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South America

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1. Introduction¹

The historical morphology of Indigenous South American languages presents a fascinating panorama of diachronic processes and synchronic patterns. Despite being the last major world region to be populated as humans spread across the globe, the continent is home to the largest number of linguistic genealogical units of any major world region aside from New Guinea, including a disproportionate number of isolates and many very small families. Of the relatively small number of larger language families, several are geographically widespread with notably non-contiguous distributions. This situation offers a rich range of possibilities for investigating language contact, even as it provides more restricted opportunities for comparative reconstruction. While the bulk of historical work on South American languages is relatively recent, it is currently evolving quite rapidly (see e.g. Constenla Umaña 2012, Gildea 2012, Rodrigues & Cabral 2012, Michael 2021, Urban (ed.) 2025 for state-of-the-art overviews), building on the wave of descriptive efforts over the past few decades that have greatly expanded our synchronic understanding of the languages of this continent. This new historical work is in turn informing the ongoing assessment of the effects of language contact and the resulting areal distributions of grammatical features.

South America is conventionally discussed in terms of several principal geographic regions (e.g. the Andes, Amazonia, the Chaco, etc.). However, the borders of these areas have undoubtedly always been blurred, and there is considerable evidence - linguistic, historical, ethnographic, etc. - that substantial interaction has linked them over time. Of these regions, the Central Andes has the most historical documentation, but also was once home to a large number of now lost and/or sparsely-documented languages (including many small families and isolates), with Quechuan and Aymaran languages heavily overrepresented in our knowledge of this region (for overviews of the Central Andean languages, see Adelaar with Muysken 2004 and Urban 2025). In 'Greater Amazonia' - the region spanning the vast watershed of the Amazon and Orinoco Rivers - we find several large families that are very widespread, alongside many small families and isolates; historical work in this region is fairly limited, and varies by region and family (for overviews of the Greater Amazonian languages, see Dixon & Aikhenvald 1999; Aikhenvald 2012; Epps & Michael 2023). Moving south, the Chaco region is home to a diverse set of relatively small families (as well as a few members of the more far-flung Tupian and Arawakan families); while these have as yet been the subject of limited descriptive and historical work, there is evidence that language contact has played a significant role in shaping their structures over time, as in the rest of the continent (Campbell & Grondona 2012). Finally, the several small families and isolates of the Southern Cone have mostly been lost, with only minimal documentation and very little historical work (though see Viegas Barros 1992, 2005, 2015); these are only sporadically addressed here.

This chapter offers an overview of some of the key processes and patterns evident in the historical morphology of South America. Some of these are typologically noteworthy, both in terms of the synchronic distributions of morphologically realized grammatical domains, and in terms of the diachronic

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processes and pathways that have given rise to them. While a few relatively conservative morphological domains can be identified through comparative reconstruction across South American language families - such as pronominal cross-reference marking - the languages of this continent also exhibit extensive morphological innovation across particular grammatical categories, often as a result of contact. This has led in some cases to elaborated inventories that conform to widespread areal distributions. A salient feature of many South American languages seems to be a relatively porous distinction between morphology and syntax (see Tallman & Epps 2020), which itself both feeds and is fed by processes of grammaticalization. These processes are shaped in turn by particular patterns that are prevalent across large parts of the region, such as serial verb constructions, noun incorporation, and the use of nominalization as a prominent subordination strategy. At the same time, language contact – itself a factor of the stable, long-term multilingualism that has accompanied linguistic diversity across parts of the continent – has played a key role in directing the elaboration and restructuring of grammatical domains in many languages, including the grammaticalization of new morphological forms. Contact has probably also significantly reduced the degree to which morphology can be reconstructed across many families, even, in some cases, where a relatively conservative signature remains in basic vocabulary.

Accordingly, we note that some of the parameters traditionally associated with morphology do not apply entirely straightforwardly in South American languages. In our discussion here, we focus on morphological forms and categories that may be seen as relatively bonded to a host (in terms of phonological and/or morphosyntactic criteria), and relatively functional as opposed to contentful; however, some of these etyma may nonetheless have instantiations as heads of phrases, may not be grammatically obligatory, and may be relatively phonologically and/or morphologically free with respect to their lexical hosts. Altogether, the exploration of historical morphology in South America underscores the relevance of both structural and social factors - with respect to particular typological profiles and the dynamics of language contact - in shaping the emergence of grammatical phenomena over time, and reminds us that particular constellations of these factors may lead to significant typological differences from one region to the next.

In what follows, we begin by reviewing some salient patterns of morphological change that have emerged from existing historical-comparative work, focusing on morphological domains that appear to be reconstructable in various South American families, as well as some that tend to be more innovative (Section 2). Section 3 considers some of the broader trends regarding processes of grammaticalization that have given rise to morphology across the region, while Section 4 focuses on the role of contact in driving the elaboration and/or restructuring of particular grammatical domains. Section 5 offers an in-depth exploration of several typologically noteworthy grammatical categories, with an eye to the historical development of associated morphological paradigms and forms.

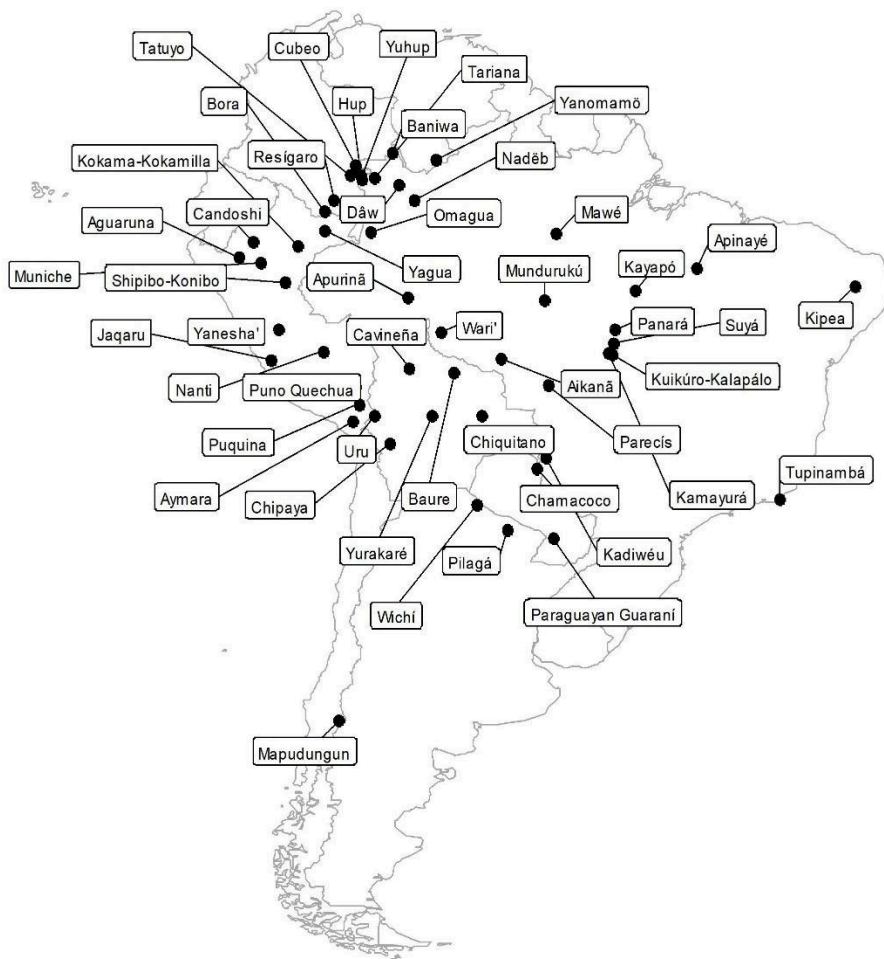


Fig. 1: Languages discussed in this chapter

2. Reconstructing morphological history in South America: perspectives and patterns

Indigenous South American languages were not recorded in written texts until the arrival of Europeans, so in contrast to some other parts of the world, our knowledge of South American historical morphology depends primarily on comparative-historical reconstruction grounded in relatively recent documentation. The earliest written materials date to the 16th and 17th centuries, when Christian missionaries undertook ambitious efforts to describe the lexicons and grammars of some South American languages and produced religious materials for the conversion of their speakers. In a few cases, these texts remain some of the most thorough and nuanced attestations of those languages (e.g. Bertonio's *Aymara Vocabulario* 1612; glottocode sout2996), and such religious and descriptive materials (some of which are quite fragmentary) are sometimes the only attestation that exists for languages that subsequently disappeared (e.g. Oré's 1607 work on Puquina; puqu1242). However, while colonial-era documents contain much important information about South American languages, they were generally only produced for the most widely spoken varieties of a few prominent families, as these were most useful for the purposes of Christianization and colonial administration; most of the region's minor languages from that time went virtually unattested, and many of those languages are no longer spoken today. Colonial-era linguistic documentation was also concentrated in the Andes—though there are a few notable works which allow for some comparative assessment of morphological change in lowland languages, including early Tupinambá

(tupi1273) grammars (e.g. Anchieta 1595; Figueira 1612) and Christian religious materials (e.g. Bettendorff 1678); Ruiz de Montoya's Guaraní (para1311) dictionary (1639), grammar (1640), and Catechism (1640); Omagua (omag1248) ecclesiastical materials from the late 17th and early 18th centuries (Michael & O'Hagan 2013); Mamiani's 1698 Kipeá (Macro-Jê) grammar (kipe1235); and a few others. While limited, materials such as these have proved to be useful sources of information about the historical development of particular families, especially regarding their phonologies (e.g. Middendorf 1890: 27-29; Mannheim 1991; Landerman 1998) and lexicons (e.g. Durston 2007). A few studies also leverage these early sources to address morphological changes, such as Michael & O'Hagan's (2013) discussion of colonial-era Omagua (omag1248), and several works drawing on Bertonio's 1612 Aymara materials (sout2996) for understanding the morphological development of that family (Cerrón-Palomino 2000; Briggs 1976; Coler 2025; Adelaar with Muysken 2004).

Since the 19th century, there has been a dramatic increase in the quantity, quality, and comprehensiveness of descriptive materials on South American languages (see Adelaar 2012a; Epps & Michael 2023 for overviews). These materials have enabled the use of comparative reconstruction to yield new insights about the internal structures of the major language families and their respective proto-languages, as seen in the ground-breaking work of Aryon Rodrigues on the Tupian and Macro-Jê families (e.g., Rodrigues 1984, 2002, 2007); Davis (1966) for Jê languages; David Payne's preliminary reconstruction of Proto-Arawakan (1991); and Parker's (1963) and Torero's (1964) pioneering work on the reconstruction of Proto-Quechuan and the internal structure and development of the Quechuan family; as well as in more recent efforts. However, this approach also has a major limitation, which is particularly acute in South America: the great majority of the continent's language families are very small, constraining opportunities for comparative reconstruction and for learning about the family-internal dynamics of morphological change (in fact, 34% of all known linguistic isolates are spoken in South America (Seifart & Hammarström 2017, van Gijn et al. 2023), while some 53% of all linguistic genealogical units in South America are isolates (Campbell 2024: 182) – constituting the highest proportion on Earth. Moreover, it is becoming increasingly clear that language contact has been a major driver of change on the continent, as we address in detail in Sections 4-5. In the following subsections, we offer a brief synthesis of some of the most salient patterns of morphological change that can be traced through the comparative reconstruction of the continent's largest language families.

2.1 Domains of relative morphological stability

The major language families of South America exhibit a great deal of diversity in their geographic extents, time depths, typological patterns, and dynamics of historical development. However, insofar as comparative reconstruction has been conducted on those families, a few notable patterns emerge regarding which domains of morphology tend to be inherited from the respective proto-languages.

One of the clearest such patterns is that person-inflection morphology and personal pronouns (two domains that are often historically related) tend to be relatively stable and amenable to comparative reconstruction (though they can also be innovated; see Section 5 for an example). This pattern is consistent with cross-linguistic observations about the relative stability of person systems and pronouns within language families around the world (Nichols 2003; cf. Campbell 1997), and can be observed even where considerable contemporary synchronic variation has developed. For instance, in the widespread Arawakan family, much of the morphology is unstable and subject to intensive innovation among the many sub-branches of the family (e.g. in the tense system; see below), yet the pronominal cross-reference system offers a robust set of reconstructable affixes (see Matteson 1972; David Payne 1991; Aikhenvald 2002: 289). The same is true of the Tukanoan family, in which the verbal person-marking system reconstructs unproblematically to the proto-language (Chacon 2018). Person inflection is also one of the most widely shared and reconstructable morphological domains within the Macro-Jê family: Nikulin (2020) reconstructs a set of person indices (*a- 2, *i- 3 non-coreferential, *ta- 3 co-referential), which occur on transitive verbs, postpositions, a subclass of 'relational' nouns, and a subclass of intransitive ('descriptive') verbs. In Proto-Tupian, a partial set of bound person markers can be reconstructed (excluding the first-person inclusive form), indicating the possessor (on nouns), absolutive argument (on

verbs), and postpositional complement (on postpositions). There are clear reflexes of this paradigm in most branches of Tupian, though there is substantial variation among the Tupian languages with respect to how they function synchronically within the family's contemporary diversity of alignment systems. In the Cariban family, Gildea (1998, 2012, inter alia) reconstructs an inverse or split intransitive pattern with a set of verbal person-markers corresponding to distinct A, Sa, and O/So values for 1st person (*i-, *w-, *u-j-), and A/Sa and O/So values for 2nd, 1st+2nd, and 3rd persons (*m-, *kit-, *Ø- and *ô-j-, *k-, *i-, respectively); a marker (*k-) indicating that A and O are both speech act participants (1A2O / 2A1O); and another (*n-) for verbs with only 3rd person participants.

Similarly, in the Andes, a person system that makes a four-way distinction between 1st exclusive, 1st inclusive, 2nd, and 3rd, and which is reflected in inflectional suffixes and personal pronouns, clearly goes back to Proto-Quechuan (however, there has been some disagreement about the form that should be reconstructed for the 1st person marker; see Adelaar with Muysken 2004: 189 for further discussion). A structurally similar four-person system of personal pronouns and suffixes can also be reconstructed in Proto-Aymaran (Cerrón-Palomino 2000), though there are important differences from Proto-Quechuan (see Section 5 for more on this point). However, it is not clear that person reference is necessarily more stable than other domains of morphology in the Quechuan and Aymaran families, since those families are relatively shallow and most of the languages' morphology can be reconstructed in the respective proto-languages.

Valency-changing morphology has also proven to be relatively stable within the large language families of South America, although at the same time it shows evidence of elaboration and innovation in some families (see Section 5). In Chibchan, middle voice and reflexive morphemes can be reconstructed (Constenla Umaña 2012), while in Proto-Tupian, valency-changing prefixes include *mo- 'causative', *er'io- ~ *er'ie- 'causative-comitative', *we- 'reflexive', and *wo- 'reciprocal' (Rodrigues & Cabral 2012). Arawakan valency-changing affixes are difficult to reconstruct—like much of Proto-Arawakan morphology—but proposals include a reflexive *-wa and reciprocal *k^hak^h (Wise 1990). In Proto-Northern-Jê (a grouping that contains Mëbêngôkre kaya1330, Apinajé apin1244, Kîsêdjê (Suyá)/ Tapayúna suya1243, Timbîra timb1253, and Panará pana1307), Nikulin & Salanova (2019) reconstruct valency-reducing morphology associated with finiteness (e.g. anticausative *aj- / *a- and *bi(t)- [finite and nonfinite]; antipassive *aw- / *a- and *ju- [finite and nonfinite]).

A third domain of relative morphological stability in the language families of South America is that of nominalizers. In Proto-Tupian it is possible to reconstruct *-at 'agent nominalizer', *-(i)pît 'patient nominalizer', *-ap 'nominalizer of circumstance/instrument', and *mi- 'object nominalizer'. Shared elements among Arawakan languages include markers of possession, which are also used as nominalizers (a set of suffixes for alienably possessed nouns and a distinct marker *-tʃî / *-hV for unpossessed inalienable nouns). The Quechuan languages feature nominalizing suffixes which play a central role in their grammars, and which can be reconstructed unproblematically in Proto-Quechuan; minimally, this includes an infinitive, agentive, instrumental/unrealized event, and stative nominalizer (Adelaar with Muysken 2004: 226-229). A similar situation obtains in Proto-Aymaran (Cerrón-Palomino 2000: 214-217).

In addition to the tendencies outlined here, which are broadly represented among the large language families of South America, there are also a few morphological domains that do not form the core of reconstructed material in those languages, but which appear in different families and in some cases represent points of general typological interest (see Section 5). For instance, an interesting family-specific phenomenon found in Panoan languages is presented by robust sets of lexicalized forms referring to parts of the body, which generally consist of a body-part prefix and a no longer productive derivational formative element. Zariquiey et al. (2022) find that, while the body part prefixes present a clear genealogical signal, the formatives do not. This suggests that the prefixes are conservative elements, while the derivational elements are more prone to diffuse.

2.2 Areas of relative instability and innovation

Comparative reconstruction in larger South American language families also reveals some notable patterns regarding innovation in particular morphological domains (see also Section 5). These include alignment and agreement (e.g. in Cariban, Gildea 2012; and Tupian, see Birchall 2015: 339), noun classifiers (e.g. Tupian, Chibchan, and other families), and tense. For instance, the Arawakan family displays many examples of bound morphology that have been grammaticalized from erstwhile free forms (e.g. applicatives from adpositions, and aspect markers from verb roots). This level of innovation limits our ability to reconstruct morphology across the family (see Aikhenvald 2002: 288). The domain of tense offers one example of this morphological heterogeneity in the Arawakan family (Table 1, see Müller 2013).

Table 1. Tense marking in several Arawakan languages (Müller 2013: 75)

<u>Language</u>	<u>Tense marking</u>
Baure (baur1253)	tenseless
Apurinã (apur1254)	suffix <i>-ko</i> ‘future’
Paresi (pare1272)	enclitic <i>-ite/te</i> ‘future’; enclitic <i>-ene/ne</i> ‘past’
Tariana (tari1256)	fused paradigm of present, past and evidentiality; suffixes <i>-mhade</i> and <i>-de</i> ‘future’
Yanesha’ (yane1238)	enclitic <i>-cha</i> ‘future’; auxiliary <i>o’ch</i> ‘future’

A final pattern that emerges from comparative studies of South American languages is that case marking is generally unstable (except in shallower families like Quechuan and Aymaran). This may be in some cases due to the fact that case marking is a relatively undeveloped morphological domain in some South American languages to begin with (see, for instance, Mapudungun mapu1245, which only has a single case marker used for a broad range of functions; Harmelink 1987; Smeets 1989: 76-83; Adelaar with Muysken 2004: 520). This instability can be seen in Proto-Tupian, in which no case markers can be reconstructed (though there was a set of postpositions, some of which later developed into case markers in various Tupian languages). However, in Chibchan it seems possible to reconstruct an ergative case marker, and therefore an ergative alignment system, although different types of ergativity have developed in individual languages, involving several types of splits (Quesada 2007: 193, Constenla Umaña 2012: 407). The development of ergativity in some families can also be traced through comparative reconstruction. For instance, while Proto-Cariban had no case marking, northern languages developed an ergative suffix/postposition from the postposition **wiya* ‘Allative/Dative/Causee/Agent’, while the southern languages Kuikuro and Kalapalo (kuik1246) developed an ergative suffix from the postposition **pôkô* ‘on, about, occupied with’ (Gildea 2012: 467).

3. Regionally relevant processes and pathways of grammaticalization

A number of historical processes and patterns are widely associated with the development of morphology in South American languages. Some of these are noteworthy from a cross-linguistic perspective, in that they apply differently or are much less frequently attested in other parts of the world. As we explore here and in the following sections, particularly relevant considerations include the role of language contact as a driver of grammaticalization, with reference to sociocultural parameters that favor small-scale multilingualism; the relevance of South American morphosyntactic profiles as favoring particular processes, pathways, and rates of grammaticalization; and evidence for a relatively porous distinction between syntax and morphology (cf. Tallman & Epps 2020).

An observation that may be made for South America is that grammaticalization is strikingly active and visible in some languages, while much less so in others. This distinction has much to do with the dynamics of intensive language contact (coupled with language maintenance), as we consider further in the sections below. The drawing of one language into a mold presented by another can lead to massive grammatical restructuring, which when coupled with relatively little direct lexical or morphological

borrowing fosters rapid grammaticalization of new morphology to fill emergent categories and paradigms. In such cases (as illustrated by Naduhup languages, the isolate Yurakaré yura1255, Arawakan Tariana tari1256, and many others), internal reconstruction may be a robust tool for tracing the development of new morphology and may be leveraged alongside comparative reconstruction (where sister-languages exist) to nail down pathways and directions of change, as well as comparison with neighboring languages to ascertain the effects of contact. In other cases, however, a language may have undergone restructuring at an early stage, and/or may have been the model in contact scenarios. The Quechuan-Aymaran contact relationship provides a good example – it is possible to recover some aspects of archaic Quechuan morphology through internal reconstruction, before that language's morphological structure was apparently remodeled on the Aymara template (Muysken 2012b; Adelaar 2012b; Emlen and Dellert 2020). As the model language, however, Proto-Aymaran offers less traction for using internal reconstruction to uncover processes of grammaticalization. Clearly, the social dynamics of contact play an important role in guiding the mechanics of grammaticalization in such cases, although those social dynamics may not have occurred recently enough to be documented.

A related observation is that grammatical morphology in some language families and/or grammatical domains appears surprisingly innovative, even where basic vocabulary may be relatively conservative. While this scenario seems remarkable in light of cross-linguistic generalizations that grammatical morphology is a relatively reliable indicator of genetic relationship (e.g. Meillet 1958), it shows that morphology may be both replaced *and* innovated (whereas basic vocabulary is for the most part only replaced) – especially when entire grammatical domains are innovated and/or elaborated, as seen in conditions of intense contact (see Epps forthcoming). In general, the most common source for morphology in South American languages is the lexicon, as might be expected through grammaticalization processes spurred by language contact. However, language contact may also promote the repurposing of existing morphology (i.e. exaptation; Lass 1990; Heath 1998), as is evident in the development of applicative and switch-reference paradigms in a number of South American languages (see Section 6).

A striking example of the effects of contact-driven grammatical restructuring is provided by the Naduhup family of northwest Amazonia. Within this small family of four languages, Hup (hupd1244) and Yuhup (yuhu1238) have experienced significant grammatical convergence toward Tukanoan languages within the Vaupés (Upper Rio Negro) contact zone (see Epps 2007, 2008c, inter alia), while their sister Nadëb (nade1244) has changed under the influence of the Arawakan languages that once dominated the Middle Rio Negro region. The fourth sister, Dâw (daww1239), has experienced what appear to be somewhat lesser degrees of restructuring, with influence from both Arawakan and Tukanoan sources. For this language family, this regional convergence toward neighboring unrelated languages has yielded striking *divergence* in typological profiles *within* the family. For example, Hup and Yuhup exhibit a heavy suffixing preference, SOV constituent order, nominative-accusative alignment, extensive root serialization of verbs, and contrastive tone; in contrast, Nadëb has ample prefixing (involving numerous clearly innovative developments, including person markers grammaticalized from pronouns and applicatives derived from incorporated postpositions), OSV constituent order, alignment patterns that include ergative-absolutive and active-stative distributions, very limited verb serialization, and contrastive vowel length but no tone. Dâw is relatively intermediate, with a more isolating profile but a suffixing preference, SVO constituent order, nominative-accusative alignment, serial verbs (but with conjoined roots showing more independence than in Hup/Yuhup), and contrastive tone alongside a marginally contrastive role for vowel length. Presumably as an outcome of this grammatical restructuring, the Naduhup family also presents a relatively extreme case of massive innovation in grammatical morphology, such that very little can be reconstructed, despite a robust genetic signal in basic vocabulary (see Epps & Bolaños 2017; Epps forthcoming).

From a more regionally focused vantage point, we can also observe that grammaticalization processes applying across languages may result in a sort of ‘funnel effect’ – whereby a set of (often unrelated) languages draw on a diverse set of source etyma to yield a comparable outcome through grammaticalization. This funnel effect is normally associated with language contact, where multiple

languages converge to a regional prototype with respect to a particular grammatical domain. The grammaticalization of evidential markers from a range of lexical sources in several unrelated languages of the Vaupés region, explored in Section 5, is an illustrative case.

Particular typological features common among South American languages are also relevant in shaping grammaticalization processes across the continent. One notable generalization, perhaps particularly evident in Amazonia, is that these languages seem to exhibit more blurring of the morphology-syntax distinction than is seen in some other parts of the world – a characteristic that evidently both feeds and is fed by processes of grammaticalization (Doris Payne 1990; Zúñiga 2017; Tallman & Epps 2020). For example, Doris Payne (1990) emphasizes the flexible positioning of verbal affixes, with corresponding changes in scope, and the tendency for particular morphemes to associate with multiple word classes (see below). She also notes that repetitions of the same suffix in a given string are not rare in this region, where one is typically more lexicalized together with a root and another is acting more productively with respect to the rest of the string. The Yagua (yagu1244) causative and potential ‘postbases’ (morphological elements derived historically from verbs; e.g. the potential < ‘love, desire’) illustrate these phenomena: they can shift around with respect to other suffixes according to scope, can take their own suffixes, and can occur more than once in a string. Payne argues that they are diachronically intermediate between roots and affixes – that they have developed the properties of true suffixes, but have retained certain verbal properties.

Another illustration of this morphology-syntax indeterminacy comes from various examples of grammatical morphemes in Amazonian languages that appear to be quite old, and yet do not conform to general expectations about morphological behavior; that is, they do not show the expected high degree of host selectivity, bonding, and relative obligatoriness. For example, a form *k^hak^h ‘reciprocal’ appears to be reconstructable to Proto-Arawakan (Wise 1990), but its reflexes occur both in verb phrases and in postpositional phrases across diverse branches of the family. These reflexes exhibit both reciprocal and comitative functions – in some cases, even within the same language, as example (1) shows for Paresi. The indeterminacy exhibited by Paresi (pare1272) *kakoa* may in fact be reconstructable to Proto-Arawakan itself (see Tallman & Epps 2020).

- (1) Paresi (pare1272; Arawakan. Brandão 2014: 259)
- | | | | |
|------------------------|-------------------------------------|---------------|-------------|
| <i>wakoakare=kakoa</i> | \emptyset = <i>aitsa-kakoa-ha</i> | <i>minita</i> | <i>hoka</i> |
| Indian=COM | 3SG=kill-RECP-PL | always | CON |
- kazaihera-ty-oa-heta*
 be.invisible?-TH-MM-PERF
 ‘They were always fighting with each other, with the Nambikwara, and he became invisible.’

In other cases, such morphemic indeterminacy overlaps with heterosemy – the co-existence of historically related etyma that occupy different morphosyntactic slots and have developed distinct corresponding functions via processes of grammaticalization. The Naduhup language Hup offers many examples of such distributions of etyma. For example, the form *big* can occur as an independent adverbial meaning ‘for a long time’; as a modifier within a noun phrase meaning ‘old (inanimate)’ (e.g. *tīw big* ‘old path’); and as a habitual aspect marker on verbs, either as a post-verbal particle (e.g. *hám-áy big* [go-DYNM HAB] ‘I always/regularly go’), or as a verbal suffix (often in its phonologically reduced form *bi-*; see Epps 2008a).

Certain types of source constructions and morphosyntactic processes play a major role in the development of new morphology in South American languages, and privilege particular grammaticalization pathways. These constructions and pathways are also undoubtedly relevant to the blurred morphology-syntax distinction noted above. Particularly noteworthy features include serial verb constructions, noun incorporation, and prevalence of nominalizations in subordination – all robustly attested typological features in South America (Doris Payne 1990; van Gijn 2014; Tallman & Epps 2020). We discuss these in turn below.

Serial verbs and other multi-predicative constructions are an important source of verbal morphology in many South American languages. An interesting example can be seen in the emergence of a middle voice marker in Yurakaré (yura1255), described by van Gijn (2010). In this language, a multi-predicative construction consisting of an ideophone² and the verb *ta* ‘say’ has given rise to a middle voice marker *-ta*, according to the following diachronic path: Stage 1, ideophone *ta*_{VERB} – Stage 2, ideophone-*ta*_{SUFFIX} – Stage 3, verb_root-*ta*. Stage 2 is also characterized by the existence of a counterpart causative, marked with *-che* (of unknown origin) or by partial reduplication. This diachronic path is clearly visible, because representative constructions of all stages are still present in the language. Most ideophonic roots can be used both in the source construction (stage 1, 2a) and in the middle versus causative (stage 2, 2b-c) construction, as illustrated for the ideophone *pu*, depicting the (sudden) emission of light. This process is shown in (2a-c).

(2) Yurakaré (yura1255; Isolate. Van Gijn field notes)

- a. *pu ta-lam=naja puyni*
 ideo say-SBJV=NSIT sun
 ‘The sun has come up (started shining)already. (lit. the sun says ‘pu’ already)’
- b. *puyni a-puta*
 sun PROG-shine
 ‘The sun is shining.’
- c. *puche-shta-y ti-tanti*
 light-FUT-1SG 1SG.P-eyes
 ‘I’ll open my eyes (lit. make my eyes shine)

A smaller subset of originally ideophonic stems have lost the ability to appear in the source construction (stage 1), e.g. *bata* ‘get going’ versus *bache* ‘send off’; *ba* is no longer a productively used ideophone. In stage 3, the use of *-tA* (but not *-che* or partial reduplication) extends to transitive verb stems of (probably) non-ideophonic origin, to mark reflexive, reciprocal, or agentless passive (e.g. *chërë* ‘pinch someone’, *chërë-të* ‘pinch oneself’, but not **chërë-che* or **chërë~chë*).

The prevalence of **noun incorporation** and the widespread use of nominalization as a subordination strategy are likewise implicated in the development of new grammatical morphology in South America, and may also contribute to the blurring of morphology and syntax, particularly with respect to the flexibility of host selection. These and other processes allow morphology to develop on nouns and be transferred to verbs, or even vice versa. Example (3) from Nadëb (Naduhup; nade1244) illustrates a process by which nominal morphology finds its way into the verb via noun incorporation. In this case, a set of postpositions has grammaticalized into an applicative inventory (Weir 1986); for some postposition-applicative pairs (as in this example), the same etymon may co-occur in a given clause with both functions.

(3) Nadëb (nade1244 Naduhup. P. Epps & K. Obert fieldnotes)

- karaba me ta-me-siñ*
 bow INSTR 3SG-MA-shoot.arrow
 ‘He shot (it) with a bow.’

Nominalization is one of the most common strategies for forming (the functional equivalent of) subordinate clauses in South America (van Gijn, Haude & Muysken 2011), where indeed this phenomenon is significantly more common than in other parts of the world (van Gijn 2014). This strategy provides an obvious mechanism by which nominal morphology, such as case markers, may spread to verbal stems – resulting in a functional expansion, as well as a morphosyntactic one (cf. Kuteva & Heine 2007). Some patterns of noun-verb morphological overlap also seem to cluster geographically (e.g. a

² Ideophones are a special category of words that depict perceptions of the external world (see Dingemanse 2019).

predominance of formal possessor/subject overlap in the Andes, while formal possessor/object overlap is rarer and more geographically scattered; van Gijn 2014). The use of participant (e.g. agent or patient) nominalization as a relativization strategy is also particularly common in South America, and may give rise to further grammaticalizations, e.g. towards purposive (same subject) relations and habitual constructions (an example from Andean languages is discussed in Section 5).

A related process involves the reanalysis of subordinate nominalizations as adverbial clauses, which may then be reanalyzed as main clauses via an ‘**insubordination**’ process. In many cases, this transition seems to be facilitated by the Amazonia-wide discursive prominence of appositional noun phrases, which easily lend themselves to adverbial interpretations. For example, the future tense marker in Hup (Naduhup) has its source in a generic nominalizer ‘thing for doing V’. Constructions involving a verb plus this nominalizer were reanalyzed as purpose adverbials (example 4), which in turn were the source of a future construction (Epps 2008b; see also Epps 2010 for a distinct case involving a similar process).

(4) Hup (hupd1244; Naduhup. Epps 2008b: 389-390)

<i>tih</i>	<i>w'ób-óh,</i>	<i>tinih</i>	<i>pib,</i>
3sg	put.in-DCL	3sg.POSSESSIVE	food.supply

‘He placed (them) in the canoe, his food supplies,

<i>tih</i>	<i>wáy-át</i>	<i>píd,</i>	<i>[tih</i>	<i>wæd-tég-éh]</i>	
3sg	emerge-OBL	DIST	3sg	eat-PURPOSE-DCL	

what he would eat when he emerged again’ (appositional NP)
 OR: ‘**in order to eat (them)** when he emerged again.’ (purpose)

While less common, we also find the **extension of verbal morphology to the noun or to other parts of speech**. A principal component of this process appears to be the extension of verbal morphology to non-verbal predicates – which itself may be facilitated by the blurred distinction between morphology and syntax. Hup evidentials offer an illustrative case: morphemes indicating nonvisual and inferred information sources were grammaticalized from verb roots within serial verb constructions, and were then extended to non-verbal predicates. An interesting feature of this trajectory is that the jump to non-verbal predicates effectively extracted the new morphemes from the core of the verbal construction, such that they apparently were able to subsequently re-associate with verbal predicates as clitics (i.e. on the periphery of the verb word). While these developments reflect the expanded scope of these newly minted evidentials, they violate the general expectation that developing morphology will increase in bondedness and host selectivity (Epps 2005).

Finally, in some cases it seems probable that morphology must have been extended among word classes, but the historical processes involved are simply opaque. A notable case is the significant formal overlap between nominal and verbal person-marking paradigms, evident in many South American languages. While such isomorphic N-V person paradigms are well attested globally (Siewierska 1998), the question of their diachronic emergence in South American languages is perhaps of particular interest, in light of the morphological promiscuity addressed above. Are we dealing with parallel grammaticalization processes from free pronouns to nominal person markers and verbal person markers, respectively, or of grammaticalization paths from free pronouns to bound pronouns on nouns, and through nouns to verbs (or vice versa)? It is also noteworthy that considerable variation exists in the verbal syntactic role to which the nominal person paradigm is formally related – a fact that seems to be independent of alignment type. For instance, Tupí-Guarani languages generally have a single person paradigm for absolutive and possessor participants, a pattern also common in Cariban languages. The discussion of person-marking in Quechuan and Aymaran languages in Section 5 offers another look at the historical processes behind the development of these markers on nouns and verbs.

4. Language contact and morphological change

As we observe in the sections above, comparative reconstruction has less traction in South America than in some other parts of the world because so many of the language families are very small, and because many of the larger families appear to have experienced considerable reorganization of their morphological inventories. In this context, tracing the effects of language contact offers important insights for understanding the historical trajectories of morphology. The restructuring of grammatical systems and categories as a result of contact has propelled processes of grammaticalization, such that new morphology has emerged, and in some cases old morphology has been repurposed for new functions. As explored below and in section 5, various grammatical categories in South American languages are distributed areally; and particularly within core zones, the relevant morphological paradigms appear to have undergone significant elaboration across multiple languages and families (see e.g. Tallman & Epps 2020). Indeed, western Amazonia is particularly instructive for assessing such contact-driven morphological developments because of the high degree of genealogical diversity represented in this area, and because in some cases related languages are also found farther afield, shedding further light on the dynamics of morphological change.

Within South America, there is some evidence for large-scale regional diffusion of typological features (see e.g. Torero 2002; Aikhenvald 2012; Campbell et al. 2020; Campbell 2024). At the continental scale, this reflects a broad east-west division, with western Amazonia, the Andes, and the Southern Cone standing in contrast to the region east of the Rio Negro and Purús basins (e.g. Doris Payne 1990; Birchall 2014; Muysken et al. 2014; Chang & Michael 2014; Michael et al. 2014; van Gijn & Muysken 2020; Emlen, van Gijn & Norder 2025). Morphologically relevant features that reflect this east-west distinction include noun phrase structure (involving nominal classification and other categories); the presence of ‘directionals’ in the verb, including associated motion morphology; and the encoding of grammatical relations (see Section 5). There are also a number of more localized regional zones in which the ethnohistorical record indicates long-term and intensive multilingualism, and evidence for convergence can be seen in the grammatical profiles of various (often unrelated) regional languages. Such regions include the Vaupés (e.g., Aikhenvald 2002; Stenzel 2005; Epps & Stenzel 2013); the Caquetá-Putumayo river basins of northern Peru and southern Colombia (Echeverri 1997; Seifart 2011); the Marañón-Huallaga area (Valenzuela 2015); the Guaporé-Mamoré region on the border of Bolivia and Brazil (Crevels & van der Voort 2008; Muysken et al. 2015); the Upper Xingu (Seki 1999; Franchetto 2011); much of the Guianas and Orinoco basin (Rivière 1984; Migliazza 1985: 20; Carlin 2017); the Chaco region (Comrie et al. 2010; Campbell & Grondona 2012; Campbell 2013); the Central Andean highlands, especially of Southern Peru and Bolivia (e.g. Urban 2025); and probably many others (see also Epps & Michael 2017; Epps 2020). At the same time, where a given language family straddles more than one contact zone, convergence of related languages toward distinct influencers may result in family-internal *divergence* in typological profile, as seen in the Naduhup family (Section 3).

Morphological forms, and especially verbal inflection, are in general relatively resistant to borrowing (Gardani et al. 2015), in South America as elsewhere. For instance, in the Quechuan and Aymaran languages, the borrowing of grammatical suffixes is relatively uncommon, even though there has been profound structural convergence between those families, and even though lexical borrowing has been heavy: The Quechuan and Aymaran languages have come to share between a quarter and a third of their lexicons (Adelaar 1986; Emlen 2017), and nearby languages like Puquina (Emlen, Mossel et al. 2025; puqu1242), Yanasha’ (Adelaar 2006; Michael, Zariquiey, and Emlen forthcoming; yane1238), Uru-Chipaya (Muysken 2012a: 239-240; chip1262, uruu1244), and Mapudugun (Golluscio, Fraguas & Mellico 2009; mapu1245) have likewise taken on a substantial number of loanwords. The handful of suffixes shared between those languages include the borrowing of the Quechuan nominal pluralizer *-kuna* into Jaqaru (Hardman 1966: 86; jaqa1244) and into Puquina (alongside the native Puquina pluralizer *-gata*; Emlen, Mossel et al. 2025), and the borrowing of several Aymara (sout2996) verbal derivational suffixes into Puno Quechua (puno1238), where those languages have long been spoken side by side (Adelaar 1987). There are also a few cases of Spanish suffixes borrowed into Quechuan languages (e.g. plural *-s* and diminutive *-ito/a*). This small number of shared grammatical suffixes stands in contrast to

the profound effects of structural convergence between the Quechuan and Aymaran languages, and to their high degree of lexical borrowing.

Cases of likely classifier borrowing can be observed among languages of the Guaporé-Mamoré region of the southwest Amazon (van der Voort 2005: 397); between Pilagá (Guaycuruan; pila1245) and Wichí (Mataguayan; wich1261) in the Gran Chaco (Comrie et al. 2010: 112); in the northwest Amazon, from Arawakan and East Tukanoan languages into Kakua (Kakua-Nukak; Bolaños 2016; cacu1241); and from Bora (Boran; bora1263) into Resígaro (Arawakan; Seifart 2012; resi1247). Indeed, Seifart notes the wholesale borrowing of entire paradigms of noun class, gender, and number markers, as well as associated bound grammatical roots into Resígaro, even while the lexicon and other morphosyntactic subsystems were largely unaffected. He observes that such patterns of morphosyntactic interrelationship among borrowed morphemes are attested more widely, and proposes that this “Morphosyntactic Subsystem Integrity” may be a general principle of morphological borrowing (Seifart 2012). Ciucci (2020) notes similar patterns in his study about the borrowing of nominal and verbal person marking morphology between languages of the Zamucoan, Guaycuruan and Mataguayan languages of the Chaco region. See also van der Voort (2005: 400), Crevels & van der Voort (2008: 167) on widespread forms in a set of unrelated Guaporé-Mamoré languages.

Other formal morphological similarities are widely distributed among unrelated languages and are suggestive of possible borrowing, but are considerably more tenuous – particularly those involving short forms and frequently attested phonemes. Several examples are discussed by David Payne (1990), including the negative element *ma*; a causative affix of the form *mV*; a verbal causative prefix consisting of a single (usually a back) vowel; a directional affix of a form *pV*; and a valence-changing affix *ka* (which may reconstruct to Proto-Arawakan). Payne (1990: 81-85) also points out that sets of possessive markers on nouns resembling those of Arawakan languages (in both form and function) are attested in the Cariban and Arawakan families and in the isolate Candoshi (cand1248). Some observations of this sort involving widespread similar forms in Amazonian languages have in fact been demonstrated to be due at least partly to chance (see e.g. van Gijn 2024).

More ubiquitous than the direct borrowing of morphological forms is the role of contact in directing internal developments. As noted above, various regions in South America exhibit considerable convergence in grammatical categories. The languages of the Chaco region, for example, share a number of features that are undoubtedly the product of contact-driven grammaticalization in at least some cases (regardless of whether they might be taken as diagnostic of a geographically defined ‘linguistic area’ centered on this region, see Campbell & Grondona 2012), though we still have little detailed information on these processes. Examples of shared categories with morphological realizations in Chacoan languages belonging to distinct families include gendered demonstratives; possessive classifiers; active-stative verb alignment, nominal tense marking (alongside a lack of verbal tense); and rich sets of affixes indicating location and direction (e.g. ‘on top’, ‘from high to low’; see Campbell 2013: 278-279). Ciucci (2020) observes that contact among the Zamucoan, Guaycuruan, and Mataguayan families in this region has led to changes such as the introduction of a clusivity distinction and a split between two types of plurality in Chamacoco (Zamucoan; cham1315; on a Mataguayan model); and adjustments in affix ordering and gender-number marking on possessive classifiers in Kadiwéu (Guaycuruan; kadi1248; on a Zamucoan model). The Vaupés region of northwest Amazonia also provides ample illustration of contact-driven grammatical changes among languages of the Tukanoan, Arawakan, Naduhup, and Kakua-Nukak families. These include the elaboration and restructuring of evidentiality, serial verb constructions, nominal classification systems, and several other domains (see e.g. Aikhenvald 2002; Epps 2007, 2008c; Bolaños 2016).

In the context of the areal patterns observed for many grammatical categories in South America, some typologically striking degrees of elaboration are evident, particularly within core areas of these categories’ geographic distributions. Contact has had a clear hand in directing relevant processes and pathways of grammaticalization, leading in some cases to the ‘funnel effect’ noted above, whereby distinct morphological sources populate paradigms with parallel functions across a set of neighboring languages. We explore some of these developments in detail in Section 5, where we focus on the

grammatical systems of associated motion, tense, evidentiality, valence-adjustment, and nominal classification, among others. Further examples include the contact-driven emergence of an inclusive/exclusive distinction, as noted above for Chamacoco, and as is also suggested by the presence of clusivity across unrelated languages in the Andes and Peruvian foothills (Crevels & Muysken 2005). Another example is the ‘frustrative’ (i.e. ‘do V in vain’); this category appears to be highly susceptible to diffusion, such that despite their ubiquity, frustrative etyma rarely reconstruct to proto-languages across the region (Overall 2017; see also Aikhenvald 2012: 185).

Most of the examples of contact-driven grammaticalization mentioned above involve the emergence of new morphology (or, in some cases, the recruitment of old morphology) to fill externally defined functional roles, often associated with particular morphosyntactic positions, but with little relevance of phonological form. Occasionally, however, similarity of form plays a role in directing grammaticalization trajectories, yet still without direct borrowing. An example from the Vaupés is given in examples (5-8): Tukano (tuca1252) exhibits an inferred evidential construction (with parallels in several other Tukanoan languages), consisting of a nominalized verb stem plus the verb *nii* ‘to be’, inflected with a suffix fusing visual evidentiality, tense, person, number, and gender (as is typical for Tukanoan verbs; example 5). Hup (Naduhup) has innovated a construction that appears to be directly calqued on the Tukanoan one (example 6), consisting of a verb stem (with zero nominalization) plus the verb ‘to be’ with declarative inflection (associated with visual evidentiality and non-future tense). This construction likewise leverages a form *ni* ‘to be’ – which may itself be a much older Tukanoan loan. Most tellingly, Tariana (Arawakan) also has an inferred evidential construction based on a form resembling *ni*, but in this case the evidential marker came about through the reanalysis of the anterior aspect marker *-nhi* (in combination with past visual evidential forms; example 7). This development was likely built on the Tukanoan model, further catalyzed by the formal similarity between the relevant forms (Aikhenvald 2002: 124).

(5) Tukano (tuca1252; Tukanoan. Aikhenvald 2002: 124)

<i>ĩsá</i>	<i>yě-ki-mihi</i>		<i>nimá</i>	<i>me'ra</i>	<i>wěri-'ki</i>
1pl	grandparent-MASC-NOM.PAST.MASC		poison	with	die-NOM.MASC.PERF
<i>nii-wĩ</i>					
be-DST:PST.VIS.3SGNF					

‘Our late grandfather had died through poison.’ (we assume)

(6) Hup (hupd1244; Naduhup. Epps 2010: 208)

<i>mumũy=cúm</i>	<i>nút</i>	<i>tih-ăn</i>	<i>tih</i>	<i>kit-næn-d'əh-ni-h !</i>
arm=begin	here	3sg-OBJ	3sg	cut-come-send-INFR2-DECL

‘Here on the upper arm he cut her!’ (speaker saw the wound/scar)

(7) Tariana (tari1256; Arawakan. Aikhenvald 2002: 124)

<i>wa-whe-ri-miki-ri</i>	<i>hiwyasi-ne</i>	<i>di-ñami-nhina</i>
1PL-grandparent-MASC-NOM.PAST-MASC	poison-with	3SGNF-die-ANT+REM.P.VIS

‘Our late grandfather had died through poison.’ (we assume)

Finally, many languages in South America exhibit congruent pathways of grammaticalization that can be attributed to contact (Heine & Kuteva 2003; Ross 2007). Illustrations include the development of an Aktionsart marker ‘be early in doing V’ from the verb ‘be awake’ in Tariana and in Tukano (Aikhenvald 2003: 11), and the development of the inferred evidential construction from the verb ‘be’ in Hup and Tukano described just above (as well as various other developments involving the verb ‘be’ in Vaupés languages; see Epps 2012). A further instructive example of this phenomenon involves the Quechuan and Aymaran language families and their neighbors in the Central Andes, where a wide-ranging process of grammaticalization has taken place in Quechuan, Aymaran, and Puquina. This

process concerns the extension of agentive nominalization to several innovative functions, including the formation of relative clauses, purpose clauses, and the habitual past or present (see discussion in Adelaar 2020 and Cerrón-Palomino 2008: 144, 229-231, 239). Setting aside the specific manifestations of this process in each language family, it is evident that this morpheme has come to fulfill a specific array of corresponding grammatical functions across all three families. Given that some of these extensions of the agentive nominalizer (in particular the purposive and habitual uses) are typologically uncommon, making chance similarities unlikely, they are most plausibly attributed to structural convergence, whereby the heterogeneous functions of the agentive nominalizer in one of those lineages served as a grammaticalization template for the others, without the borrowing of the morpheme itself (note that the form of each language's agentive nominalizer is different, despite their closely corresponding functions).

5. Morphological developments across grammatical domains

Various grammatical domains in South American languages exhibit a striking tendency toward elaboration (i.e. with many grammaticalized distinctions constituting large paradigms), which are often concentrated within particular geographic areas. These patterns point to a considerable role for morphological innovation via grammaticalization – often traceable through internal and comparative reconstruction – with areal diffusion as a catalyst (see Section 4; see also Tallman & Epps 2020). Other domains, such as pronominal cross-referencing morphology, appear relatively stable across language families (Section 2), but these too show evidence of innovation and elaboration in particular cases. The ubiquity of contact-induced innovation in South American languages, and the difficulty that this creates for family-internal reconstruction, has shaped the way historical linguistics has developed in South America, with a very strong focus on contact as an explanatory principle of the distribution of linguistic features. Therefore, this section focuses on the role of contact in shaping particular grammatical domains in South American languages: 1) tense systems, 2) evidentiality, 3) nominal classifier systems, 4) valence-adjusting morphology, and 5) pronominal markers.

Some of the most elaborate **tense systems** in the world are found in South America, particularly in languages of western Amazonia and the Andean foothills. Of the 63 Amazonian languages surveyed by Müller (2013), most have three to four grammatical tenses, and roughly half encode at least two remoteness distinctions in the past and one in the future (Müller 2013: 68-69; see also Dahl & Velupillai 2013, which also shows a clustering of remoteness distinctions in South America). Some of these tense systems also show intricate associations with evidentiality, which is likewise a highly elaborated category in western Amazonia (a notable case is Matsigenka; Fleck 2007). Furthermore, Müller (2013: 61-69) observes that tense morphology in related languages within her sample exhibit a low degree of cognacy – thus pointing to a high rate of innovation – in contrast to wider cross-linguistic characterizations of tense as relatively stable (Wichmann & Holman 2009; see also Epps forthcoming for illustrations of this morphological heterogeneity in several Amazonian language families, and the discussion in Section 2 above).

In keeping with the areal distribution of complex tense systems, there is ample evidence that contact has catalyzed grammaticalization in expanding and altering tense inventories. For example, Müller (2013: 61) observes that the several degrees of temporal remoteness in Kokama-Kokamilla (Tupi-Guarani; coca1259) are likely to have emerged on the model of its Panoan neighbors. In the Upper Rio Negro region, both Hup (Naduhup) and Tariana (Arawakan; Aikhenvald 2002: 121) have elaborated a recent-remote-future distinction under Tukanoan influence; in the Hup case, this has involved the grammaticalization of a remote past tense marker from an adverb ('yesterday/before yesterday'), and a future marker from a generic nominalizer (itself an erstwhile noun; see Epps 2007, 2008c). Contact is likewise probably responsible for the congruent past tense marking in the Quechuan and Aymaran families, involving a binary distinction between experienced past and non-experienced past (Faller 2004), a distinction that has also been adopted in Andean Spanish (ande1249) as a result of contact (Escobar 1994). And in southwest Amazonia, the future tense marker in the neighboring languages Aikanã (isolate; aika1237) and Wari' (Chapakuran; wari1268) has its source in a quotative construction (which is also evident in the second-language Portuguese (braz1246) of Aikanã speakers; van der Voort 2016). These

examples illustrate how unrelated languages in contact have elaborated congruent tense systems as a result of language contact.

Systems of **evidentiality** – the grammaticalized coding of information source – are also notably elaborate in parts of South America. Indeed, de Haan's (2013) survey indicates evidential marking in 68% of the languages sampled within South America, with 27% having both direct and indirect evidentials (a distinction that captures, in de Haan's terms, whether "the speaker has some sort of sensory evidence for the action or event he/she is describing"; 2013). Compare this with worldwide figures of 57% and 17%, respectively (see also Müller 2013). The grammaticalization of etyma to fill developing and/or expanding evidential paradigms can be traced in numerous languages. For example, sources from verbs include 'hear' > reported evidential in Nanti (Arawakan; nant1250; Michael 2008), 'seem' > inferred evidential in Jarawara (Arawakan; jara1276; Aikhenvald 2004: 275), and 'be (hidden) inside' > inferred evidential and 'make noise' > nonvisual evidential in Hup (Naduhup), via the grammaticalization of verb roots in serial verb constructions (Epps 2005). Sources from nouns include 'noise' > reported evidential in Yanomamö (Yanomaman, yano1261, possibly via noun incorporation; Aikhenvald 2004: 284). Other morphology can also be recruited for evidential marking (a kind of 'hermit crab' process; see Heath 1998), such as the shift from declarative/indicative marker > direct evidential in Shipibo-Konibo (Panoan; ship1254), and past tense markers > reportive/attested in Kamayurá (Tupi-Guaranian; kama1373); Aikhenvald 2004: 278, 280; citing Valenzuela 2003 and Seki 2000).

While surveys of evidentiality in South America suggest several points of independent innovation, there has clearly been extensive diffusion more widely (Aikhenvald & Dixon 1998; Aikhenvald 2004: 292; Müller 2013: 228). The Guaporé-Mamoré (Crevels & van der Voort 2008) and the Vaupés regions (Epps 2005; Aikhenvald 2012: 277) offer particular hotspots of evidentiality, with systems in these regions exhibiting multiple evidential distinctions, and with close parallels across unrelated languages. The central Andean languages (including Quechuan and Aymaran) also encode similar evidential categories morphologically, as well as the experienced/non-experienced distinction in the tense system discussed above; both of these have also spread to Andean Spanish (see e.g. Babel 2009). Some of these cases offer opportunities to trace specific processes of grammaticalization by which regionally defined evidential paradigms have been populated by internally sourced material, as can be seen in several of the lexical sources listed above. In the Vaupés region, for example, Hup (Naduhup; Epps 2005) and Tariana (Arawakan; Aikhenvald 2002: 117-129) have both expanded their evidential inventories from one marked form (reported) to five categories (visual, nonvisual, inferred, assumed, and reported), and Kakua (Kakua-Nukakan; Bolaños 2016) has experienced similar elaboration. These parallel developments offer another good example of a 'funnel' of grammaticalization, such that, for example, Tariana and Hup both developed a nonvisual evidential, but from the verbs 'hear, feel' and 'make noise', respectively. The model for these changes was provided by East Tukanoan languages, which also share elaborate evidential inventories. These in turn probably developed earlier via internal processes of grammaticalization, almost certainly promoted by family-internal contact (see Malone 1988).

Nominal classifier systems are another highly elaborated grammatical domain in South America which seems in many instances to be attributable to language contact. These systems have a high concentration in western Amazonia; though Quechuan and Aymaran languages, in contrast, have no classifier systems or grammatical gender systems at all (which likewise might be considered an areal pattern; see Adelaar 2008a). The Amazonian classifier systems tend to involve large, open sets of classifying etyma (with the capacity to pull nouns into the system as 'repeater' classifiers, i.e. the form used in the classifier slot 'repeats' that of the relevant noun); they often exhibit both derivational and agreement-related functions; and they typically allow for flexible assignment across a range of morphosyntactic environments (hence the labels 'multiple' or 'multifunctional' for such systems; Aikhenvald 2000; Krasnoukhova 2012; see also Doris Payne 1987; Derbyshire & Payne 1990; Grinevald & Seifart 2004; Seifart & Payne 2007). Classifying etyma typically display varying degrees of grammaticalization within a particular language. For example, classifiers in Tatuyo (Tukanoan; tatu1247; Gomez-Imbert 2007) range from highly grammaticalized forms that are not easily associated with a lexical source and have abstract semantics (e.g. *-ro/to/~do* 'general', *-i/ki* 'cylindrical', *-wi* 'tubular'), to

those that are more semantically specific (e.g. *--wa* ‘river’, *-ja* ‘palm’, *--jo* ‘pot’), to barely grammaticalized ‘repeaters’ that are identical to nouns in both form and meaning (e.g. *-wii* ‘house’).

Classifier systems themselves appear to be of varying time-depths across Amazonian languages and families. Arawakan classifier systems are robust across the family, with various elements that reconstruct to Proto-Arawakan (David Payne 1991). Seifart (2007) likewise reconstructs classifiers for both the Boran and Witotoan families, though he observes that areal diffusion probably contributed to the development of both systems. In the Tupian family, classifiers related to physical characteristics of objects have developed from nouns in Mundurukú (mund1330) and Ramarama (rama1257); it is not clear whether these are independent developments, or whether contact between the branches played a role (see Rodrigues & Cabral 2012 for further discussion). In Chibchan, Constenla Umaña (2012) also mentions a set of inalienably possessed nouns, which have developed into classifier-like suffixes in several languages, including numeral classifiers. A number of Macro-Jê languages exhibit possessive classifiers, but whether these existed in the proto-language is still unclear (Nikulin 2020: 193).

In some languages classifiers are clearly a more recent innovation. Incipient systems in a number of languages appear to have their source in compounding constructions, often involving the semantic extension of terms for plant parts, in particular. Evidence for such processes can be seen in Yagua (Peba-Yaguan; yagu1244), in which contact with Bora (bora1263) was also a factor (Doris Payne 2007); Yuhup (Ospina 2002); and Apurinã (Facundes 2000; apur1254) – which as an Arawakan language appears to have mostly lost the old classifier system and developed the beginnings of a new one. Epps (2007) traces the process of classifier emergence in detail for Hup (Naduhup; see also Ospina 2002 for Yuhup). In this language, plant part terms figure in nominal compounds (e.g. *píp-b’ah* [paxiuba-split.wood] ‘split half of paxiuba trunk’); as is evident in all three of Hup’s sister-languages, including the most distant sister Nadëb); from there, these terms were extended from those compounds referring to plants to those referring to body parts (e.g. *nəg’æd-b’ah* [mouth-split.wood/flat.thing] ‘tongue’); this first step toward semantic extension is also evident in Hup’s sister-language Dâw. From there, the semantically extended plant-part terms became generalized to compounds involving a wider range of nouns and members of other word classes, including verb roots, yielding a highly productive system for deriving new lexical items on the one hand (e.g. *pæy-b’ah* [thunder/lightning/electricity-CL:flat.thing] ‘solar panel’), and on the other functioning as a multifunctional classifier system much like those seen in neighboring Tukanoan and Arawakan languages, which presumably provided the model that propelled this grammaticalization process (see also Epps & Obert 2021).

Several of the examples above, as well as the cases of direct borrowing of classifier etyma noted in Section 5, highlight the relevance of contact in directing the development of nominal classifier systems in South American languages. As with other grammatical domains, the clustering of relatively complex and structurally similar nominal classification systems in western Amazonia – with particular hotspots in the northwest and southwest (see Krasnoukhova 2012: 305) – suggests a significant role for areal diffusion. More localized areal distributions of classifying systems likewise point to contact; we note van der Voort’s (2005) observations of similarities in classification strategies (as well as forms) among languages of the Guaporé-Mamoré region (southwest Amazonia); the prevalence of possessive classifiers associated with domesticated animals in the Chaco region (Comrie et al. 2010; Campbell 2013); the evident diffusion of possessed classifier constructions from Cariban into North Arawakan languages in northeastern South America (Aikhenvald 2000: 383; Aikhenvald & Green 1998); and Seifart & Payne’s (2007: 384-385) comment that the “close correspondences of—sometimes very specific—nominal classification structures across Tucanoan, Witotoan, Peba-Yaguan, and some Arawak languages . . . [point to] widespread processes of areal diffusion”.

Contact may also elaborate and/or restructure existing classifier systems. For example, the classifier systems of most Tukanoan and Arawakan languages in the Upper Rio Negro region, while very similar, differ in their treatment of animals: while both systems classify humans by animacy/gender and inanimates by shape, animals in Tukanoan languages are classified by animacy/gender (like humans; example 8a), whereas in Arawakan languages they are classified by shape (like inanimates; example 8b).

However, in cases of close Tukanoan-Arawakan contact, we see a realignment of this pattern, such that Tariana (Arawakan) classifies animals according to the Tukanoan pattern (i.e. by animacy/gender; example 8c, from Aikhenvald 2002), while elsewhere Cubeo (Tukanoan; cube1242) classifies some animals according to the Arawakan pattern (i.e. by shape; Gomez-Imbert 1996).

- (8) (a) Tukano (tuca1252; Tukanoan. Aikhenvald 2002: 92)

pinō phai-gi
snake big-CL:ANIM
'a big snake'

- (b) Baniwa (bani1255; Arawakan. Aikhenvald 2002: 89)

a:pi maka-khay
snake big-CL:CURVILINEAR
'a big snake'

- (c) Tariana (tari1256; Arawakan. Aikhenvald 2002: 91)

api/a:pi hanu-ite
snake big-CL:ANIM
'a big snake'

Despite the fact that certain features of **valence-adjusting systems** reconstruct in some South American language families (see Section 3), they also present examples of morphological elaboration. Such innovative developments are perhaps most notable in the western sub-Andean area, where strikingly complex applicative systems are attested across a range of languages (see Wise 1990, 2002: 335; Danielsen 2007; Valenzuela 2010; Birchall 2014). Valence-adjusting morphemes are very often transparently derived from – and indeed sometimes even hard to distinguish from – incorporated postpositions or nouns. In Paresi (Arawakan; pare1272), for example, various postpositions can be incorporated with valence-adjusting or argument-rearranging functions (Brandão 2014: 276). An extensive set of applicative prefixes in Nadëb (Naduhup) appear to have their origins in incorporated postpositions (see example (3) above), and two different etyma in Hup (Naduhup) with reflexive/reciprocal functions derive from incorporated nouns meaning ‘sibling’ (‘sibling in general’; ‘opposite-sex sibling’); see example (9) (Epps 2010, 2011). Once again, contact has undoubtedly played a role in the elaboration of valence-adjusting morphology in many South American languages; in the Vaupés region, for example, Hup and Tariana both display innovative valence-related morphology that appears to follow a Tukanoan model (of which the development of a pre-verbal reciprocal is one example; see Epps 2007, 2010 for Hup; Aikhenvald 2002: 113-116 for Tariana).

- (9) Hup (hupd1244; Naduhup. Epps 2008a: 497)

híd bab'-ʔíd-íy
3pl sibling-speak-DYNM
'They are chatting (together).'

The grammatical category of **associated motion** involves dedicated verbal morphology that expresses spatial displacement or change of location relative to the event encoded by the verb (Guillaume 2016: 81). Associated motion is a highly elaborated category in many languages of western Amazonia, with particularly intricate systems attested from Bolivia to southern Colombia (Guillaume 2016: 82). Some languages within this focal region exhibit over a dozen markers, which also often show interactions with tense (prior/concurrent/subsequent motion) and grammatical relations (subject/object motion). An example of a language that distinguishes multiple associated motion values is Cavineña (Takanan; cavi1250), in which we find *V-ti-* ‘go and V’; *V-na-* ‘come and V’; *V-aje-* ‘V while going’; *V-be-* ‘V while coming’; and *V-kena-* ‘V and go’, among others (Guillaume 2016: 81). Where they can be identified, the

historical sources of associated motion markers are typically lexical verbs of motion, with grammaticalization often facilitated by serial/compound verb constructions (Doris Payne 1990: 223; Guillaume 2013). Indeed, some languages appear to exhibit incipient associated motion, where motion verbs in combination with other verbs perform comparable functions, although they still function as full verbs (e.g. ‘come’ and ‘go’ in Hup; see Epps 2008a).

The areal clustering of associated motion morphology in western South America suggests that it has emerged and/or been elaborated via contact-driven grammaticalization in many of the languages in which it occurs. This conclusion is supported by the relative lack of comparable resources (i.e. either very simple systems or no associated motion at all) in related languages located on the periphery of the region – an observation that is particularly evident for Arawakan languages, which tend to have robust associated motion systems within the core of the areas in which associated motion is prominent, and very little outside it (Guillaume 2016: 124). Guillaume (2013) observes that even for the Takanan language family, where the system is particularly elaborate (up to thirteen markers), only four markers appear to reconstruct to the proto-language; others are transparently derived via grammaticalization from independent lexical verbs of motion.

Switch-reference (the grammatical coding of a referential switch or referential continuity of participants, usually of the subject, in clause-combining) is a conspicuous feature of western South American languages. The possible diachronic sources for switch-reference (hereafter, SR) markers cross-linguistically seem to be quite disparate: a number of possibilities have been proposed in the literature, including pronouns, conjunction markers (Haiman 1983; Givón 1983), nominalizers, deictic elements (Givón 1983), case markers (Austin 1980, 1981), and TAME markers (Roberts 1997; Gordon 1983). As far as we are aware, no systematic study yet reviews the diachronic development of SR markers in South American languages, so it is also beyond the scope of this chapter to do so. However, we can identify some functional overlaps of SR markers with other categories, which indicate historical connections. These connections suggest, in line with the global picture, that SR markers develop out of disparate source constructions, often as the result of the repurposing or extension of an existing morphological element.

There are a number of examples of homophonous switch-reference and case morphemes e.g. in Tacanan, Panoan, Chicham, Aymaran, and Ecuadorian Quechua, though they do not always present straightforward cases, as the SR markers often contain case forms in addition to further material. As an example of this path, Overall (2016), focusing on Chicham language Aguaruna (agua1253), shows that the different subject (DS) marker $-(n)\tilde{i}$ originated as an oblique case marker that was grammaticalized into a subordinate marker and subsequently became specialized as a DS marker, or element that forms part of the DS marker. This marker is cognate with the locative case marker $=(n)\tilde{i}$. Overall (2016: 463) argues for a historical connection based on allomorphic patterns. Aguaruna also has a second set of SR suffixes which mark referential continuity between participants in different syntactic roles. The subject to object identity marker *-tatamana* is analyzed as originating in a nominalization with relative clause function consisting of a subject nominalizer **-tatama* (indicating the role of the relativized argument in the relative clause) and the accusative case marker *-na* (indicating the role of the relativized argument in the matrix clause). Subsequently this marker acquired a broader application, beyond relativization.

There are also historical connections between pronominal forms and SR markers in some South American languages. For instance, some Aymaran languages exhibit a set of four different-subject markers, e.g. Jaqaru *-ijana* ‘1’, *-imana*, ‘2’, *-ipana* ‘3’, *-isana* ‘1 + 2’ (Hardman 1966: 72-73; jaqa1244; note that this system has collapsed to 3rd person *-ipana* in most Southern Aymaran varieties). Historically, these morphemes clearly contain person-marking elements that are also reflected in the Proto-Aymaran nominal possessive markers (**-ŋa* ‘1’, **-ma* ‘2’, **-p^ha* ‘3’, **-sa* ‘1+2’; Cerrón-Palomino 2000: 204) and personal pronouns (**naya* ‘1’, **huma* ‘2’, **up^ha* ‘3’, **hiw(a)sa* ‘1+2’; *ibid.*: 193) (see also Cerrón-Palomino & Carvajal-Carvajal 2009: 198). A slightly different situation is presented by Tukanan languages, whose same subject (SS) markers are specified for gender and number of the subject participant. These markers derive from the gender markers, which are found in several contexts in the language, among them as markers of subject agreement, on free pronouns, and as nominalizers. The SR

functionality is possibly mediated by their nominalizing function (Bruil 2019), although the precise diachronic steps are unclear. One possibility, following one of the diachronic paths for SR systems suggested by Givón (1983), is that an opposition arose from bound or weak gender elements in SS constructions versus the use of independent pronouns in DS contexts.

A few cases exemplify contact-induced change in SR systems. Under the influence of neighboring East Tukanoan languages, Arawakan Tariana has developed a switch-reference system (Aikhenvald 2002). It is not clear what the diachronic source for all markers in the system is, but the same-subject temporal (‘after’) marker *-hyume* stems from the verb *whyume* ‘be over, be last’. Ecuadorian Quechuan varieties have innovated a new morphologically marked opposition between SS and DS purpose clauses, possibly as a result of contact with Barbacoan languages. In Quechuan varieties south of Ecuador, which exhibit the older system, purpose clauses are marked with the combination of the nominalizer *-n(q)a* and the benefactive case marker *-paq*, distinguishing between SS and DS purpose events by using obligatory person reference only for DS purpose clauses, and only optionally marking person on SS purpose clauses. Ecuadorian Quechua retained a paradigmatic opposition of *-ngapaj* (the inherited purpose construction) for SS contexts, and recruited the 3rd person imperative marker *-chun* for DS contexts (used with all persons). This development was likely prompted by the loss of nominal person marking, which made it impossible to distinguish DS and SS purpose clauses. The resulting paradigmatic opposition between *-ngapaj* (SS) and *-chun* (DS), combined with absence of person marking, is reminiscent of the Barbacoan switch-reference system, which extends to purpose clauses, and which likely functioned as a model for this change in Ecuadorian Quechuan varieties. The contact-induced scenario is supported by further parallels between Barbacoan and Ecuadorian Quechuan: the DS person marker is also used to code third person imperatives in Barbacoan languages, and in both Barbacoan and Ecuadorian Quechua, the purpose SR system extends to marking ‘want’-complements (Bruil 2011).

Pronominal markers on verbs appear to be one of the relatively few grammatical categories that reconstruct robustly within a number of Amazonian language families, as observed in Section 2.³ Nevertheless, there are also cases of their innovation, usually as a result of contact. An example can be seen in Nadëb (see 10), the only member of the Naduhup family to have pronominal verbal prefixes (or proclitics); their development was probably catalyzed by contact with neighboring Arawakan languages. The innovative nature of Nadëb’s pronominal prefixes is evidenced by their limited distribution and by their similarity to the free pronouns, in addition to their absence in the rest of the family. Only pronominal A arguments expressing second person singular and third person singular and plural (*ma-*, *ta-*, and *ra-*, respectively) are marked via verbal prefixes; all other pronominal arguments and person/number values are represented via elements that are independent from the verb. The second and third person singular forms presumably derive from free pronouns, which are cognate across the family (compare e.g. Hup 2sg *ʔam*, 3sg *tih*; Nadëb 2sg *õm/ma-*, 3sg *ta-*), although the third person plural form *ra-* is less easily accounted for (see Epps forthcoming).

(10) Nadëb (nade1244; Naduhup. P. Epps & K. Obert fieldnotes)

<i>ma-karen</i>	<i>mafu:k</i>	<i>ʔu:h ?</i>
2SG.A-want	manioc.flour	part
‘Do you want some of the manioc flour?’		

Another case of contact-induced innovation in pronominal markers is found in the Quechuan and Aymaran languages. Structurally similar person-marking paradigms in both the nominal and verbal domains can be reconstructed in both Proto-Quechuan and Proto-Aymaran, but they have followed different historical trajectories (Fig. 2). The Quechuan nominal and verbal person markers came from a

³ Pronominal forms in South American languages are often the main or even sole evidence presented for distant genealogical relations; see Muysken 2018, who cites cases for the connection between Chiquitano (chiq1253) and Macro-Jê (Adelaar 2008b), Puquina and Arawakan (Adelaar & Van de Kerke 2009; see also Adelaar 2020; Emlen, Mossel et al. 2025) and Munihe (muni1258) and Arawakan (Gibson 1996).

single paradigm that likely existed earlier in the Quechuan lineage, while the personal pronouns are not historically related to these morphemes. In Aymaran, by contrast, it is the personal pronouns and the nominal person markers that share a single source, while the verbal person markers come from another origin entirely (Muysken 2012b: 89-90; Adelaar 2020: 985; Emlen 2025).



Fig. 2: Different historical trajectories of Quechuan and Aymaran person markers

This example gives one illustration of how the close structural parallels between the Quechuan and Aymaran languages have emerged through different historical pathways, as morphology has been recruited from different sources to fulfill comparable functions in a sort of ‘funnel’ process (cf. the discussion of contact-driven convergence in Section 4 above).

Sometimes, substantial changes in person marking systems seem to coincide with what must have been significant historical events, associated with expansions. In Tupian, although an almost complete person paradigm can be reconstructed for Proto-Tupian, the languages of the Tupi-Guarani branch (the most widespread and numerous branch of the family), have completely innovated the person paradigms. This process has involved creating new paradigms and shifting the functions of existing paradigms, while largely leaving intact the formal overlap between direct objects, (some) intransitive subjects, possessors and postpositional complements, which is reconstructable in Proto-Tupian (Jensen 1998; Gildea 2002; Birchall 2015). Much of the likely source material for the innovated person forms, however, seems to have disappeared from the languages. Given the widespread presence of these newly organized paradigms in Tupi-Guaranian, these changes must have occurred in pre-Proto-Tupi-Guaraní, after the split from Mawé (sate1243) and Awetí (awet1244), and just before the developments that gave rise to the rapid expansion of the Tupi-Guaraní branch.

6. Conclusion

The Indigenous languages of South America, with their enormous genealogical and typological diversity, present numerous opportunities for understanding the dynamics of morphological change. Some of these are specific to or at least particularly evident within this continent, and have methodological and theoretical consequences for historical linguistics. First, since Indigenous South American languages were not written until relatively recently, upon the arrival of Europeans – and then, only in a few major varieties of a few major families – the documentary record is not in itself very informative about historical morphology. In this context, comparative reconstruction emerges as a particularly important method for tracing developments in some families. In Section 2, we presented some of the more stable domains of morphology which can be understood in this manner, in addition to several domains of morphology that are more unstable and tend to be subject to innovation.

However, comparative reconstruction also faces limitations in South America. For most families, we have only recently begun to approach a level of description needed for reliable reconstruction. Moreover, the continent is home to an unusually high number of small language families and linguistic isolates, such that there are only a few large families whose histories can be illuminated in detail with these methods. Furthermore, the profound influence of contact among South American languages has limited the amount of morphology that can be reconstructed in those proto-languages. For these reasons,

understanding the effects of language contact, in the context of the stable, long-term multilingualism which characterizes the social life of language use in many parts of the continent, has emerged as a crucial point of evidence in interpreting the historical morphology of South America. These points are explored in Section 3 (considering processes of grammaticalization), Section 4 (focusing specifically on contact-induced grammatical restructuring and elaboration), and Section 5 (investigating the historical emergence of typologically noteworthy grammatical categories in South American languages).

The patterns we present here show the historical morphology of South American languages to be a rich and exciting field of research. We can expect many new insights ahead, as more documentation becomes available, as new comparative work is undertaken, and as the social dynamics of multilingualism and language contact – and their role in generating the areal-typological patterns discernible across the region – become better understood.

References

- Adelaar, Willem F. H. 1986. La relación Quechua–Aru: Perspectivas para la separación del léxico. *Revista Andina* 4. 379–426.
- Adelaar, Willem F. H. 1987. Aymarismos en el Quechua de Puno. *Indiana* 11. 223–31.
- Adelaar, Willem F. H. 2006. The Quechua Impact in Amuesha, an Arawak Language of the Peruvian Amazon. In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.), *Grammars in Contact: A Cross-Linguistic Typology*, 290–312. Oxford: Oxford University Press.
- Adelaar, Willem F. H. 2008a. Towards a Typological Profile of the Andean Languages. In Alexander Lubotsky, Jos Schaeken, and Jeroen Wiedenhof, with the assistance of Rick Derksen and Sjoerd Siebinga (eds.), *Evidence and Counter-Evidence: Essays in Honour of Frederik Kortlandt*. Vol. 2: *General Linguistics*, 23–33. Amsterdam/New York: Rodopi.
- Adelaar, Willem F. H. 2008b. Relações externas do Macro-Jê: O caso do chiquitano. In Stella Telles & Aldir Santos de Paula (eds.), *Topicalizando Macro-Jê*, 9-28. Recife: Edições Néctar.
- Adelaar, Willem F. H. 2012a. Historical overview: Descriptive and comparative research on South American Indian languages. In Lyle Campbell & Verónica Grondona (eds.), *The indigenous languages of South America: A comprehensive guide*, 1–58. Berlin: de Gruyter Mouton.
- Adelaar, Willem F. H. 2012b. Modeling convergence: Towards a reconstruction of the history of Quechuan–Aymaran interaction. *Lingua* 122(5). 461–469.
- Adelaar, Willem F. H. 2020. Grammaticalization in the Quechuan and Aymaran languages of the Central Andes. In *Grammaticalization Scenarios from Africa, the Americas, and the Pacific*, edited by Walter Bisang and Andrej Malchukov, 977–1006. De Gruyter Mouton.
- Adelaar, Willem F. H. and Simon van de Kerke 2009. Puquina. In Mily Crevels and Pieter Muysken (eds.), *Lenguas de Bolivia*, vol. I, 125–146. La Paz: Plural Editores.
- Adelaar, Willem F. H., with Pieter Muysken. 2004. *The Languages of the Andes*. Cambridge Language Surveys. Cambridge: Cambridge University Press.
- Aikhenvald, Alexandra Y. 2000. *Classifiers*. Oxford: Oxford University Press.
- Aikhenvald, Alexandra Y. 2002. *Language Contact in Amazonia*. Cambridge: Cambridge University Press.
- Aikhenvald, Alexandra Y. 2003. Mechanisms of change in areal diffusion: new morphology and language contact. *Journal of Linguistics* 39. 1–29.
- Aikhenvald, Alexandra Y. 2004. *Evidentiality*. Oxford & New York: Oxford University Press.
- Aikhenvald, Alexandra Y. 2012. *The languages of the Amazon*. Oxford: Oxford University Press.
- Aikhenvald, Alexandra Y., and R.M.W. Dixon. 1998. Evidentials and areal typology: a case study from Amazonia. *Language Sciences* 20. 241–257.
- Aikhenvald, Alexandra Y. & Diana Green. 1998. Palikur and the Typology of Classifiers. *Anthropological Linguistics* 40(3). 429–480.
- Anchieta, J. de. 1595. *Arte de grammatica da lingua mais usada na costa do Brasil*. Coimbra: Antonio de Mariz.
- Austin, Peter. 1980. Switch-Reference in Australian Languages. In *Studies of Switch-Reference*, edited by Pamela Munro, 7–47. Los Angeles, CA: University of California at Los Angeles.
- Austin, Peter. 1981. Switch-Reference in Australia. *Language* 57(2). 309–334.
<https://doi.org/10.2307/413693>.
- Babel, Anna M. 2009. Dizque, evidentiality, and stance in Valley Spanish. *Language in Society* 38(4). 487–511.

- Bertonio, Ludovico. 1612. *Vocabulario de la Lengua Aymara*. Juli, Peru: Francisco del Canto.
- Birchall, Joshua. 2014. *Argument Marking Patterns in South American Languages*. PhD dissertation, Radboud Universiteit Nijmegen.
- Birchall, Joshua. 2015. A comparison of verbal person marking across Tupian languages. *Boletim Do Museu Paraense Emílio Goeldi. Ciências Humanas* 10 (2). 325-345. <https://doi.org/10.1590/1981-81222015000200007>.
- Bolaños, Katherine. 2016. *A Grammar of Kakua*. Amsterdam: LOT dissertations series.
- Brandão, Ana Paula B. 2014. *A Reference Grammar of Paresi-Haliti (Arawak)*. PhD dissertation, University of Texas at Austin.
- Briggs, Lucy Therina. 1976. *Dialectal Variation in the Aymara Language of Bolivia and Peru*. Doctoral dissertation, University of Florida.
- Bruil, Martine. 2011. The Emergence of Future Converbs in Imbabura Quichua: Pre-Hispanic Language Contact as a Possible Explanation. In *Language Contact in Times of Globalization*, edited by Cornelius Hasselblatt, Peter Houtzagers, and Remco Van Pareren, 27–44. Leiden: Brill.
- Bruil, Martine. 2019. The Rise of the Nominalizations: The Case of the Grammaticalization of Clause Types in Ecuadorian Siona. In *Nominalization in Languages of the Americas*, edited by Roberto Zariquiey, Masayoshi Shibatani, and David W. Fleck, 391–417. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/tsl.124.10bru>.
- Campbell, Lyle. 1997. Amerindian personal pronouns: A second opinion. *Language* 73. 339–51.
- Campbell, Lyle. 2013. Language Contact and Linguistic Change in the Chaco. *Revista Brasileira de Linguística Antropológica* 5(2). 259–291.
- Campbell, Lyle. 2024. *The Indigenous Languages of the Americas: History and Classification*. Oxford and New York: Oxford University Press.
- Campbell, Lyle & Veronica Grondona. 2012. Languages of the Chaco and Southern Cone. In Lyle Campbell & Verónica Grondona (eds.), *The Indigenous languages of South America: A comprehensive guide*, 625–668. Berlin: de Gruyter Mouton.
- Campbell, Lyle, Thiago Chacon & John Elliott. 2020. Contact and South American indigenous languages. *Handbook of Language Contact* (2nd edition), ed. by Raymond Hickey, 625–648. Hoboken, NJ: Wiley-Blackwell.
- Carlin, Eithne B. 2017. Language contact in southern Suriname: The case of Trio and Wayana. In Kofi Yakpo & Pieter Muysken (eds.), *Boundaries and bridges: Language contact in multilingual ecologies*, 229–256. Berlin: de Gruyter Mouton.
- Cerrón-Palomino, Rodolfo. 2000. *Lingüística Aimara*. Cuzco: Centro de Estudios Regionales Andinos Bartolomé de Las Casas.
- Cerrón-Palomino, Rodolfo. 2008. *Quechumara: Estructuras paralelas del Quechua y del Aimara*. La Paz: UMSS / PROEIB Andes / Plural Editores.
- Cerrón-Palomino, Rodolfo, and Juan Carvajal-Carvajal. 2009. Aimara. In *Lenguas de Bolivia*, edited by Mily Crevels and Pieter Muysken. Vol 1, 169–213. La Paz: Plural Editores.
- Chacon, Thiago C. 2018. Indexação verbo-sujeito nas línguas Tukáno: categorização dos referentes nominais e sua codificação nos verbos. *Revista Brasileira de Linguística Antropológica*, 6(1). 239–268. <https://doi.org/10.26512/rbla.v6i1.21065>
- Chang, William & Lev Michael. 2014. A relaxed admixture model of language contact. *Language Dynamics and Change* 4(1). 1–26.
- Ciucci, Luca. 2020. Matter borrowing, pattern borrowing and typological rarities in the Gran Chaco of South America. *Morphology* 30. 283–310.

- Coler, Matt. 2025. Jaqaru. In *Oxford Guide to the Languages of the Central Andes*, edited by Matthias Urban. Oxford: Oxford University Press.
- Comrie, Bernard, Lucía A. Golluscio, Hebe González and Alejandra Vidal. 2010. El Chaco como área lingüística, in Z. Estrada Fernández and R. Arzápalo Marín (eds.), *Estudios de lenguas amerindias 2: contribuciones al estudio de las lenguas originarias de América*, 85–130. Hermosillo, Sonora (Mexico): Editorial Unison.
- Constenla Umaña, Adolfo. 2012. Chibchan Languages. In Lyle Campbell and Verónica Grondona (eds.), *The Indigenous Languages of South America*, 391–440. Berlin: de Gruyter Mouton. <https://doi.org/10.1515/9783110258035.391>.
- Crevels, Mily, and Pieter Muysken. 2005. Inclusive-Exclusive Distinctions in the Languages of Central-Western South America. In Elena Filimonova (ed.), *Clusivity: Typology and case studies of the inclusive–exclusive distinction*, 314–339. Amsterdam: John Benjamins.
- Crevels, Mily & Hein van der Voort. 2008. The Guaporé-Mamoré region as a linguistic area. In Pieter Muysken (ed.), *From linguistic areas to areal linguistics*, 151–179. Amsterdam & Philadelphia: John Benjamins.
- Dahl, Östen and Viveka Velupillai. 2013. Tense and Aspect. In: Dryer, Matthew S. & Haspelmath, Martin (eds.) *WALS Online* (v2020.3). <https://doi.org/10.5281/zenodo.7385533>.
- Danielsen, Swintha. 2007. *Baure: An Arawak Language of Bolivia*. Leiden: CNWS Publications.
- Davis, Irvine. 1966. Comparative Jê phonology. *Estudos Linguísticos: revista brasileira de linguística teórica e aplicada* 1. 10–24.
- Derbyshire, Desmond and Doris Payne. 1990. Noun Classification Systems of Amazonian Languages. In Doris Payne (ed.), *Amazonian linguistics: Studies in Lowland South American Languages*, 243–271. Austin: University of Texas Press.
- Dingemanse, Mark 2019. “Ideophone” as a comparative concept. In Kimi Akita & Prashant Pardeshi (Eds.), *Ideophones, Mimetics, Expressives*, 13–33. Amsterdam: John Benjamins.
- Dixon, R.M.W. and Alexandra Y. Aikhenvald (eds.) 1999. *The Amazonian languages*. Cambridge: Cambridge University Press.
- Durston, Alan. 2007. *Pastoral Quechua: the history of Christian translation in colonial Peru, 1550-1654*. Notre Dame, IN: University of Notre Dame Press. <https://doi.org/10.2307/j.ctvpg8689>
- Echeverri, Juan Alvaro. 1997. *The People Of The Center Of The World: A Study in Culture, History, and Orality in the Colombian Amazon*. PhD dissertation, New School for Social Research.
- Emlen, Nicholas Q. 2017. Perspectives on the Quechua–Aymara contact relationship and the lexicon and phonology of Pre-Proto-Aymara. *International Journal of American Linguistics* 83(2). 307–340.
- Emlen, Nicholas Q. 2025. The Quechuan-Aymaran relationship. In Matthias Urban (ed.), *Oxford Guide to the Languages of the Central Andes*. Oxford University Press.
- Emlen, Nicholas Q. and Johannes Dellert. 2020. On the polymorphemic genesis of some Proto-Quechuan roots: Establishing and interpreting non-random form/meaning correspondences on the basis of a cross-linguistic polysemy network. *Diachronica* 37(3). 318–367.
- Emlen, Nicholas Q., Arjan Mossel, Simon van de Kerke, and Willem F. H. Adelaar. 2025. Puquina. In Matthias Urban (ed.), *Oxford Guide to the Languages of the Central Andes*. Oxford University Press.

- Emlen, Nicholas Q., van Gijn, Rik, and Norder, Sietze. 2025. The Andean-Amazonian interface: Sociolinguistic relations and areal-typological patterns. In Matthias Urban (ed.), *Oxford Guide to the Languages of the Central Andes*. Oxford University Press.
- Epps, Patience. 2005. Areal Diffusion and the Development of Evidentiality: Evidence from Hup, *Studies in Language* 29(3). 617–650.
- Epps, Patience. 2007. The Vaupés melting pot: Tukanoan influence on Hup. In Alexandra Aikhenvald and R. M. W. Dixon (eds.), *Grammars in Contact: A Cross-Linguistic Typology*, 267–289. Oxford: Oxford University Press.
- Epps, Patience. 2008a. *A grammar of Hup*. Berlin, New York: Berlin: Mouton de Gruyter.
- Epps, Patience. 2008b. From “wood” to future tense: Nominal origins of the future construction in Hup. *Studies in Language* 32(2). 383–404.
- Epps, Patience. 2008c. Grammatical borrowing in Hup. In Yaron Matras and Jeanette Sakel (eds.), *Grammatical Borrowing: A Cross-linguistic Survey*, 551–565. Berlin: Mouton de Gruyter.
- Epps, Patience. 2010. Linking valence change and modality: Diachronic evidence from Hup. *International Journal of American Linguistics* 76(3). 335–356.
- Epps, Patience. 2011. Reciprocal constructions in Hup. In Nicholas Evans, Alice Gaby, Stephen Levinson and Asifa Majid (eds.), *Reciprocals and Semantic Typology*, 315–328. Amsterdam: John Benjamins.
- Epps, Patience. 2012. On form and function in language contact: A case study from the Amazonian Vaupés region. In Isabelle Léglise and Claudine Chamoreau (eds.), *Dynamics of Contact-Induced Language Change*, 195–230. Berlin: de Gruyter Mouton.
- Epps, Patience. 2020. Amazonian linguistic diversity and its sociocultural correlates. In Mily Crevels and Pieter Muysken (eds.), *Language Dispersal, Diversification, and Contact: A Global Perspective*, 275–290. Oxford: Oxford University Press.
- Epps, Patience. Forthcoming. Exploring innovation in grammatical morphology. In Nora Boneh (ed.), *Language Change: Theoretical and Empirical Perspectives*. Berlin: Springer.
- Epps, Patience and Katherine Bolaños. 2017. Reconsidering the ‘Makú’ family of northwest Amazonia. *International Journal of American Linguistics* 83(3). 467-507.
- Epps, Patience & Lev Michael. 2017. The areal linguistics of Amazonia. In Raymond Hickey (ed.), *The Cambridge handbook of areal linguistics*, 934–963. Cambridge, UK: Cambridge University Press.
- Epps, Patience & Lev Michael. 2023. Introduction: The languages of Amazonia. In Patience Epps and Lev Michael (eds.), *Amazonian Languages: An International Handbook, Volume 1*, xvii–lxi. Cambridge, UK: Cambridge University Press.
- Epps, Patience and Karolin Obert. 2021. Naduhup languages and the typology of nominal classification. *Cadernos de Etnolinguística* 10(1). e100104.
- Epps, Patience and Kristine Stenzel (eds.). 2013. *Upper Rio Negro: Cultural and Linguistic Interaction in Northwestern Amazonia*. Rio de Janeiro: Museu do Índio-FUNAI. Ebook available at <http://www.etnolinguistica.org/biblio:epps-stenzel-2013>.
- Escobar, Anna María. 1994. Evidential Uses in the Spanish of Quechua Speakers in Peru. *Southwest Journal of Linguistics* 13. 21-43.
- Facundes, Sidney da Silva. 2000. *The Language of the Apurinã People of Brazil*. PhD dissertation, University of New York, Buffalo.
- Faller, Martina. 2004. The Deictic Core of ‘Non-Experienced Past’ in Cuzco Quechua. *Journal of Semantics* 21(1). 45-85.

- Fleck, David. 2007. Evidentiality and Double Tense in Matsigenka. *Language* 83. 589-614.
- Franchetto, Bruna (ed.). 2011. *Alto Xingu: Uma Sociedade Multilíngue*. Rio de Janeiro: Museu do Índio-FUNAI.
- Gardani, Francesco, Peter Arkadiev, & Nino Amiridze (eds.). 2015. *Borrowed Morphology*. Berlin: de Gruyter.
- Gibson, Michael L. 1996. *El Munichi: Un idioma que se extingue*. Yarinacocha: SIL International.
- van Gijn, Rik. 2010. Middle Voice and Ideophones, a Diachronic Connection: The Case of Yurakaré. *Studies in Language* 34 (2). 273–97. <https://doi.org/10.1075/sl.34.2.02gij>.
- van Gijn, Rik. 2014. Subordination Strategies in South America: Nominalization. In Loretta O'Connor and Pieter Muysken (eds.), *The Native Languages of South America: Origins, Development, Typology*, 274–96. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781107360105.015>.
- van Gijn, Rik, Katharina Haude, and Pieter Muysken. 2011. Subordination in South America: An Overview. In Rik van Gijn, Katharina Haude, and Pieter Muysken (eds.), *Subordination in Native South American Languages*, 1–24. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/tsl.97.01van>.
- van Gijn, Rik, Sietze J Norder, Leonardo Arias, Nicholas Q. Emlen, Matheus Azevedo, Allison Caine, Saskia Dunn, et al. 2023. The Social Lives of Isolates (and Small Language Families): The Case of the Northwest Amazon. *Interface Focus* 13. 1320220054. <https://doi.org/10.1098/rsfs.2022.0054>.
- van Gijn Rik & Pieter Muysken. 2020. Highland-lowland relations: a linguistic view. In Adrian Pearce, David G. Beresford-Jones, and Paul Heggarty (eds.), *Rethinking the Andes-Amazonia divide: a cross-disciplinary exploration*, 178–210. London: UCL Press.
- van Gijn, Rik. 2024. Contact-induced diffusion of applicatives in northwestern Amazonia? In Fernando Zúñiga and Denis Creissels (eds.), *Applicative constructions*, 309–347. Berlin: Mouton de Gruyter.
- Gildea, Spike. 2002. Pre-Proto-Tupí-Guaraní Main Clause Person-Marking. In Ana Suely Cabral and Aryon D. Rodrigues (eds.), *Línguas Indígenas Brasileiras. Fonologia, Gramática e História. Atas Do I Encontro Internacional Do GTLI Da ANPOLL*, Vol 1, 315–326. Belém: Editoria Universitária U.F.P.A.
- Gildea, Spike. 1998. *On reconstructing grammar: Comparative Cariban morphosyntax*. Oxford: Oxford University Press.
- Gildea, Spike. 2012. Linguistic studies in the Cariban family. In Lyle Campbell & Verónica Grondona (eds.), *The Indigenous languages of South America: A comprehensive guide*, 441–494. Berlin: de Gruyter Mouton.
- Givón, Talmy. 1983. Topic Continuity in Discourse: The Functional Domain of Switch-Reference. In John Haiman and Pamela Munro (eds.), *Switch-Reference and Universal Grammar: Proceedings of a Symposium on Switch Reference and Universal Grammar, Winnipeg, May 1981*, 51–82. Amsterdam: John Benjamins.
- Golluscio, Lucía, Adriana Fraguas and Fresia Mellico. 2009. Mapudungun vocabulary. In Martin Haspelmath & Uri Tadmor (eds.), *World Loanword Database*. Available online at <http://wold.clld.org/vocabulary/41>, Accessed on 2023-06-2. Leipzig: Max Planck Institute for Evolutionary Anthropology.
- Gomez-Imbert, Elsa. 1996. When Animals Become ‘Rounded’ and ‘Feminine’: Conceptual Categories and Linguistic Classification in a Multilingual Setting, in J. J. Gumperz and S. C.

- Levinson (eds.), *Rethinking Linguistic Relativity*, 438–469. Cambridge: Cambridge University Press.
- Gomez-Imbert, Elsa. 2007. Tukanóan Nominal Classification: The Tatuyo System. In Leo Wetzels (ed.), *Language Endangerment and Endangered Languages: Linguistic and Anthropological Studies with Special Emphasis on the Languages and Cultures of the Andean-Amazonian Border Area*, 401–428. Leiden: CNWS Publications.
- Gordon, Lynn. 1983. “Switch-Reference, Clause Order, and Interclausal Relationships in Maricopa.” In John Haiman and Pamela Munro (eds.), *Proceedings of a symposium on switch reference and universal grammar, Winnipeg, May 1981*, 83–104. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/tsl.2.07gor>.
- Grinevald, Colette and Frank Seifart. 2004. Noun classes in African and Amazonian languages: Towards a comparison. *Linguistic Typology* 8. 243–285.
- Guillaume, Antoine. 2013. Reconstructing the category of “associated motion” in Tacanan languages (Amazonian Bolivia and Peru). In Ritsuko Kikusawa & Lawrence A. Reid (eds.), *Historical Linguistics 2011. Selected papers from the 20th International Conference on Historical Linguistics, Osaka, 25–30 July 2011*, 129–151. Amsterdam & Philadelphia: John Benjamins Publishing Company.
- Guillaume, Antoine 2016. Associated Motion in South America: Typological and Areal Perspectives, *Linguistic Typology* 20. 81–177.
- de Haan, Ferdinand. 2013. Semantic distinctions of evidentiality. In Matthew S. Dryer and Martin Haspelmath (eds.), *The World Atlas of Language Structures Online*. <http://wals.info/chapter/77>.
- Haiman, John. 1983. On Some Origins of Switch-Reference Marking. In John Haiman and Pamela Munro (eds.), *Switch-Reference and Universal Grammar: Proceedings of a Symposium on Switch Reference and Universal Grammar, Winnipeg, May 1981*, 105–28. Amsterdam: John Benjamins.
- Hardman, Martha J. 1966. *Jaqaru: Outline of Phonological and Morphological Structure*. The Hague: Mouton.
- Harmelink, Bryan L. 1987. The uses and functions of ‘mew’ in Mapudungun. *Lenguas Modernas* 14. 173–178.
- Heath, Jeffrey. 1998. Hermit crabs: Formal renewal of morphology by phonologically mediated affix substitution. *Language* 74(4). 728–759.
- Heine, Bernd, and Tania Kuteva. 2003. On contact-induced grammaticalization. *Studies in Language* 27. 529–572.
- Jensen, Cheryl J. 1998. Comparative Tupí-Guaraní Morphosyntax. In Desmond C. Derbyshire and Geoffrey K. Pullum (eds.), *Handbook of Amazonian Languages*, 489–618. Berlin: Mouton de Gruyter.
- Krasnoukhova, Olga. 2012. *The Noun Phrase in the Languages of South America*. PhD Dissertation, Nijmegen: Radboud Universiteit.
- Kuteva, Tania and Heine, Bernd. 2007. *The Genesis of Grammar: A Reconstruction*. Oxford University Press.
- Landerman, Peter. 1998. Internal reconstruction in Aymara and Quechua. In Jane H. Hill, P.J. Mistry and Lyle Campbell (eds.), *The Life of Language: Papers in Linguistics in Honor of William Bright*, 35–57. Berlin/New York: Mouton de Gruyter.
- Lass, Roger. 1990. How to do things with junk: Exaptation in language change. *Journal of Linguistics* 26(1). 79–102.

- Malone, Terrell A. 1988. The origin and development of Tuyuca evidentials. *International Journal of American Linguistics* 54. 119–140.
- Mannheim, Bruce. 1991. *The Language of the Inka since the European Invasion*. Austin: University of Texas Press.
- Matteson, Esther. 1972. Proto Arawakan. In Esther Matteson, Alva Wheeler, Frances Jackson, Nathan Waltz, and Diana Christian (eds.), *Comparative studies in Amerindian languages*, 160–242. The Hague: Mouton.
- Meillet, Antoine. 1958. *Linguistique historique et linguistique générale*. Paris: Klincksieck.
- Michael, Lev. 2008. *Nanti evidential practice: language, knowledge, and social action in an Amazonian society*. Ph.D. dissertation, University of Texas at Austin.
- Michael, Lev. 2021. The classification of South American languages. *Annual Review of Linguistics* 7. 329–349.
- Michael, Lev, William Chang, and Tammy Stark. 2014. Exploring Phonological Areality in the Circum-Andean Region Using a Naive Bayes Classifier. *Language Dynamics and Change* 4(1). 27–86.
- Michael, Lev, and Zachary O’Hagan. 2013. *A Linguistic Analysis of Old Omagua Ecclesiastical Texts*. Unpublished ms.
- Michael, Lev, Roberto Zariquiey, and Nicholas Q. Emlen. Forthcoming. Phonological adaptation of loanwords from Indigenous and colonial languages in Yanésha’.
- Middendorf, Ernst W. 1890. *Die einheimischen Sprachen Perus, Vol. 1: Das Runa Simi oder die Kshua- Sprache*. Leipzig: Brockhaus.
- Migliazza, Ernesto C. 1985. Language of the Orinoco-Amazon region: Current status. In Harriet M. Klein & Louisa Stark (eds.), *South American Indian languages: Retrospect and prospect*, 17–139. Austin, TX: University of Texas Press.
- Müller, Neele. 2013. *Tense, aspect, modality, and evidential marking in South American Indigenous languages*. Amsterdam: LOT Dissertation Series.
- Muysken, Pieter. 2012a. Contacts between Indigenous Languages in South America. In Lyle Campbell and Verónica Grondona (eds.), *The Indigenous Languages of South America*, 235–58. Berlin: De Gruyter.
- Muysken, Pieter. 2012b. Modeling the Quechua-Aymara Relationship: Structural Features, Sociolinguistic Scenarios, and Possible Archeological Evidence. In Paul Heggarty and David Beresford-Jones (eds.), *Archaeology and Language in the Andes: A Cross-Disciplinary Exploration of Prehistory*, 85–110. Oxford: Oxford University Press.
- Muysken, Pieter. 2018. Grammatical archaeology: History and contact in the Indigenous languages of South America. In Katerina Harvati, Gerhard Jäger and Hugo Reyes-Centeno (eds.), *New perspectives on the peopling of the Americas*, 61–78. Tübingen: Kerns Verlag.
- Muysken, Pieter, Harald Hammarström, Joshua Birchall, Swintha Danielsen, Love Eriksen, Ana Vilacy Galucio, Rik van Gijn, et al. 2014. The Languages of South America: Deep Families, Areal Relationships, and Language Contact. In Loretta O’Connor and Pieter Muysken (eds.), *The Native Languages of South America: Origins, Development, Typology*, 299–322. Cambridge: Cambridge University Press.
- Muysken Pieter, Harald Hammarström, Joshua Birchall, Rik van Gijn, Olga Krasnoukhova & Neele Müller. 2015. Linguistic areas, bottom-up or top-down? The case of the Guaporé-Mamoré, In Bernard Comrie & Lucia Golluscio (eds.), *Language Contact and Documentation / Contacto lingüístico y documentación*, 205–237. Berlin: De Gruyter Mouton.

- Nichols, Joanna. 2003. Diversity and stability in language. In Brian D. Joseph and Richard D. Janda (eds.), *Handbook of historical linguistics*, 283–310. Oxford: Blackwell.
- Nikulin, Andrey. 2020. *Proto-Macro-Jê: Um estudo reconstrutivo*. Brasília: Universidade de Brasília dissertation.
- Nikulin, Andrey, and Andrés Pablo Salanova. 2019. Northern Jê verb morphology and the reconstruction of finiteness alternations. *International Journal of American Linguistics* 85. 533–67.
- Ospina Bozzi, Ana María. 2002. *Les structures élémentaires du Yuhup Maku, langue de l'Amazonie Colombienne: Morphologie et syntaxe*. PhD dissertation, Université Paris 7 – Denis Diderot.
- Overall, Simon E. 2016. Switch-Reference and Case-Marking in Aguaruna (Jivaroan) and Beyond, In Rik van Gijn and Jeremy Hammond (eds.), *Switch Reference 2.0*, 453–472. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/tsl.114.13ove>.
- Overall, Simon E. 2017. A typology of frustrative marking in Amazonian languages. In Alexandra Y. Aikhenvald and R. M. W. Dixon (eds.), *The Cambridge Handbook of Linguistic Typology*, 477–512. Cambridge: Cambridge University Press.
- Parker, Gary J. 1963. La clasificación genética de los dialectos Quechuas. *Revista del Museo Nacional* 32. 241–52.
- Payne, David L. 1990. Some widespread grammatical forms in South American languages. In Doris L. Payne (ed.), *Amazonian Linguistics: Studies in lowland South American languages*, pp. 75–87. Austin: University of Texas Press.
- Payne, David L. 1991. A Classification of Maipuran (Arawakan) Languages Based on Shared Lexical Retentions. In Desmond C. Derbyshire and Geoffrey K. Pullum (eds.), *Handbook of Amazonian Languages, Volume 3*, 355–499. Berlin: Mouton de Gruyter.
- Payne, Doris L. 1987. Noun classification in the western Amazon. *Language Sciences* 9(1). 21–44.
- Payne, Doris L. 1990. Morphological characteristics of lowland South American languages. In Doris L. Payne (ed.), *Amazonian linguistics: Studies in lowland South American languages*, 213–241. Austin, TX: University of Texas Press.
- Payne, Doris L. 2007. Source of the Yagua Nominal Classification System, *International Journal of American Linguistics* 73(4). 447–474.
- Quesada, J. Diego. 2007. *The Chibchan Languages*. Cartago: Editorial Tecnológica de Costa Rica.
- Rivière, Peter. 1984. *Individual and Society in Guiana: A comparative study of Amerindian social organization*. Cambridge: University Press.
- Roberts, John R. 1997. Switch-Reference in Papua New Guinea: A Preliminary Survey. In Andrew Pawley (ed.), *Papers in Papuan Linguistics*, 101–241. Canberra: Australian National University.
- Rodrigues, Aryon D. 1984. Relações Internas Na Família Lingüística Tupi-Guarani. *Revista de Antropologia* 27/28 (28). 33–53.
- Rodrigues, Aryon D. 2002. Para o estudo histórico-comparativo das línguas Jê. In Ludoviko dos Santos & Ismael Pontes (eds.), *Línguas jê: Estudos vários*, 1–14. Londrina: Universidade Estadual Londrina.
- Rodrigues, Aryon D. 2007. As Consoantes Do Proto-Tupí. In Ana Suelly Cabral and Aryon D. Rodrigues (eds.), *Línguas e Culturas Tupí*. Campinas: Curt Nimuendaju.

- Rodrigues, Aryon D. and Ana Suelly Cabral. 2012. Tupían. In Lyle Campbell and Verónica Grondona (eds.), *The Indigenous Languages of South America: A Comprehensive Guide*, 495–574. Berlin, Boston: De Gruyter. <https://doi.org/10.1515/9783110258035.495>.
- Ross, Malcolm. 2007. Calquing and metatypy. *Journal of Language Contact – THEMA* 1. 116–143.
- Seifart, Frank. 2007. The prehistory of nominal classification in Witotoan languages. *International Journal of American Linguistics* 73. 411–445.
- Seifart, Frank. 2011. Bora loans in Resígaro: Massive morphological and little lexical borrowing in a moribund Arawakan language. *Cadernos de Etnolingüística (Série Monografias, 2)*.
- Seifart, Frank. 2012. The principle of morphosyntactic subsystem integrity in language contact: Evidence from morphological borrowing in Resígaro (Arawakan). *Diachronica* 29(4). 471–504.
- Seifart, Frank and Harald Hammarström. 2017. Language Isolates in South America. In Lyle E. Campbell (ed.), *Language Isolates*, 260–286. London: Routledge.
- Seifart, Frank and Doris Payne. 2007. Nominal classification in the northwest Amazon: Issues in areal diffusion and typological characterization. *International Journal of American Linguistics* 73(4). 381–387.
- Seki, Lucy. 1999. The Upper Xingu as an incipient linguistic area. In Robert M. W. Dixon and Alexandra Y. Aikhenvald (eds.), *The Amazonian Languages*, 417–430. Cambridge: Cambridge University Press.
- Seki, Lucy. 2000. *Gramática do Kamaiurá, língua Tupí-Guaraní do Alto Xingu*. Campinas: Editora da Unicamp.
- Siewierska, Anna. 1998. On nominal and verbal person marking. *Linguistic Typology* 2(1). 1–56.
- Smeets, Ineke. 1989. A Mapuche Grammar. Leiden: Ph.D. thesis, Leiden University.
- Stenzel, Kristine. 2005. Multilingualism in the Northwest Amazon, revisited. *Memorias del Congreso de Idiomas Indígenas de Latinoamérica-II*, University of Texas at Austin. Available at www.ailla.utexas.org/site/cilla2/Stenzel_CILLA2_vaupes.pdf.
- Tallman, Adam J. R. and Patience Epps. 2020. Morphological complexity, autonomy, and areality in Amazonia In Peter Arkadiev & Francesco Gardani (eds.), *The Complexities of Morphology*, 230–263. Oxford: Oxford University Press.
- Torero, Alfredo. 1964. Los dialectos quechuas. *Anales Científicos* 2. 446–78.
- Torero, Alfredo. 2002. *Idiomas de los Andes: Lingüística e historia*. Lima: Instituto Francés de Estudios Andinos/Editorial Horizonte.
- Urban, Matthias (ed.). 2025. *The Oxford Guide to the Languages of the Central Andes*. Oxford: Oxford University Press.
- Valenzuela, Pilar. 2003. Evidentiality in Shipibo-Konibo, with a comparative overview of the category in Panoan. In Alexandra Y. Aikhenvald and R.M.W. Dixon (eds.), *Studies in Evidentiality*, 33–62. Amsterdam: John Benjamins.
- Valenzuela, Pilar. 2010. Applicative constructions in Shipibo-Konibo (Panoan). *International Journal of American Linguistics* 76. 101–144.
- Valenzuela, Pilar M. 2015. ¿Qué tan “amazónicas” son las lenguas kawapana? Contacto con las lenguas centro-andinas y elementos para un área lingüística intermedia. *Lexis* 39(1). 5–56.
- van der Voort, Hein. 2005. Kwaza in comparative perspective. *International Journal of American Linguistics* 71. 365–412.

- van der Voort, Hein. 2016. Recursive inflection and grammaticalized fictive interaction in the southwestern Amazon. In Esther Pascual and Sergeiy Sandler (eds.), *The Conversation Frame: Forms and functions of fictive interaction*, 277–302. Amsterdam: John Benjamins.
- Viegas Barros, J. Pedro. 1992. La familia lingüística tehuelche. *Revista Patagónica* 13(54). 39–46.
- Viegas Barros, J. Pedro. 2005. *Voces del viento: raíces lingüísticas de la Patagonía*. Buenos Aires: Mondragón.
- Viegas Barros, J. Pedro. 2015. *Proto-Chon: Fonología, Morfología y Léxico*. PhD dissertation, Universidad de Buenos Aires.
- Weir, E. M. Helen. 1986. Footprints of yesterday's syntax: Diachronic development of certain verb prefixes in an OSV language (Nadëb). *Lingua* 68. 291–316.
- Wichmann, Søren and Eric W. Holman. 2009. *Assessing Temporal Stability for Linguistic Typological Features*. Munich: Lincom Europa.
- Wise, Mary Ruth. 1990. Valence-changing affixes in Maipuran Arawakan languages. In Doris Payne (ed.), *Amazonian Linguistics: Studies in Lowland South American Languages*, 89–116. Austin: University of Texas Press.
- Wise, Mary Ruth. 2002. Applicative affixes in Peruvian Amazonian languages. In Mily Crevels, Simon van de Kerke, Sergio Meira & Hein van der Voort (eds.), *Current studies on South American Indian languages*, 329–344. Leiden: Research School of Asian, African, and Amerindian Studies (CNWS).
- Zariquiey, Roberto, Javier Vera, Simon J. Greenhill, Pilar Valenzuela, Russell D. Gray, and Johann-Mattis List. 2022. Untangling the Evolution of Body-Part Terminology in Pano: Conservative versus Innovative Traits in Body-Part Lexicalization. *Interface Focus* 13 (1). 20220053. <https://doi.org/10.1098/rsfs.2022.0053>.
- Zuñiga, Fernando. 2017. On the morphosyntax of indigenous languages of the Americas. *International Journal of American Linguistics* 83(1). 111–139.