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Abstract: This paper presents a general review of the Oxford Handbook of the Languages of the Caucasus. It summarizes over four dozen different typological rarities found in Caucasian languages, and examines what explanations have been given for their presence, and what roles phylogeny, contact and human geography play in their appearance in these languages.

Keywords: Caucasus; areal typology; Kartvelian; Nakh-Daghestanian; Abkhaz-Adyghean; rarities in language

Recent years have seen an explosion of ‘handbook’-style academic works, and this trend has not spared linguistics. This reflects not just new voices, new views and new research agendas that have entered the intellectual mainstream, but also a sense that some fields have become mature enough that it is no longer possible to fully command the burgeoning literature in particular fields. Works summarizing the state-of-the-art have thus become repeatedly necessary. In the *Oxford handbooks* series alone, not only are there handbooks of morphological theory (Audring and Masini 2019) and comparative syntax (Cinque and Kayne 2005); there are also handbooks on more niche subjects like grammatical number (Hofherr and Doetjes 2021), ellipsis (Van Craenenbroeck and Temmerman 2019), and polysynthesis (Fortescue et al. 2017). This surely reflects a positive development: we know more things about human language than we used to. This makes the appearance of the *Oxford handbook of the languages of the Caucasus* all the more timely.

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1 Structure

The *Handbook* reflects all these developments. Yet the book is ambitious in scope: it attempts at nothing less than a survey of the full linguistic diversity of this famous yet still poorly understood region of the world. It achieves this through an ingenious internal structure; effectively several books within a book. Without precisely defining what a ‘Caucasian’ language is, the *Handbook* provides an overview of this diversity at different levels of generalization. The first section sets the tone with three chapters giving a linguistic snapshot of the region and a review of its linguistic scholarly history (Introduction, *Polinsky*), the sociolinguistic functions of the region’s multilingualism (Chapter 1, *Dobrushina, Daniel and Koryakov*), and ethnology and demography necessary to understand how the languages have related to each other historically (Chapter 2, *Kazenin*). Especially useful in this respect is Chapter 1, which presents a wealth of information about the historical use of writing systems across the region, as well as changing patterns of multilingualism and language contact across genders and generations throughout the region.

Twelve chapters follow that delineate four of the six linguistic phyla extant in the Caucasus: Nakh-Daghestanian (Chapter 3, *Ganenkov and Maisak*), Abkhaz-Adyghean (Chapter 9, *Arkadiiev and Lander*), Kartvelian (Chapter 11, *Testeleis*), and Indo-European (Chapter 13, *Belyaev*), after each general chapter covering a particular phylum providing one or more narrowly focused chapters elucidating the grammatical properties of exemplary usually less well-documented languages within that phylum in a nested fashion, with each language under its own phylogenetic heading. Thus the chapters on Dargwa (Chapter 4, *Sumbatova*), Lak (Chapter 5, *Friedman*), Avar (Chapter 6, *Forker*), Archi (Chapter 7, *Chumakina*) and Chechen and Ingush (Chapter 8, *Komen, Molochieva and Nichols*) follow the more general chapter on Nakh-Daghestanian, while a joint chapter on Abaza and Abkhaz (Chapter 10, *O’Herin*) follows the chapter on Abkhaz-Adyghean, Megrelian (Chapter 12, *Rostovtsev-Popiel*) follows Kartvelian, and Ossetic (Chapter 14, *Erschler*) follows Indo-European. Because each language survey provides a roughly comparable amount of information about each domain of grammar, readers can make direct comparisons at analogous portions of the chapters that are sometimes lacking in dispersed specialist literature. Thus if you want to compare the phonological inventory in Chumakina’s chapter on Archi with that in Komen, Molochieva and Nichols’ chapter on Chechen, you turn to Sections 7.2.1 and 8.2.1 respectively.

The final section of the book provides ten chapters on typological-theoretical phenomena that examine the region’s languages from an orthogonal angle: segmental phonetics and phonology (Chapter 15, *Beguš*), word-stress and tone and intonation (Chapters 16 and 19, *Borise*), ergativity (Chapter 18, *Ganenkov*), the syntax of noun-phrases

and determiners (*Ch. 19, Öztürk and Eren*), agreement (Chapter 20, *Foley*), binding and indexicality (Chapter 21, *Ganenkov and Bogomolova*), correlatives (Chapter 22, *Demirok and Öztürk*), ellipsis (Chapter 23, *Erschler*) and information-structure (Chapter 24, *Forker*). These chapters analyze phenomena that are mentioned either only in passing, or are entirely undiscussed in previous literature, or have never before been discussed from a regional perspective. Thus Beguš' (Chapter 15) discusses Georgian consonant onset clusters or doubly-articulated stops in Abkhaz which are generally only discussed in works on their own respective families, and while morphological blocking in Georgian has been frequently discussed (Anderson 1986; Carmack 1997; Wier 2011), Foley's chapter on agreement shows this unusual trait is found in a number of Daghestanian languages such as Aqusha Dargwa and Lak, which are rarely mentioned in the same context, much less examined for their similarities or differences.

Overall, one important feature of the *Handbook* is that this pronounced modular structure allows readers and instructors to examine and teach only those families, languages or typological phenomena that interest them most. In what follows, rather than recapitulating each chapter, I would like to explore some of the implications of these authors' research, noting along the way where in the *Handbook* a given result or scientific finding may be found.

2 The typological challenges of rarity

The Caucasus may be said to present two main sets of challenges for scholars seeking to understand the depth and breadth of its linguistic diversity: rarity and areality. Of these, it is the first that stands out most saliently, as the region is famously a locus for typologically rare or unique structural properties not characteristic of languages from other parts of the world (see Tables 1 and 2 with references from the *Handbook*). This fact is sometimes not fully appreciated even by scholars of the region. Thus of the four sets of typologically rare phonological contrasts in the *World atlas of language structures* (WALS) (Maddieson 2013a), all four are attested in the Caucasus: two abundantly, labiovelar(ized) and pharyngeal(ized) consonants; one marginally (a voiced lateral interdental fricative [ɬ] in Kabardian and Adyghe); and one paralinguistically (clicks, though not present as phonemes in lexical words, are found in Georgian and several Daghestanian languages often in specialized registers). But the extent to which *rara* and *rarissima* are found in the Caucasus is not just wide, but also deep, since not only do we find grammatical categories that are unusual in other parts of the world, rare subcategories, uncommon numbers of subcategories or the absence of common categories, and rare combinations of categories; we also find that the ways categories behave within or are distributed between constructions challenge linguists' understanding of typological norms.

Table 1: Categorical rarities in Caucasian languages (AA = Abkhaz-Adyghean; ND = Nakh-Daghestanian).

Rare categories	– Labiovelar(ized) consonants (across AA and ND; <i>Beguš</i> Section 15.2.2.1) – Pharyngeal(ized) consonants (across AA and ND; <i>Beguš</i> Section 15.2.2.1) – Ejective fricatives (in Kabardian and Ubykh, <i>Beguš</i> Section 15.2.2.2) – Palatalized uvulars (in Abaza and Ubykh, <i>Arkadiev and Lander</i>, Section 9.2.1) – Secondary articulations on glottal stops (in Abzakh Adyghe, <i>Beguš</i> Section 15.2.2.1) – Multiple secondary articulations (e.g. [q^{iw}] in Ubykh, <i>Beguš</i> Section 15.2.2.1) – Velar lateral fricatives and affricates (in Archi, <i>Beguš</i> Section 15.2.3.2) – Fortis/geminate glottalized lateral affricates (<i>Beguš</i> Section 15.2.3.2) – Morphological optatives (throughout the region; <i>Polinsky</i> Section 1.2) – Morphological numerative (in Ossetian, <i>Belyaev</i> Section 13.4.2) – Morphological orientation (in Tanti Dargwa, <i>Sumbatova</i> Section 4.4.4.3) – Morphologization of spatial contact versus separation (in Megrelian, <i>Rostovtsev-Popiel</i> Section 12.7.3) – Morphological expressivity in Budukh (Alekseev 1994: 270) – Distinct categories of elevation, location and orientation in spatial deixis (in Avar and other ND languages, <i>Ganenkov and Maisak</i> Section 3.4.2, <i>Forker</i> Section 6.4.2)
Rare numbers of (sub) categories	– Number of lateral consonants (in Akhvakh, <i>Beguš</i> Section 15.2.3.2) – Number of genders (in some ND languages, e.g. Batsbi, <i>Ganenkov and Maisak</i> Section 3.4.1) – Number of cases (e.g. in Tsez, <i>Ganenkov and Maisak</i> Section 3.4.2; see also Comrie and Polinsky 1998) – Recursively increasing valence (in AA languages; Lander and Letuchiy 2010)
Absence of common categories	– A vertical vowel system (in AA, <i>Beguš</i> Section 15.2.2.3) – The marginality of /k/ and /g/ (in Ubykh, <i>Beguš</i> Section 15.2.2.1) – SOV order but little/no case-marking (in Abkhaz, <i>Dobrushina et al.</i> Section 1.2) – No/few valence decreasing processes (in most AA and ND languages; <i>Dobrushina et al.</i> Section 1.2)
Rare combinations of categories	– Both a dative and lative strategy for recipients in ND (<i>Dobrushina et al.</i> Section 1.6.3) – Distinct performative optatives and desiderative optatives (<i>Ganenkov and Maisak</i> Section 3.5.6) – A single pronoun to express both 1_{PL} inclusive and 2_{PL} (in Itsari and Shari Dargwa, <i>Ganenkov and Maisak</i> Section 3.4.3)

Table 2: Constructional rarities in Caucasian languages.

Phonetics and phonology	–	Labiovelars realized as doubly-articulated (<i>Beguš</i> Section 15.2.2.1)
	–	Final voicing (in Lezgian, <i>Beguš</i> Section 15.4.5.2)
	–	Syllabically heavy onsets (in Tsakhur, <i>Borise</i> Section 16.7.2)
	–	Harmonic consonant clusters (in Kartvelian, <i>Testeleṭs</i> Section 11.2.4)
	–	Exceedingly large clusters of five or more onset consonants (in Georgian, <i>Testeleṭs</i> Section 11.2.4)
Morphology	–	Exuberant exponence in Batsbi (<i>Ganenkov</i> and <i>Maisak</i> Section 3.5.10)
	–	Focus gemination in Chechen and Abkhaz (<i>Beguš</i> Section 15.4.3)
	–	Endoclititics in Udi (<i>Foley</i> Section 20.2.3)
	–	Mesoclititics in Lak (<i>Friedman</i> Section 5.6)
	–	Frequent use of separable morphomic suffixes to create oblique stems (in most ND languages, <i>Ganenkov</i> and <i>Maisak</i> Section 3.4.2)
Syntax and alignment	–	Large numbers of suppletive stems for verbal tense, mood, aspect, person or number in Georgian (Aronson and Kiziria 1999)
	–	Frequent circumfixes in Kartvelian (<i>Testeleṭs</i> Section 11.8, <i>Rostovtsev-Popiel</i> Section 12.6.2; Harris 2010)
	–	Basic non-derived verbs forming a closed class in Archi (<i>Chumakina</i> Section 7.5.1), Ingush (<i>Komen</i> et al. Section 8.5.1) and Udi (Harris 2008)
	–	<i>Suffixaufnahme</i> in Kartvelian and ND (Plank 1995 ed.)
	–	Morphological blocking processes in Kartvelian (Wier 2011)
	–	Agreement for gender and number but not person (in most ND languages, <i>Ganenkov</i> and <i>Maisak</i> Section 3.4.1)
	–	Hierarchical alignment in Lak and Dargwa (<i>Ganenkov</i> and <i>Maisak</i> Section 3.6.7, <i>Ganenkov</i> Section 18.6.3)
	–	Adverbs, particles, postpositions and even personal pronouns as agreement targets (in many ND languages, <i>Foley</i> Section 20.2)
	–	Backward raising constructions in Adyghe (<i>Arkadiyev</i> and <i>Lander</i> Section 9.7.3)
	–	Ellipsis of verb and case-marked head noun but not other parts of NP/DP in Digor and Iron Ossetic, as well as in Eastern Armenian (<i>Erschler</i> Section 23.4.1)
	–	Morphosyntactic inversion in Kartvelian (<i>Foley</i> Section 20.4.2; Wier 2011)
	–	Multiple coexisting patterns of basic case assignment depending on tense and modality in Kartvelian (<i>Testeleṭs</i> Section 11.6, <i>Rostovtsev-Popiel</i> Section 12.8.2.2)
	–	Violation of syntactic island constraints: the coordinate structure constraint in Tanti Dargwa (<i>Sumbatova</i> Section 4.8.3); <i>wh</i> -question islands in Laz (<i>Demirok</i> and <i>Öztürk</i> Section 22.4.2)

Each of these grammatical traits taken individually presents the analyst with questions of ontological significance: how do they arise and function, and why do they persist? Taken all together, they can pose an intimidating list that resists any one simple explanation. To take an example from the Udi language (discussed in Foley’s

chapter, Section 20.2.3), person-number markers on verbs can appear as suffixes attached to the verb (1a), as enclitics to separate negators(1b) and to focal items (1c), as mesoclitics between a verb root and a light-verb stem (1d) and even as endoclitics inside otherwise inseparable verb roots (1e).

1. Distribution of Udi person markers

- a. *q'ačǵǵ-on bez tǵngin-ax bašq'-al=q'un* (Harris 2002: 117)
thief-PL-ERG my money-DAT steal-FUT.II=**3PL**
'Thieves will steal my money.'
- b. *nana-n te=ne buǵa-b-e p'a° ačik'alšey* (Harris 2002: 117)
mother-ERG not=3SG find-LV-AOR.II two toy.ABS
'Mother did not find two toys.'
- c. *q'ačǵǵ-on bez tǵngin-ax=q'un bašq'-e* (Harris 2002: 119)
thief-PL-ERG my money-DAT=**3PL** steal-AOR.II
'Thieves stole my money.'
- d. *nana-n buǵa-ne-b-e p'a° ačik'alšey* (Harris 2002: 122)
mother-ERG find-**3SG**-LV-AOR.II two toy.ABS
'Mother found two toys.'
- e. *q'ačǵǵ-on bez tǵngin-ax baš<q'un>q'-e* (Harris 2002: 122)
thief-PL-ERG my money-DAT steal<**3PL**>-AOR.II
'Thieves stole my money.'

If one wanted to teach a student the principles of such verb agreement, how would one do that? Although there is an answer, discussed at length in Harris' magisterial *Endoclititics and the origins of Udi morphosyntax* (Harris 2002), it is not a straightforward one: some verb tenses obligatorily take person markers as suffixes onto the verb stem, while other verb tenses allow these markers to float as clitics onto other constituents of the clause, and mesoclitization and endoclitization occur only as last resorts when other rules do not apply. Harris showed, to be clear, that this is not just or solely a problem of theoretical interpretation, but rather one inherent in the data itself.

Many various explanations have been proposed for why typological *rara* arise; some good summaries can be found in Plank (n.d.), Harris (2008, 2010) and Grossman (2016); see Table 3 for examples of different classes of *rara* in Caucasian languages. What is clear is that not all proposed causes have played the same role in explaining the distribution of rarities between languages. A voluminous literature exists discussing what features may or must be part of the human linguistic endowment (Haspelmath 2008; Newmeyer 2005), but such studies have not always proven empirically successful in predicting which features would be present or common in individual languages as a consequence. We would for example expect that among stop consonants bilabial, coronal and velar places of articulation are universal or

Table 3: Proposed causes of cross-linguistic rarity of features.

Metatype	Factor	Rare feature	Documentation
Innate endowment	Not present in language	Marginality of /k/ and /g/	Ubykh, <i>Beguš</i> Section 15.2.2.1
Function	Dysfunctional	1PL/2PL pronoun syncretism	Itsari Dargwa, <i>Ganenkov</i> and <i>Maisak</i> Section 3.4.3
Acquisition	Not easily acquired	Pharyngealization	In many AA and ND languages
Processing	Not easily processed	Violation of some syntactic island constraints	Tanti Dargwa, <i>Sumbatova</i> Section 4.8.3
Pathway	Few versus many pathways	Many circumfixes	In Kartvelian, <i>Testelets</i> Section 11.8
Stages	Many versus few stages	Endoclititics	Udi, <i>Foley</i> Section 20.2.3
Source	Rare versus common source construction	Fortis glottalized lateral affricate	In some ND languages, <i>Beguš</i> Section 15.2.3.2
Type	Rare type of change	Final voicing	In Lezgian, <i>Beguš</i> Section 15.4.5.2

nearly so, but in Ubykh plain velar stops like [k] and [g] without secondary articulations are marginal (in *Beguš*’ chapter, Section 15.2.2.1); they exist only in Turkish and Circassian loanwords – this despite one of the largest consonant inventories of all languages (see for example Lindblom and Maddieson 1988; Maddieson 2013a)! Most linguists would also agree that functional forces formally distinguishing different speech-act participants would lead to the avoidance of pronominal syncretisms (Cysouw 2009), and yet in the Itsari and Shari varieties of Dargwa and the Alik dialect of Kryz, a single independent pronoun exists to mark first person inclusive and second person plural (noted in *Ganenkov* and *Maisak*’s chapter, Section 3.4.3).

First language acquisition (Kusters 2003) and cognitive processing (Goodluck and Rochemont 2013) have also sometimes been cited as reasons why some features fail to be found more frequently. According to WALS, 4.1 % of languages have pharyngeal consonants, and in one study of Ammani Arabic (Mashaqba et al. 2022), Jordanian children do not acquire ‘emphatic’ (pharyngealized) consonants until somewhat later than nonemphatic equivalents. There are, as far as I know, no studies of the acquisition of pharyngeals in any Caucasian language. They are a common and apparently phylogenetically stable feature amongst Abkhaz-Adyghean and Nakh-Daghestanian languages, found in many different branches of those respective families (some discussion of which is found in *Ganenkov* and *Maisak* Section 3.2.1, *Friedman* Section 5.2.2, *Komen* et al. Section 8.2.4, *Beguš* Section 15.2.3.3, and *Beguš* Section 15.2.3.4); even if they are potentially acquired later in these languages, this has produced no demonstrable effect on their diachronic stability.

Twenty-first century research has seen a movement away from explaining rarities through a single synchronic mechanism toward a more complex organic view asking what kinds of preconditions are necessary for some kinds of rare constructions. In a series of publications, Harris (2002, 2010) has made a strong case that Udi endoclititization makes sense only as the diachronic outcome of several individual stages, each of which is typologically unexceptional but which cumulatively create highly unusual (and in Udi's case, perhaps typologically unique) final constructional patterns. Blevins (2009), Grossman (2016) and others have also argued that some constructions are rare because there are few stable logical or grammaticalizational pathways that lead to them; to cite an example used by Blevins to illustrate a putative universal failing to be expressed, coronal deletion is simply not a common sound-change, so the absence of coronals is consequently a rare outcome. In the Caucasus, we might see Kartvelian's many circumfixes (Testelelets Section 11.8) in the same light: circumfixes usually grammaticalize as the reanalysis of preexisting prefixal and suffixal material (Zingler 2022); circumfixes usually don't just appear in languages *ex nihilo*. Likewise, a fortis glottalized lateral affricate [tʰʔ] found in a few languages of Daghestan (in Beguš' chapter, Section 15.2.3.2) such as Avar, Andi, and Hunzib only arises in languages that already possess robust fortis-lenis, glottalization and lateral contrasts. Finally, we might also point out that some structures may simply be rare, which is to say, we know too few diachronic facts about some languages to be able to make a clear assessment of some rare constructions. The rule of final voicing found in Lezgian may perhaps fall into this category (discussed in Beguš, Section 15.4.2), though see Yu (2004), who argues that Lezgian final voicing results from a series of natural changes.

3 The Caucasus as a *Sprachbund*?

The fact that the Caucasus contains so many rarities in one restricted region raises another question by implication: why so many rarities *here*? Why would so many typologically unusual linguistic features accumulate in this particular region and not others? This is one question which the *Handbook* never answers directly. As is well known, the Caucasus is not phylogenetically uniform: at least three autochthonous (Abkhaz-Adyghean, Kartvelian, and Nakh-Daghestanian) and three other language phyla (Indo-European, Altaic and Semitic) are found there today. Because few modern scholars take seriously older views of 'Ibero-Caucasian' unity (see Tuite 2008 for an extended discussion), we can safely exclude common ancestry as the main explanation for why so many of these rarities are present across the region and across family boundaries.

Instead, we must look towards language contact. But this just pushes the question back one level: is the Caucasus truly a zone of contact? This old question, first

raised at least by Trubetzkoy (1931) in reference to the prevalence of glottalization, has garnered more attention in recent years as linguists direct more attention to the role that contact plays as a causal factor in language change. Perhaps the best survey of the question is found in Tuite (1999), which is mentioned in the *Handbook* only briefly in Dobrushina et al. Section 1.6 and at somewhat greater length in Belyaev Section 13.8 with regard to the Indo-European languages of the region. Tuite (1999) examined the array of proposed features that previous scholars such as Klimov (1965) and Catford (1977) had used to argue for a *Sprachbund*, and found that oft-touted presence of ergativity in the region manifests itself in radically different ways in the different families: as head-marking agreement for person and number of all arguments in Abkhaz-Adyghean with little or no case-marking; as dependent-marking cases and verb agreement for gender and number in Nakh-Daghestanian; and as a yet very different system in Kartvelian, with both head-*and*-dependent marking of shifting case-arrays in different tense and mood paradigms and a complicated system of morphological blocking for subject and object agreement, more reminiscent of Algonquian than of Abkhaz or Avar.

And what is true of ergativity is also true of many of the other features: Klimov's 'pharyngeal' feature holds true across the region only by stretching the meaning of that term beyond usefulness, as uvular consonants have a quite different and far broader cross-linguistic distribution than true pharyngeals (cf. Maddieson 2013b, 2013c, respectively), thus pushing Kartvelian out of the language union's ambit. It has become clear that languages with subject and object agreement are commonplace around the world: around 51 % of the WALS sample have verbs with both A and P marking (Siewierska 2013). Thus if prefixal subject and object agreement strike us as unusual, it is really because those markers manifest themselves as prefixes, which are considerably rarer for any inflectional morphology than suffixation is (Dryer 2013). So, many of these features much more plausibly reflect not any kind of areal typology so much as very broad general typological trends. In the end, Tuite also suggested as much, endorsing Trubetzkoy's earlier more cautious statement: "Glottalization ... appears to be a genuinely pan-Caucasian feature, just as Trubetzkoy noted over 60 years ago" (1999: 6). While a more recent survey by Chirikba (2008) took a more sanguine view of the idea, it is safe to say that regional specialists do not agree on precisely how and whether contact explains the particular shapes and modes of linguistic expression across the Caucasus. In the *Handbook*, an additional whole chapter summarizing this wide-ranging vigorous debate would have been very worthwhile, including the features mentioned in Table 4, and at a minimum discussion of how different scholars have approached major questions of ergativity and polysynthesis, and whether phonological features like glottalization, pharyngealization and labialization are truly probative of a linguistic area.

Table 4: Features proposed as constituting a *Sprachbund* in the Caucasus.

	Trubetzkoy (1931)	Klimov (1965)	Catford (1977)	Tuite (1999)	Chirikba (2008)
Glottalized obstruents	✓	✓	✓	✓	✓
‘Rich’ consonantism					✓
‘Rich’ sibilant systems					✓
Ternary contrast of stops and affricates					✓
‘Pharyngeal’/postvelar consonants		✓	✓		✓
‘Harmonic complexes’ of consonants			✓		
Agglutinative morphology		✓			✓
Prefixal SUBJ and OBJ agreement		✓			✓
Polysynthesis					✓
Directional preverbs			✓		✓
Ergative constructions		✓			✓
Inverse constructions					✓
Possessor > possessum word order					✓

This brings us back to our earlier question of why rarities seem as prevalent as they do in this region. If the accumulation of linguistic rarities in the Caucasus cannot be uncontroversially explained through common ancestry or contact, perhaps the answer is to be found in the underlying geographies that shape both phylogeny and contact. In much of her work, Nichols (1992, 1997) has demonstrated that the complex social interactions that human societies have with their environment extend even to the distribution of linguistic phyla around the world. She has discussed the Caucasus in particular as a classical residual zone:

The Caucasus serves as a refugium of sorts, attracting intrusive languages from the adjacent lowlands [t]hese intrusive languages have evidently absorbed speakers of preexistent languages, but there is no reason to believe they have obliterated whole languages, much less whole families. Intrusive languages, in other words, do not replace other languages or families but are added to them. Thus the Caucasus tends to increase in genetic and typological diversity over time. (Nichols 1992: 14)

That is, the geography and landscape of the region has shaped the way humans interacted with each other in such a way that its aggregate diversity rarely decreases significantly, but it often experiences episodes of increase in its linguistic diversity. This may provide an explanation for why rare features present in those languages are not lost, because, barring language-internal developments that lead to loss of

typologically marked features, the languages that bear them survive over long periods and are not eradicated by population and language shift. That is, the rarities become epiphenomena of the long-term sociolinguistic success of the languages in which they are spoken. In such regions, features like endoclititics, glottalized lateral affricates, multiple coarticulations and others that are statistically unlikely to arise except over long periods of time simply do not die out as fast as they would in other regions where the rates of language shift are higher. Rarity, on this view, is actually unsurprising, given long enough periods of language maintenance.

4 The *Handbook* as a guide for future research

These issues of rarity and areality throw into sharp relief many of the most basic problems that typologists and area specialists face. The *Handbook* provides a fully state-of-the-art view to this rich heritage of how these languages have functioned and arisen. But what is the path forward? Fortunately, the *Handbook* provides some guidance on this issue as well:

- Although the *Handbook* itself provides one of the first overviews of stress assignment (Borise, Chapter 16), stress remains understudied or unstudied for many languages. Borise's chapter emphasizes this by including entire sections on languages with insufficient documentation (Section 16.7.1), conflicting descriptions and accounts (Section 16.7.2) and the general lack of research done through instrumental studies (Section 16.7.3).
- Likewise, the chapter on tone (Borise, Chapter 17) is one of the first areal overviews of its kind, though tone is even less well-understood than stress in almost all languages of the region.
- The placement of Abkhaz negation markers, which can occur as a prefix or as a suffix, is still poorly understood (O'Herin, Section 10.5.7.1).
- Although the *Handbook* provides a wonderful chapter on information structure in Caucasian languages (Forker, Chapter 25), some languages remain very much understudied in this respect, e.g. Abkhaz (O'Herin, Section 10.8). Forker notes (Section 24.2.4) that there are no studies at all on givenness in Nakh-Daghestanian languages, and she suggests that this may be interconnected with the relative lack of research on prosody and suprasegmental features, a lack noted by Borise above.
- The entire domains of first and second language acquisition are, with few notable exceptions (e.g., Imedadze and Tuite 1992; Yuksel et al. 2021), entirely unstudied for most languages of the region, and understudied for the rest. An additional chapter in the Part VI 'Phenomena' on these topics would, in and of itself, have greatly contributed to our understanding on these topics.

These lacunae should not be seen as critical areas that authors and editors failed to consider, but, at nearly 1200 pages, areas the *Handbook* hardly had room to explore. In fact, they show in fact the vital and on-going state of research on the languages of the Caucasus.

References

- Alekseev, Mikhail E. 1994. Budukh. In Rieks Smeets (ed.), *The indigenous languages of the Caucasus*, vol. 4, 367–406. Delmar, NY: Caravan Books.
- Anderson, Stephen R. 1986. Disjunctive ordering in inflectional morphology. *NLLT* 4. 1–31.
- Aronson, Howard I. & Dodna Kiziria. 1999. *Georgian language and culture: A continuing course*. Bloomington, Indiana: Slavica.
- Audring, Jenny & Francesca Masini (eds.). 2019. *The Oxford handbook of morphological theory*. Oxford: Oxford University Press.
- Blevins, Juliette. 2009. Another universal bites the dust: Northwest Mekeo lacks coronal phonemes. *Oceanic Linguistics* 48. 264–273.
- Carmack, Steven. 1997. Blocking in Georgian verb morphology. *Language* 73(2). 314–338.
- Catford, John C. 1977. Mountain of tongues: The languages of the Caucasus. *Annual Review of Anthropology* 6(1). 283–314.
- Chirikba, Viacheslav A. 2008. The problem of the Caucasian Sprachbund. In Pieter Muysken (ed.), *From linguistic areas to areal linguistics*, 25–93. Amsterdam: John Benjamins.
- Cinque, Guglielmo & Richard S. Kayne (eds.). 2005. *The Oxford handbook of comparative syntax*. Oxford: Oxford University Press.
- Comrie, Bernard & Maria Polinsky. 1998. The great Daghestanian case hoax. In Anna Siewierska & Jae Jung Song (eds.), *Case, typology and grammar*, 95–114. Amsterdam: John Benjamins.
- Cysouw, Michael. 2009. *The paradigmatic structure of person marking*. Oxford: Oxford University Press.
- Dryer, Matthew. 2013. Ch. 26: Prefixing versus suffixing in inflectional morphology. In Matthew S. Dryer & Martin Haspelmath (eds.), *WALS online (v2020.3)*. Zenodo.
- Fortescue, Michael, Marianne Mithun & Nicholas Evans (eds.). 2017. *The Oxford handbook of polysynthesis*. Oxford: Oxford University Press.
- Goodluck, Helen & Michael Rochemont (eds.). 2013. *Island constraints: Theory, acquisition and processing*. Dordrecht: Kluwer Academic.
- Grossman, Eitan. 2016. From rarum to rarissimum: An unexpected zero person marker. *Linguistic Typology* 20(1). 1–23.
- Harris, Alice C. 2002. *Endoclititics and the origins of Udi morphosyntax*. Oxford: Oxford University Press.
- Harris, Alice C. 2008. Light verbs as classifiers in Udi. *Diachronica* 25(2). 213–241.
- Harris, Alice C. 2010. Explaining typologically unusual structures: The role of probability. In Jan Wohlgemuth & Michael Cysouw (eds.), *Rethinking universals*, 91–103. Berlin: de Gruyter Mouton.
- Haspelmath, Martin. 2008. Parametric versus functional explanations of syntactic universals. In Theresa Biberauer (ed.), *The limits of syntactic variation*, 75–107. Amsterdam: John Benjamins.
- Hoffherr, Patricia Cabredo & Jenny Doetjes (eds.). 2021. *The Oxford handbook of grammatical number*. Oxford: Oxford University Press.
- Imedadze, Natela & Kevin Tuite. 1992. The acquisition of Georgian. In Dan Isaac Slobin (ed.), *The crosslinguistic study of language acquisition*, 39–109. New York: Psychology Press.

- Klimov, Georgij A. 1965. *Kavkazskie jazyki*. Moscow: Akademia Nauk.
- Kusters, Wouter. 2003. *Linguistic complexity, the influence of social change on verbal inflection*. Leiden: University of Leiden PhD Dissertation.
- Lander, Yury A. & Alexander B. Letuchiy. 2010. Kinds of recursion in Adyghe morphology. In Harry van der Hulst (ed.), *Recursion and human language*, 263–284. Berlin: De Gruyter Mouton.
- Lindblom, Björn & Ian Maddieson. 1988. Phonetic universals in consonant systems. In Charles N. Li & Larry M. Hyman (eds.), *Language, speech and mind*, 62–78. London: Routledge.
- Maddieson, Ian. 2013a. Consonant inventories. In Matthew S. Dryer & Martin Haspelmath (eds.), *WALS online (v2020.3)* [Data set]. Zenodo.
- Maddieson, Ian. 2013b. Uvular consonants. In Matthew S. Dryer & Martin Haspelmath (eds.), *WALS online (v2020.3)* [Data set]. Zenodo.
- Maddieson, Ian. 2013c. Presence of uncommon consonants. In Matthew S. Dryer & Martin Haspelmath (eds.), *WALS online (v2020.3)* [Data set]. Zenodo.
- Mashaqba, Bassil, Aya Daoud, Wael Zuraïq & Anas Huneety. 2022. Acquisition of emphatic consonants by Ammani Arabic-speaking children. *Language Acquisition* 29(4). 441–456.
- Newmeyer, Frederick J. 2005. *Possible and probable languages: A generative perspective on linguistic typology*. Oxford: Oxford University Press.
- Nichols, Johanna. 1992. *Linguistic diversity in space and time*. Chicago: University of Chicago Press.
- Nichols, Johanna. 1997. Modeling ancient population structures and movement in linguistics. *Annual Review of Anthropology* 26(1). 359–384.
- Plank, Frans (ed.). 1995. *Double case: Agreement by Suffixaufnahme*. Oxford: Oxford University Press.
- Plank, Frans. n.d. 'Introductory Notes' from *Das grammatische Raritätenkabinett*, Unpublished manuscript. Available at: <https://typo.uni-konstanz.de/rara/rara-intro/>.
- Siewierska, Anna. 2013. Verbal person marking. In Matthew S. Dryer & Martin Haspelmath (eds.), *WALS online (v2020.3)* [Data set]. Zenodo.
- Trubetzkoy, Nikolai. 1931. Die Phonologischen Systeme. *Travaux du Cercle Linguistique de Prague* 4. 96–116.
- Tuite, Kevin. 1999. The myth of the Caucasian Sprachbund: The case of ergativity. *Lingua* 108(1). 1–29.
- Tuite, Kevin. 2008. The rise and fall and revival of the Ibero-Caucasian hypothesis. *Historiographia Linguistica* 35(1–2). 23–82.
- Van Craenenbroeck, Jeroen & Tanja Temmerman (eds.). 2019. *The Oxford handbook of ellipsis*. Oxford: Oxford University Press.
- Wier, Thomas R. 2011. *Georgian morphosyntax and feature hierarchies in natural language*. Chicago, IL: University of Chicago PhD dissertation.
- Yuksel, Peri, Cass Lowry & Patricia J. Brooks. 2021. Laz caregivers' talk to their young children: The importance of context and utterance type in eliciting ancestral language use. *First Language* 41(3). 268–293.
- Yu, Alan C. L. 2004. Explaining final obstruent voicing in Lezgian: Phonetics and history. *Language* 80(1). 73–97.
- Zingler, Tim. 2022. Circumfixation: A semasiological approach. *Word Structure* 15(1). 55–113.