between nominal expressions and verbal inflection in reflexive constructions, which are exclusively nominal in Nakh-Dagestanian, exclusively verbal in Northwest-Caucasian, and mixed in Kartvelian. We show that exempt uses of anaphors are found in Nakh-Dagestanian, but not in Kartvelian or Northwest Caucasian, and that different types of reflexive pronouns in Nakh-Dagestanian have distinct restrictions on locality, while Kartvelian anaphors are strictly local. In our discussion of antecedents, we introduce the well-known pattern of ‘reverse binding’ in Nakh-Dagestanian, where the reflexive appears in the subject position above the antecedent. We show that some instances of reverse binding can be explained by factoring in the distinction between syntactic binding and coreference. One specific configuration—with a reflexive in the subject position and a direct object as antecedent—still allows the reverse pattern, even when the nature of the antecedent is controlled for. Georgian anaphors are also known to be grammatical in the subject position, with non-trivial implications for the semantic interpretation. The interpretation of personal pronouns in Nakh-Dagestanian and, possibly, other Caucasian languages can undergo indexical shift in finite embedded reports.

Important avenues for future work on binding and indexicality in the Caucasus include a deeper investigation into reverse binding configurations in Nakh-Dagestanian and Kartvelian, research on the interaction between nominal anaphors and verbal applicatives in Kartvelian, as well as an in-depth study on the interpretation of personal pronouns and other indexical expressions in embedded attitude reports in the three indigenous families of the Caucasus.

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References

- Alekseev Mikhail E., Said Z. Alikhanov, Boris M. Ataev, Magomed A. Magomedov, Magomed I. Magomedov, Guljahan I. Madiyeva, Patimat A. Saidova, Djalil S. Samedov. 2014. *Sovremennyy avarskij yazyk*. Makhachkala: DNC RAN.
- Anand, Pranav, and Andrew Nevins. 2004. Shifty Operators in Changing Contexts. *In* Proceedings of SALT. Pp. 20–37.
<http://elanguage.net/journals/salt/article/download/14.20/1732>, accessed October 31, 2014.
- Amiridze, Nino. 2006. Reflexivization Strategies in Georgian. PhD Thesis. University of Utrecht.

- Ariel, Mira. 1990. *Accessing Noun-Phrase Antecedents*. London: Routledge.
- Ariel, Mira. 2001. Accessibility theory: An overview. In Ted Sanders, Joost Schliperoord and Wilbert Spooren (eds.), *Text representation*, 29–88. Amsterdam: John Benjamins.
- Boeder, Winfried. 2002. Speech and thought representation in the Kartvelian (South Caucasian) languages. In Tom Güldemann and Manfred von Roncador (eds.), *Reported Discourse: A meeting ground for different linguistic domains*, 3–48. Amsterdam: John Benjamins.
- Boeder, Winfried. 2014. Anaphora in Svan. In Nino Amiridze, Tamar Reseck, and Manana Topadze Gäumann (eds.), *Advances in Kartvelian Morphology and Syntax: Contributions to the Festival of Languages, Bremen, 17 Sep to 7 Oct, 2009*, 101–139. Bochum: Universitätsverlag Dr. N. Brockmeyer.
- Büring, Daniel. 2005. *Binding Theory*. Cambridge: Cambridge University Press.
- Cole, Peter, Gabriella Hermon, and C.-T. James Huang. 2006. Long-Distance Binding in Asian Languages. In Everaert, Martin, and Henk van Riemsdijk (eds.), *The Blackwell Companion to Syntax. Volume III*, 21–84. Blackwell Publishing.
- Creissels, Denis. 2007. Intensifiers, reflexivity and logophoricity in Axaxdərə Akhvakh. Paper presented at the Conference on the Languages of the Caucasus. Max Planck Institute for Evolutionary Anthropology. Leipzig, December 07–09, 2007. Available at <http://www.deniscreissels.fr/public/Creissels-logoph.Akhv.pdf>.
- Creissels, Denis. 2016. The pronoun ži in Northern Akhvakh: a corpus-based study. Paper presented at the Workshop on Nakh-Daghestanian languages. University of Bamberg, April 15–16, 2016. Available at <http://www.deniscreissels.fr/public/Creissels-refl.pro.Akhvakh.pdf>.
- Daniel, Michael. 2015. Logophoric reference in Archi. *Journal of Pragmatics* 88. 202–219.
- Demirok, Ömer, and Öztürk Balkız. 2015. The Logophoric Complementizer in Laz. *Dilbilim Araştırmaları Dergisi* 2. 45–69.
- Edmondson, Jerold A., and Frans Plank. 1978. Great expectations: An intensive SELF-analysis. *Linguistics and Philosophy* 2(3). 373–413.
- Erschler, David. 2016. Paradoxical Binding in Kartvelian. Paper presented at the The South Caucasian Chalk Circle (SCCC): Philology meets Linguistics. September 22–24, 2016. Paris: University of Chicago Center.
- Forker, Diana. 2014a. *A grammar of Hinuq*. Berlin: Mouton de Gruyter.
- Forker, Diana. 2014b. Are there subject anaphors? *Linguistic Typology* 18. 51–81.
- Ganenkova, Dmitry, Timur Maisak, and Solmaz Merdanova. Diskursivnaja anafora v agul'skom jazyke. Manuscript. Institute for Linguistics RAS, Moscow. Available at http://otipl.philol.msu.ru/~kibrik/content/pdf/Ganenkova_etal.pdf.
- Ganenkova, Dmitry. Forthcoming. Case and agreement. In Michael Daniel, Nina Dobrushina, and Dmitry Ganenkova (eds.), *Mehweb: Selected essays on phonology, morphology and syntax*. Berlin: Language Science Press.
- Ganenkova, Dmitry, and Natalia Bogomolova. In preparation. Agreement shift in embedded reports.
- Harris, Alice C. 1981. *Georgian Syntax: A Study in Relational Grammar*. Cambridge: Cambridge University Press.
- Harris, Alice C. 1991. Mingrelian. In Alice C. Harris (ed.), *The Indigenous Languages of the Caucasus. Volume I: The Kartvelian Languages*, 313–394. Delmar, New York: Caravan Books.
- Haspelmath, Martin. 1993. *A Grammar of Lezgian*. Berlin: Mouton de Gruyter.
- Hewitt, Brian George. 1979. *Abkhaz*. Amsterdam: North-Holland.
- Hewitt, Brian George, and S. R. Crisp. 1986. Speech reporting in the Caucasus. In Florian Coulmas (ed.), *Direct and Indirect Speech*, 121–144. Berlin: Mouton de Gruyter.

- Holisky, Dee Ann. 1981. *Aspect and Georgian Medial Verbs*. Delmar, New York: Caravan Books.
- Holisky, Dee Ann. 1991. Laz. In Alice C. Harris (ed.), *The Indigenous Languages of the Caucasus. Volume 1: The Kartvelian Languages*, 395–472. Delmar, New York: Caravan Books.
- Huang, Yan. 2000. *Anaphora: A cross-linguistic study*. Oxford: Oxford University Press, 2000.
- Kalinina, Elena Ju. Aktantnye predloženiya. In Alexander E. Kibrik, Konstantin I. Kazenin, Ekaterina A. Lyutikova, and Sergei G. Tatevosov (eds.), *Bagvalinskij jazyk. Grammatika, teksty, slovari*, 512–553. Moscow: Nasledie.
- Kazenin, Konstantin I. 2006. Focus in Daghestanian and word order typology. *Linguistic Typology* 6(3). 289–316.
- Kazenin, Konstantin I. 2007. Reciprocals, comitatives, sociatives, and reflexives in Kabardian. In Vladimir P. Nedjalkov (ed.), *Reciprocal constructions. Volume 2*, 739–772. Amsterdam: John Benjamins.
- Kazenin, Konstantin I. 2013. *Sintaksis sovremennogo laskogo jazyka*. Makhachkala: DNC RAN.
- Khalilova, Zaira. 2009. A Grammar of Khwarshi. PhD thesis.
- Kibrik, Aleksandr E. 1979/2003. Očerki po teorii ergativnosti. Tindiskij jazyk. In Kibrik Aleksandr E. 2003. *Konstanty i peremennye jazyka*, 662–668. Sankt-Petersburg: Aletheia.
- Kibrik, Alexander. 1997. Beyond subject and object: Toward a comprehensive relational typology. *Linguistic Typology* 1(3). 279–346.
- Kibrik Alexander E. 2003. *Konstanty i peremennye jazyka*. Sankt-Petersburg: Aletheia.
- König, Ekkehard . 2001. Intensifiers and reflexive pronouns. In Martin Haspelmath, Ekkehard König, Wulf Oesterreicher, Wolfgang Raible (eds.), *Language Typology and Language Universals. Volume I*, 747–760. Berlin: Mouton de Gruyter.
- König, Ekkehard, and Peter Siemund, 2000. Intensifiers and reflexives: A typological perspective. In Zygmunt Frajzyngier and Traci S. Curl (eds.), *Reflexives: Form and Function*, 41–74. Amsterdam: John Benjamins.
- König, Ekkehard, and Volker Gast (eds.). 2008. *Reciprocals and Reflexives: Theoretical and Typological Explorations*. Berlin: Mouton de Gruyter.
- Kumakhov, Mukhadin, and Karina Vamling. 1998. *Dopolnitel'nye konstrukcii v kabardinskom jazyke*. Lund University.
- Lacroix, René. 2009. Description du dialecte laze d'Arhavi (caucasique du sud, Turquie). Thèse de doctorat. Université Lumière Lyon 2.
- Lacroix, René. 2012. Laz middle voice. In Gilles Authier and Katharina Haude (eds.), *Ergativity, Valency and Voice*, 165–198. Berlin: Mouton de Gruyter.
- Letuchiy, Alexander. 2007. Reciprocals, reflexives, comitatives, and sociatives in Adyghe. In Vladimir P. Nedjalkov (ed.), *Reciprocal constructions. Volume 2*. 773–812. Amsterdam: John Benjamins.
- Lyutikova, Ekaterina A. 2000. Reflexives and emphasis in Tsaxur (Nakh-Dagestanian). In Zygmunt Frajzyngier and Traci S. Curl (eds.), *Reflexives: Form and Function*, 227–256. Amsterdam: John Benjamins.
- Lyutikova, Ekaterina A. 2001. Anaforičeskie sredstva. In Alexander E. Kibrik, Konstantin I. Kazenin, Ekaterina A. Lyutikova, and Sergei G. Tatevosov (eds.), *Bagvalinskij jazyk. Grammatika, teksty, slovari*, 615–681. Moscow: Nasledie.
- Messick, Troy. 2016. Shifty agreement in embedded contexts and a theory of embedded pronouns. Manuscript.

- Nash, Léa. 2016. "What versionizers tell us about the structure of trivalent verbs and dative arguments. Paper presented at the The South Caucasian Chalk Circle (SCCC): Philology meets Linguistics. September 22–24, 2016. Paris: University of Chicago Center.
- Nichols, Johanna. 2001. Long-Distance Reflexivization in Chechen and Ingush. In Peter Cole, Gabriella Hermon, C.-T. James Huang (eds.), *Long-Distance Reflexives*, 255–278. Academic Press.
- Nichols, Johanna. 2011. *Ingush Grammar*. Berkeley: University of California Press.
- Nikitina, Tatiana. 2012. Personal deixis and reported discourse: Towards a typology of person alignment. *Linguistic Typology* 16. 233–263.
- O’Herin, Brian. 2002. *Case and agreement in Abaza*. Dallas: SIL International and the University of Texas at Arlington.
- Öztürk, Balkız, and Markus A. Pöchtrager (eds.). 2011. *Pazar Laz*. Munich: Lincom Europa.
- Polinsky, Maria. 2015a. Embedded finite complements, indexical shift, and binding in Tsez. *Languages of the Caucasus* 1(1). Retrieved from <https://escholarship.org/uc/item/6h56v1v8>.
- Polinsky, Maria. 2015b. *Tsez Syntax: A Description*. Manuscript. Harvard University.
- Reinhart, Tanya. 1983. *Anaphora and Semantic Interpretation*. Chicago: University of Chicago Press.
- Schlenker, Philippe. 2003. A Plea for Monsters. *Linguistics and Philosophy* 26(1). 29–120.
- Schmidt, Karl Horst. 1991. Svan. In Alice C. Harris (ed.), *The Indigenous Languages of the Caucasus. Volume 1: The Kartvelian Languages*, 473–556. Delmar, New York: Caravan Books.
- Serdobolskaya, Natal’ja V., and Alexander Motloxov. 2009. Semantika konstrukcij s sentencijal’nymi aktantami v adygejskom jazyke. In Peter Arkadiev, Alexander B. Letuchiy, Nina R. Sumbatova, Yakov G. Testeleets (eds.), *Aspekty polisintetizma: Očerki po grammatike adygejskogo jazyka*, 498–556. Moscow: Russian University for the Humanities.
- Sosenskaja, Tatiana B. 1999. Mestoimenie. In Kibrik, Alexander E. and Jakov G. Testeleets (eds.), *Elementy caxurskogo jazyka v tipologičeskom osveščeenii*, 129–151. Moscow: Nasledie.
- Shklovsky, Kirill, and Yasutada Sudo. 2014. The Syntax of Monsters. *Linguistic Inquiry* 45(3). 381–402.
- Sumbatova Nina R. and Yuri A. Lander. 2014. *Darginskij govor selenija Tanty: grammatičeskij očerk, voprosy sintaksisa*. Moscow: Jazyki slav’anskoj kul’tury.
- Sundaresan, Sandhya. 2011. Monsters, Agreement, and Anaphora: Evidence from Tamil. <http://ling.auf.net/lingbuzz/001205/v2.pdf>, accessed May 25, 2013.
- Testeleets, Yakov G. and Svetlana Ju. Toldova. 1998. Refleksivnye mestoimenija v dagestanskix jazykax i tipologija refleksiva. *Voprosy jazykoznanija* 4. 35–57.
- Toldova, Svetlana Ju. 1999. Mestoimennye sredstva podderžanija referencii. In Kibrik, Alexander E. and Jakov G. Testeleets (eds.), *Elementy caxurskogo jazyka v tipologičeskom osveščeenii*, 629–673. Moscow: Nasledie.
- Toldova, Svetlana Ju. 1996. Reflexivization. In Kibrik, Alexander E. (ed.). *Godoberi*, 217–226. Munich: Lincom Europa.
- Yamada, Hisanari. 2013. Reciprocal constructions in Avar. *Lingua* 126. 150–171.
- Zhirkov, Lev I. 1955. *Lakskij jazyk*. Moscow: Izdatel’stvo Akademii nauk SSSR.