Traces of Contact in Western South America: Arawakan and Andean Languages[1]

Huellas de contacto en el oeste de Sudamérica: lenguas arawak y andinas

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Resumen: Las lenguas arawak conforman la principal familia lingüística de las tierras bajas de Sudamérica en cuanto a número de lenguas y extensión del área de distribución. Además, una mirada atenta sobre esta familia revela notables similitudes con las lenguas andinas, como mostrará este artículo. En quechua y, sobre todo, en aymara, muchas de las correspondencias parecen ser el resultado de un contacto relativamente reciente y superficial. Por el contrario, en otras lenguas de los Andes centrales (las lenguas uru-chipaya y, en particular, el puquina) y en lenguas de la periferia andina (por ejemplo, el umbra, el sechura, el tallán, el mapudungun, el yagán), hay casos de correspondencias con respecto al vocabulario básico que pueden reflejar otros escenarios, como un contacto temprano, y, posiblemente, también migraciones extensas. Este artículo ilustra cómo el estudio de una familia lingüística de las tierras bajas también puede ser relevante en el estudio de la prehistoria lingüística andina, y cuestiona una división demasiado general entre Andes y Amazonia.

Palabras clave: lenguas arawak; lenguas andinas; lenguas indígenas de Sudamérica; prehistoria lingüística; contacto lingüístico; Wanderwörter.

Abstract: Arawakan is the major language family of lowland South America in terms of number of languages and size of the distribution area. Additionally, a closer look reveals remarkable correspondences with Andean languages, as this article will show. In Quechuan and especially in Aymaran, many of them seem to be the result of relatively recent and superficial contact. By contrast, in other central Andean languages (Uru-Chipayan, and, in particular, Puquina) and in languages of the Andean periphery (e.g., Umbra, Sechura, Tallán, Mapudungun, Yahgan), there are cases of corresponding basic vocabulary items that may reflect other scenarios such as early contact, and possibly also extensive migrations. This article illustrates how the study of a lowland language familiy can also be relevant in the study of Andean linguistic prehistory, and questions an all-too-general Andes-Amazonia divide.

Keywords: Arawakan languages; Andean languages; indigenous languages of South America; linguistic prehistory; language contact; Wanderwörter.

1. Introduction

Among the South American language families, Arawakan (also known as Arawak or Maipuran) holds a particular role in several respects:

First, it is the family with the largest number of languages in South America (Aikhenvald 1999, 65), and there are some 40 extant Arawakan languages and dozens of extinct languages of Arawakan affiliation (Aikhenvald 2013, 3).

Second, Arawakan is also the South American family that is the most widespread in geographical terms: languages belonging to this family are or were spoken from the Bahamas (Taíno, extinct) in the north to the Salta province of Argentina in the south (Chané, extinct), and from the eastern slopes of the Andes in the west (e.g., Amuesha) to the estuary of the Amazon in the east (extinct Aroã) (Aikhenvald 1999, 66-71).

Third, unlike for other lowland South American language families, connections with languages of western South America, including the central Andes, have repeatedly been claimed for Arawakan, in terms of borrowing relations with Arawakan as a donor (e.g., Torero 1992, 182), with Arawakan languages as recipient languages (e.g., Adelaar 2006), and in terms of genealogical connections (e.g., La Grasserie 1894, 10-11; Greenberg 1987, 83; Torero 1993, 462-463). If true, this would make Arawakan the only lowland language family with substantial ties to the languages of the Andes. These connections will be addressed in this paper.

Contact between Arawakan and languages of the (northern) Andes are, *a priori*, not surprising, since the homeland of Proto-Arawakan has been localized relatively far in the west of the continent: in northwestern South America, specifically, between the Negro and the Orinoco rivers (Aikhenvald 2013, 3; for further scenarios, see, e.g., Noble 1965; Lathrap 1970; Oliver 1989; Urban 1992; Heckenberger 2002; Walker and Ribeiro 2011).[2] The approximate homeland of Arawakan, according to Aikhenvald (2013), is shown in Figure 1.

This paper will discuss lexical correspondences between Arawakan and different languages of the Andes, in several cases for the first time, for instance in Umbra of western Colombia, in several extinct languages of the Peruvian north coast, and in Yahgan of Tierra del Fuego. The term 'Andean languages' is used here, as in Adelaar with Muysken (2004), to refer to different languages spoken in the Pacific regions of South America, in the northern and southern Andes and their extensions, and in the central Andes.

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2 An Arawakan homeland between the Negro and Orinoco rivers is relatively close to the area where Candoshi is spoken (western Loreto department, Peru), a language which has repeatedly been connected with Arawakan in genealogical terms (most convincingly by Payne 1989). This proposal should not be lightheartedly dismissed; its discussion, however, is beyond the scope of this paper. Munichi, an extinct language, likewise from the western Loreto department, has sometimes also been considered a remote relative of the Arawakan family (e.g., Gibson 1996, 18-19).

Figure 1. Approximate homeland of Arawakan languages (after Aikhenvald 2013, 2).

The Andean languages dealt with here are the following, from north to south:

- Umbra   - Puquina
- Sechura, Tallán   - Uru-Chipayan
- Mochica   - Kunza
- Quechuan   - Mapudungun
- Aymaran   - Yahgan

As will be argued here, in Aymaran, correspondences with Arawakan only occur in non-basic vocabulary; likewise, in Quechuan, there are hardly any correspondences in basic vocabulary, with a few exceptions. By contrast, in other instances discussed here, we find several corresponding basic vocabulary items (terms for 'eye', 'face', 'foot',

'louse', 'red', 'sun'; yet hardly any verbs), most remarkably in the languages spoken at the northern and southern edges of the Andean zone: Umbra of western Colombia, and Mapudungun and Yahgan of southern central and southern Chile and Argentina. The basic vocabulary items in question are sometimes shared by Arawakan and several Andean languages discussed here. Rather than a simple borrowing scenario, these correspondences may also reflect an old contact network which included, among others, Arawakan languages, but also several Andean languages, possibly except Quechuan and, in particular, except Aymaran.

This paper first addresses Arawakan correspondences in the different languages mentioned above (Sections 2 to 10). The observations made in the different sections are briefly summarized and discussed in Section 11.

2. Umbra

Umbra is a barely described language of northwestern Colombia. Speakers live in the municipalities of Riosucio, department of Caldas, and Quinchía (Sardinero and Mápura villages), department of Risaralda. The exact number of speakers is unknown, and there is only one source with a substantial amount of Umbra language data: Rendón (2011). It might be related to Anserma of Caramanta and Cartama (department of Antioquia, Hammarström *et al.* 2022), some words of which have been documented during colonial times and later published (Rivet 1943, 34).[3]

Umbra has sometimes been classified as a Chocoan language (Rendón 2011, 12; Hammarström *et al.* 2022). Yet, only incidental lexical correspondences with Chocoan seem to exist, for instance, Umbra <kuĩn> 'to rain' (Rendón 2011, 97), Northern Emberá *kue* 'rain' (Pardo Rojas 2021), Umbra <bi> 'maize' (Rendón 2011, 89), Northern Emberá *be* 'maize' (Pardo Rojas 2021). By contrast, Umbra has a number of basic lexical items – including diachronically stable and rarely borrowed terms like the root for 'louse' – with corresponding counterparts in Proto-Arawakan. These items are shown in Table 1. If the form in question is polymorphemic, its relevant part is in bold.

The sets shown in Table 1 reflect some recurrent sound correspondences. For instance, Proto-Arawakan *#k corresponds to Umbra #Ø. A development from *k > Ø seems to have occurred in some Arawakan languages of northwestern Amazonia, such as, for instance, Achagua, Cabiyarí, Curripaco, or Piapoco (cf. Huber and Reed 1992), but also in other Arawakan languages (Payne 1991, 441-444); we may thus be dealing with independent innovations.[4] In intervocalic position, Proto-Arawakan *k* corresponds to Umbra *k*.

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3   Compare Umbra <ā̃nčueʳ>, <ā̃nčuéʳ> 'salt' (Rendón 2011, 90, 174), Anserma <anzer>, <anserm>, <ancer> 'salt' (Rivet 1943, 34). This evidence, however, is not sufficient to make the claim plausible beyond doubt.

4   A #Ø : #*k* correspondence (< *#k) is also attested in other languages families: for instance, in Pumé-Chocoan with #Ø in Pumé corresponding to #*k* in Chocoan (Pache 2016), and in Chibchan, with #Ø in Pech corresponding to #*k* in other Chibchan languages (Constenla Umaña 1981).

	English	Proto-Arawakan	Umbra
1	'arm'	*dana[pʰa]	<**taɾã́**n> 'hand' (113),5, <taɾã̃bã́> 'arm' (40, 113), <taraw̃ǎ, taraw̃ãw̃ǎ> 'arm' (113), <pašano**tārā**> 'branch' (149)
2	'day, light, sun'	*keči 'sun, (day)'	<ĩs̃i/ĩs̃ĩ̃> 'light, day, bright, brightness' (122), <ĩs̃ĩ̃> 'day' (122)
3	'eye'	*[ḷ]uki/e	<žunko> (39, 112), <**žúnkó**ão/zunkoõ̃> (112)
4	'fire'	*dikah[ȼi]	<**tika**ũ> 'fire' (172), <tĩka⁶ža> 'fireplace' (46), <**tĩkã**ũ̃m> 'candle' (81)
5	'leaf'	*pana 'leaf'	<x̃ũɾã**para**/ɾ́ux̃a**xára**n> 'hair/hair of the head' (112)
6	'louse'	*(i)ni (Aikhenvald 2013)	<ĩɾ̃ẽ> (145)
7	'mouth'	*numa (Aikhenvald 2013)	<tapaɾ̃, **tupa**ɾ̃> 'lip, mouth' (113)
8	'river', 'water'	*wakʊ 'river' (Ramirez 2020-2021)	<i**bakú**/i**makú**> 'water' (81), <ĩ**ɓakṹ**/í**makú**> 'water' (115)
9	'stone'	*kʰiba	<ibá, **iba**má, mã> (198)
10	'worm'	*keni, Achagua <éeniʃi> (Huber and Reed 1992, 306), Resígaro <eniítsí> 'bot-fly larva' (Allin 1979, 392)	<ariči> (145)

Table 1. Lexical correspondences between Proto-Arawakan and Umbra. If not indicated otherwise, Proto-Arawakan forms are from Payne (1991). Umbra forms are from Rendón (2011), page numbers are in brackets.

Another remarkable sound correspondence in Table 1 is between Proto-Arawakan *p and Umbra {*p*, *x*} – a change from *p > h has been observed in Achagua, Parecís and Yavitero, three Arawakan languages which belong to three distinct subgoups (Payne 1991, 433).

Other correspondences in Table 1 are that of Proto-Arawakan *#d and *#n versus Umbra #t, and of Proto-Arawakan *n, in intervocalic position, corresponding to Umbra *r*.

Remarkably, the forms shared by Umbra and (Proto-)Arawakan are mostly lexical items that have been described as quite resistant to borrowing, such as terms for 'louse', 'eye', 'stone' (Haspelmath and Tadmor 2009). However, there are no correspondence sets including verbs. A reason might be that verbal roots are more difficult to borrow than

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5   Proto-Arawakan reconstructions are given in the respective original orthography (see Payne 1991; Aikhenvald 2002; Ramirez 2020-2021). In other cases, the use of original orthography is indicated by pointed brackets. Data from single languages without pointed brackets are presented in Americanist orthography.

nominal roots because they obligatorily occur with morphology in Arawakan (see Aikhenvald 2006, 33-34). Thus, if we are dealing here with borrowing indeed, claimed morphological constraints to lexical borrowing are valid in the case of Arawakan and Umbra; yet, in the case of semantic constraints (broken down to the formula 'basic vocabulary is rarely borrowed'), the picture is far less clear.

In Umbra morphosyntax, as far as it can be gleaned from Rendón (2011), there are hardly any striking correspondences with Arawakan languages. One possible case is the element <nu-> in <**nu**rụrų̃mba> 'my relative', from <rụrų̃mba> 'relative' (p. 73), which is reminiscent of Proto-Arawakan *nu- 'my' (Payne 1991, 376). Yet, this incidental grammatical correspondence should not be over-interpreted unless further robust evidence is found.

A typological parallel with Arawakan is gender marking in Umbra 3rd-person pronouns. Female gender is indicated by adding an element <ĩno> 'woman' to the pronoun – compare <nau-n kõnfõrã> 'his house' versus <naw-ĩno kõnfõrã> 'her house' (Rendón 2011, 171). Given its transparency, this way of gender marking is probably of quite recent coinage in Umbra; there is no formal correspondence with gender marking in Arawakan pronouns. Yet, a formal correspondence does exist in the terms for 'woman'/'wife': compare Umbra <ĩno> 'woman' (Rendón 2011, 162), and Proto-Arawakan *ɨno 'wife' (Payne 1991, 426). This parallel may have another history than the sets discussed above, since it does not show the Proto-Arawakan *n : Umbra *r* correspondence shown in Table 1.

3. Sechura, Tallán

Sechura and the Tallán languages Catacaos and Colán are among the indigenous languages that were formerly spoken in the coastal areas of the present-day department of Piura (for an overview, see Urban 2019). They have both several corresponding counterparts in Proto-Arawakan. Sechura and the Tallán languages were spoken in adjacent areas, Tallán languages (also called Catacaoan languages) in the north and Sechura in the south. A genealogical connection between Tallán and Sechura was first proposed by Rivet (1949), and Sechura-Tallán has recently been deemed to be among the "accepted smaller families" of South America (Campbell 2012, 68-69).[6] The Tallán languages became extinct during the first half of the 19th century (Urban 2019, 95), Sechura became extinct somewhat later, in the second half of the 19th century (Urban 2019, 110). Table 2 shows some correspondences in the lexicon of Proto-Arawakan, Sechura and Tallán.

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6   Among the correspondences between both groups is, for instance, Catacaos <**turu**yup> 'river' and Sechura <tulut> 'river'. Some corresponding forms such as Colán <lacatu>, Catacaos <dlacati>, Sechura <lactuc> 'to die' (see Adelaar with Muysken 2004, 400), or Colán <**cutūc**-nap>, Sechura <**cuchuc**-yor> 'sky' also have parallels in other languages dealt with here, for instance, in Arawakan and/or Kunza (see Section 8 and Subsection 11.4).

	English	Proto-Arawakan	Sechura, Tallán
1	'eye'	*[l]ukɨ/e	<uchi> Sechura (S)
2	'fish'	*uma 'piranha', *hima 'fish'	<jum> (M), <xuma> (S) Sechura 'fish'
3	'bone'	*[n]apɨ 'bone', cf. also *kʰapɨ 'hand'	<la**lape**chen> Catacaos 'bone'; <dla**dlapi**rãm> Colán 'bone'; <**yabi**que> Catacaos 'branch; <**yabi**tiram> Colán 'branch'
4	'heart'	*[ni]ahkɨ[ni]	<**ñiesiñi**chim> Catacaos; <**ñessini**m> Colán[7]
5	'man'	*ahšeni, *adia[li] 'man (person)'	<aszat> Catacaos; <y**atãd**lam> Colán
6	'nose'	*kɨri	<chuna> Sechura (S)
7	'sun, day', 'sky'	*keči 'sun, day'	<**cutũc**-nap> Colán; <**cuchuc**yor> Sechura 'sky'
8	'sun', 'moon'	*kamui 'sun, (summer)'	<nam> Catacaos 'moon', <nap> Catacaos 'sun'
9	'water', 'rain'	*uni 'water'	<purir> Sechura (M) 'rain'

Table 2. Lexical correspondences between Proto-Arawakan, Sechura and Tallán. Proto-Arawakan forms are from Payne (1991), Sechura forms are from Spruce's mid-19th century word lists published by Urban (2015), indicated by (S), or from Martínez Compañón (1985 [1782-1790]), indicated by (M); Catacaos and Colán forms are from Martínez Compañón (1985 [1782-1790]).

The sets in Table 2 show that Arawakan *k may correspond to Sechura and Tallán <c>, <ch> (possibly representing [k], see Cerrón-Palomino 2020), <y>, and <n> or <l> – a similar situation obtains with Yahgan, where Arawakan *k corresponds to *k*, *y*, and *l*, see Section 10 below.

The number of corresponding forms in Table 2 is remarkable in relative terms since the Tallán forms in question all come from a wordlist from the late 18th century (Martínez Compañón 1985 [1782-1790]) which contains only 43 entries for each language, including two Spanish loans (terms for 'God' and 'animal'). Since four Proto-Arawakan items are relatable to the resulting 41 Colán and Catacaos items, this suggests some 10% of shared vocabulary.

As to grammatical correspondences of Sechura-Tallán with Arawakan, there is only limited evidence, which is also due to the available data. The Catacaos suffix <-che> or

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7   This *k*/*s* correspondence might be in line with the observation that Catacaos has incidentally also been called "Satacaos" (see Urban 2019, 84).

<-chi> is a potential candidate for a shared grammatical morpheme: it occurs on nouns such as <lalape**che**n> 'bone' or <ñiesiñi**chi**m> 'heart' and has a counterpart in Proto-Arawakan *-či (see Aikhenvald 2020). This Arawakan suffix is used to mark an unspecified possessor with nouns that refer to obligatorily possessed entities – for a reflex, compare Warekena of Xié *nu-naware* 'my village' versus *naware-ši* 'village (in general)' (Aikhenvald 2020). Related, fossilized suffixes may also occur in Yahgan (fossilized, as in *kašuš* 'nose' and *lateš* 'leg') and in Candoshi (productive, as in <napi**ch**> 'bone', Tuggy 1966, 175, absolute form, see Payne 1989).[8]

Catacaos <-chi> may also have been used in deverbal action nominalization, for instance in Catacaos <agua**chi**m> translated, by Martínez Compañón (1985 [1782-1790]), as 'to eat' – compare Colán <aguã> 'to eat'. In a similar vein, reflexes of Proto-Arawakan *-či are also used in deverbal action nominalization (Aikhenvald 2020). Together with the sets discussed in Table 2, these grammatical correspondences may suggest a possible genealogical connection between Arawakan and Sechura-Tallán.

In possessive noun phrases, the order is possessed-possessor in Sechura and Tallán – compare Sechura <collo> 'mouth', <roro> 'sea', <coyu roro> 'beach' (Urban 2015), that is, '(its) mouth (the) sea', or the Catacaos possessive construction shown in (1). The analysis of 'grass' as 'food of the cattle' is from Arrizabalaga (2007).

Catacaos
(1)   <t-agua-col> (hyphenation by the author)
        3-food-cattle
        'grass' (Martínez Compañón 1985 [1782-1790])

As to the prefix <t->, identified in (1), a related 3rd-person possessive marker may be attested in Sechura <**te**uma> 'head' which has been compared with Quechuan *uma* 'head' (cf. Urban 2019, 199). The possessed-possessor order in (1) is not typical of Arawakan languages in general. Yet, left-headed possessive constructions occur in some northern Arawakan languages (Aikhenvald 1999, 97), for instance, in Wayuunaiki of northern Colombia/Venezuela (Mansen and Captain 2000, 799). Left-headedness is also a characteristic of possessive noun phrases in the Mesoamerican linguistic area (cf. Campbell, Kaufman and Smith-Stark 1986; Pache, Meira and Grinevald 2020, 78).

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8   As to exclusive correspondences of Sechura-Tallán with Candoshi, there is not much to be found, except, possibly, Sechura <llumash> 'maize' versus Candoshi <yovato> 'maize' (Tuggy 1966, 185). Related 'maize' terms, however, also occur in other languages: Sacáta <umague>, Copallén <chumac>, Chirino <yugato> 'maize'. The three latter are extinct, unclassified languages from the Jáen province in Peru (Rivet 1934, 246). The Candoshi correspondence with Chirino was first mentioned by Rivet (1934); the Sechura correspondences with Sacáta and Copallén are from Torero (1993, 450).

4. Mochica

Mochica is an unclassified language of the coast of northwestern Peru which became extinct in the first half of the 20th century. It has often been observed, from a Quechuanist and Aymaranist perspective, that it is a typological outlier in the central Andes (e.g., Adelaar with Muysken 2004; Pache in press). Mochica has had obvious contacts with Cholón, a Hibito-Cholón language of the Huallaga River valley on the eastern slopes of the central Andes; its contact zone was thus not confined to the coastal areas (Salas García 2012; Jolkesky 2016, 572-573; Eloranta 2017). Mochica has been argued to share many typological features and also some lexical items with Mayan languages of Mesoamerica (Stark 1968; Eloranta 2020). A few corresponding forms can also be found in Arawakan languages. They are shown in Table 3.

	English	Proto-Arawakan	Mochica
1	'sun', 'day'	*keči 'sun, day'	<käss> 'day'
2	'eye'	*[l]ukɨ/e	<joch (loch)>
3	'forehead', 'face'	*du[tʰi] 'forehead'	<tot> 'face', <ssoj> 'forehead'
4	'red'	*kɨra	<kuj (kul)> 'blood, red'
5	'jaguar', 'dog'	*mani[tʰi] 'jaguar'	<fanu> 'dog'

Table 3. Lexical correspondences between Proto-Arawakan and Mochica. Proto-Arawakan forms are from Payne (1991), Mochica forms are from Middendorf (1892).

Except for 'jaguar'/'dog', the forms shown in Table 3 ('day', 'eye', 'forehead', 'red') also have counterparts in one or several other Andean languages addressed here (see Subsection 11.4 below) and the terms are not exclusively shared by Mochica and (Proto-)Arawakan. Correspondences between Mochica and Amuesha, an Arawakan language of the eastern slopes, are addressed by Jolkesky (2016, 377-378).

Typological parallels of Mochica with Arawakan languages exist in the domain of possessive marking: roots referring to obligatorily possessed entities receive a particular suffix if they appear without any specified possessor (Mochica <-kik>, a functional counterpart of Proto-Arawakan *-či) whereas roots referring to non-obligatorily possessed entities are combined with a particular possessive suffix in possessive constructions (Mochica <-ss>, different suffixes in Arawakan, see Payne 1990, 81); similar phenomena also exist in Mesoamerican languages (e.g., Nahuatl, Yucatec Maya) (Adelaar 2003; Eloranta 2020, 400).

5. Quechuan, Aymaran

In terms of speaker numbers, Quechuan and Aymaran are the most important language families of the central Andes. The homeland of Aymaran has been localized somewhat further to the south, compared with the Quechuan homeland, namely in the coastal area of Nazca in present-day Peru (Torero 1972, 92); this proposal needs further investigation, however. Both language families are addressed in the same section here, given that they have been in long and intense contact and that, if a form is identical in both language groups, it is often impossible to determine who borrowed it from whom.

In the past, there has been contact at least between specific Quechuan varieties and Arawakan languages: Amuesha, an Arawakan language of the departments of Huánuco, Junín and Pasco (Peru), for instance, borrowed several forms from different Quechuan varieties at different time periods, Incaic and pre-Incaic (Adelaar 2006). As for the influence in the other direction, there are relatively few forms of Arawakan origin in Quechuan and Aymaran (Torero 2002, 535) and contact of Quechuan and Aymaran with Arawakan languages has been argued to have been relatively recent, compared with contact of, for instance, Uru-Chipayan with Arawakan (Torero 1992, 182; see the following Sections 6 and 7). Table 4 illustrates some traces of contact between Quechuan, Aymaran and Arawakan. There are no corresponding basic vocabulary items in the case of Aymaran and only a few in the case of Quechuan. Sets identified in Torero (1992) are marked with a cross, those identified in Adelaar and Pache (2022) are marked with a postposed asterisk.

	English	Proto-Arawakan	Aymaran	Quechua
1	'ant', 'spider', 'flea'	*kudɨ 'ant'[9]	k'usiwalʲu 'ant', kusi-kusi 'spider' (de Lucca 1983, 76, 90)	kuči Tarma Quechua 'flea' (Adelaar 1977, 448); <ccussi vru> Cuzco Quechua 'wolf spider', "araña alguazil de las moscas" (González Holguín 1989 [1608], 415)
2	'bee'†	*maba 'bee, honey'	map'a 'wax, sticky' (de Lucca 1983, 300)	*mapa 'dirt' (greasy matter), 'dirty' (Zamponi 2020, 541)
3	'fear'*	*pɨnka 'to fear'	p'inqa Aymara 'shame' (de Lucca 1983, 359)	p'inqa Bolivian Quechua 'to be ashamed' (Rosat Pontacti 2004, 739); piŋqay San Pedro de Cajas Quechua 'shame' (Adelaar 1977, 464); Ecuadorian Quichua pinga 'shame' (Stark & Muysken 1977, 126)

9 There is also a corresponding form in Candoshi, <nkoši> 'ant' (Payne 1989), not attested in Tuggy (1966).

	English	Proto-Arawakan	Aymaran	Quechua
4	'grass'*	*kačau 'grass'	-/-	q'aču 'grass, fodder' Cuzco Quechua (Cusihuamán Gutiérrez 1976, 117)
5	'monkey'†	*kuhdi; Terêna <kútexu> 'a type of monkey, travels in groups' (Ekdahl and Butler 1969)	k'usilʲu (de Lucca 1983, 90)	<ccussillu> Cuzco Quechua (González Holguín 1989 [1608], 72)
6	'sibling'*	*perɨ[pe] 'brother'	-/-	pani, pana 'sister or (female) cousin of a male ego' (Rosat Pontacti 2004, 707-708)
7	'sour', 'salt'	*kaȼo[rɨ] 'sour'; -kootsi Trinitario 'sour'; tikaci Ignaciano 'sour'	katʲi Jaqaru 'salt, salty' (Belleza Castro 1995), probably borrowed via Quechua	kači Southern Quechua 'salt' (Rosat Pontacti 2004, 361); Tarma Quechua kači 'salt' (Adelaar 1977, 444)
8	'tobacco'*	Ashéninca syeri, Matsigenka seri (Payne 1991, 422), derived from Proto-Arawakan *yuerɨ	qunta sayri Aymara 'wild tobacco', Nicotiana undulata (de Lucca 1983, 862)	sayri 'tobacco' (Rosat Pontacti 2004, 981)
9	'woman', 'female'*	*čɨna[ru] 'woman'	-/-	čina 'female' for animals in Ayacucho Quechua (Dedenbach-Salazar et al. 2002, 214) and Bolivian Quechua (Rosat Pontacti 2004, 169)

Table 4. Lexical correspondences between Proto-Arawakan and Quechuan and/or Aymaran. Proto-Arawakan forms are from Payne (1991), Ignaciano data are from Key (2021a) and Trinitario data from Gill and Gill (2021).

Several words corresponding in Quechuan or Aymaran on the one hand and Arawakan languages on the other hand are shared borrowings and have counterparts in other languages of western South America, too: Proto-Arawakan *maba 'bee, honey' and related forms, for instance, have been identified as the reflexes of a widespread South American *Wanderwort* (Zamponi 2020, 541-543). For the forms presented in Table 4 above, (Proto-) Quechuan and (Proto-)Aymaran can often be excluded as donors: (1) for the semantics of the form in question (words referring to 'honey', 'tobacco', or 'monkey'), (2) for the fact that the forms in question reconstruct for Proto-Arawakan but are only attested in single branches of Quechuan (such as the terms for 'grass' or 'female'), or (3) for sound correspondences: in the cases of 'ant/spider', 'sibling' and 'tobacco', Arawakan /*ɨ/ corresponds

to Quechuan/Aymaran /i/. If Quechuan/Aymaran was the donor, one would expect the corresponding vowel of the Arawakan form to be /i/ because /i/ is part of the Proto-Arawakan vowel inventory (Payne 1991). In some cases, languages belonging to specific Arawakan subgroups can be identified as the possible donors, for instance, a language of the Campa or Pre-Andine subgroup in the case of 'tobacco'.

In the case of the 'sour'/'salt' term, no borrowing direction can be determined for the moment; related forms are very widespread in the languages of western South America and also occur, for instance, in Candoshi and Mapudungun; additionally, the Proto-Arawakan form is only reconstructed on the basis of Arawakan languages spoken relatively close to the Andes (Payne 1991, 419).

6. Puquina

Puquina is an extinct, unclassified language of the southern central Andes. At present, its traces persist in toponymy (Mossel 2009) and in an inscription in the church of Andahuaylillas, in the department of Cuzco, Peru. There are also some religious texts published in Puquina (Oré 1607). A sister language of Puquina contributed to the lexicon of Kallawaya, the secret language of itinerant healers of the eastern slopes of the Bolivian Andes (Hannß 2017; 2019). A genealogical connection between Puquina and Arawakan ("affinité veritable") was first proposed in the late 19th century, based, among others, on systematic correspondences in markers for the 1st and 2nd persons (La Grasserie 1894, 10-11). The additional correspondence in 3rd-person marking was discovered only later (Torero 1992, 178; Adelaar and van de Kerke 2006). The respective paradigms are illustrated in Table 5.

	Proto-Arawakan possessor and subject person prefixes (Payne 1991, 376)	Pukina personal pronouns	Pukina possessive pronouns
1st SG	*nu-	*ni*	*no*
2nd SG	*pï-	*pi*	*po*
3rd SG	*tʰu- (feminine, neuter)	*ču*	*ču*

Table 5. Grammatical correspondences between Proto-Arawakan and Puquina. Source: Adelaar and van de Kerke (2006).

More recently, intense and early contact has been proposed as an explanation for these grammatical correspondences (e.g., Torero 1992, 182), but the possibility of a genealogical connection between Arawakan and Puquina has still been considered, too (Adelaar and van de Kerke 2006).

Lexical correspondences are shown in Table 6. Sets already mentioned by Créqui-Montfort and Rivet (1926) are marked with a postposed asterisk; these forms have also been discussed in Torero (1992, 178). Additionally, it is shown in Table 6 that there are also specific correspondences of Puquina with Bauré, an Arawakan language of the Beni department in Bolivia.

	English	Arawakan	Puquina
1	'brother', 'four'	Bauré *-piri* 'sibling of the same sex'; *peri[pe] 'brother'	*s-per* 'four'; Kallawaya *pil ~ pili ~ pilʲi* 'four' (Hannß 2015)[10]
2	'eye', 'face'*	*[l]ukɨ/e 'eye'	*yuke* 'face'
3	'fear', 'to be ashamed'	*pɨnka 'fear, (respect)'	*penka* 'to be ashamed'
4	'high'*	*ani-ye* Bauré 'high', 'sky-LOC'	*hanigo* 'high'
5	'seed', 'eye'	*e-ˈso-ki* Bauré 'seed'	*hiski* 'eye'
6	'to stand', 'to live'	Bauré *-šom* 'to stand'; *dɨma 'to stand'	*suma* 'to live'
7	'to stand', 'to live'	Bauré *-čik-* 'to live'; *katika 'to stand'	***kička*** 'to live'; ***wičiga*** '?to live'[11]
8	'sour', 'sweet'	*-kooci* Trinitario 'sour' (Gill and Gill 2021); *ti**kaci*** Ignaciano 'sour' (Key 2021a); *ka¢o[rɨ]	*kasi* '?sweet'
9	'sun'*	*kamui 'sun, summer'	*kamen* 'day'

Table 6. Some Arawakan-Puquina lexical correspondences. Proto-Arawakan forms are from Payne (1991), Bauré forms are from Danielsen (2007), Puquina forms are from Emlen *et al.* (in press).

The existence of the corresponding (near-)synonymous verbs 'to stand', 'to live' – Bauré *-šom-* 'to stand' (< PA *dɨma 'to stand') and Bauré *-čik-* 'to live' (< PA *katika 'to stand'), versus Puquina *suma* 'to live' and Puquina *kička*, *wičiga* 'to live' – is difficult to explain as the result of chance or borrowing, not only because they are (near-)synonyms (see Pache 2023, 246), but also because we are dealing with verbs, a word class which obligatorily carries grammatical morphemes in the languages in question and is therefore less easily borrowed. If borrowing is nevertheless at the origin of all Puquina-Arawakan correspondences (as suggested by Torero 1992, 178), Bauré is a good candidate for a donor of several

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10 The term for 'brother' is sometimes used in numerals for '4' in lowland South America (Pache 2018a).
11 Segmentation is mine and tentative.

forms, given that they contain morphology which is only analyzable in this Arawakan language, not in Puquina: compare Bauré *e-ˈsoki* 'seed' (*e-* 'unspecified possessor', Danielsen 2007, 120) versus Puquina *hiski* 'eye'. Also, whereas Bauré *ani-ye* 'high' can be analyzed as 'sky-LOCATIVE', there is no productive Puquina locative marker *-go* in *hanigo* 'high'.

In other cases, such as the terms for 'eye/face' (Proto-Arawakan *[l]uki/e, Puquina *yuke* 'face') and for 'sun' (Proto-Arawakan *kamui 'sun, summer', Puquina *kamen* 'day'), the forms in question are very widespread and do not necessarily indicate a direct relationship between Puquina and Arawakan: compare, for the 'sun' terms in Table 6, corresponding counterparts in other languages, such as Kunza <ckamur> 'moon' (Lehnert Santander 2021), Cofán *kʰoβɨ* 'moon, month' (Borman 2021), or Proto-Chapakuran <*komeN> 'sun' (Angenot-de Lima 1997, 147); for more details, see Subsection 11.4 below. This suggests that Arawakan correspondences in Puquina do not necessarily reflect a single scenario, but may have several different origins.

7. Uru-Chipayan

Uru-Chipayan is a small language family with only one extant language, Chipaya. At least since colonial times, Uru-Chipayan languages have mainly been distributed along the aquatic axis consisting of Lake Titicaca, the Desaguadero River, Lake Uru-Uru, Lake Poopó and Lake Coipasa in the southern central Andes (Wachtel 1990). Uru-Chipayan languages have been grouped with Arawakan languages by different authors (e.g., by Créqui-Montfort and Rivet 1925, 231; Greenberg 1987, 83-84).[12] A relatively high percentage of Uru-Chipayan-Arawakan borrowings has been emphasized by others (e.g., Torero 1992, 182). Indeed, there is a salient feature shared by Uru-Chipayan and Arawakan languages: the distinction of gender, for instance, in 3rd-person singular personal/demonstrative pronouns, in nominalized verbs, but also in certain nouns of Uru-Chipayan (Cerrón-Palomino 2006; Hannß 2008), and in 3rd-person singular personal/demonstrative pronouns, in nominalization and in adjectives in Arawakan (Aikhenvald 2020). However, this is rather a typological parallel. In fact, robust formal correspondences between Uru-Chipayan and Arawakan languages are surprisingly few, considering that both language groups have so often been compared and connected with each other – Créqui-Montfort and Rivet (1925, 231), for instance, claim the existence of some 170 Uru-Chipayan-Arawakan cognates. In the context of loans, the borrowing direction is often difficult to determine. It has been argued that Uru-Chipayan is the donor in some cases (e.g., in the case of a set consisting of Chipaya *paqu*, *paku*, Ch'imu Uru <păko> 'dog', Trinitario *paku*, Itonama *u-paʔu*; Pache, Wichmann and Zhivlov 2016, 400). Further,

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12 Rojas-Berscia and Roberts (2019, 17) instead propose that a connection of Uru-Chipayan with Jivaroan (Chicham) languages "may well turn out to be genealogical", given the similarities that they observe in personal pronouns.

relatively robust Arawakan-Uru-Chipayan correspondences are those shown in Table 7. Sets that have already been published in Créqui-Montfort and Rivet (1926, 1927) are marked with a postposed asterisk, those published in Torero (1992) with a cross.

	English	Arawakan	Chipaya	Uru Ch'imu
1	'ear'*	*[da]keniˈaku]	kʰuñi	<k'úñi>
2	'eye'*	*[ʟ]ukɨ/e	čʰuki 'eye', yuk(i) 'face'	<tš'úχ̇ⁿiä, tšūk>
3	'foot'*	*kɨhti[ba]	qʰoča	<kőtyŭ, kőtχŭ, kőtšū>
4	'lake'†	*kaɨle[sa] 'lake, (swamp)'	-/-	<k'ár̄ē>
5	'pot', 'pitcher'	keheβi Bauré 'pot, cooking vessel' (Key 2021b); *kopi[tʰi] 'pot, (ceramic cooking pot)'	kewi 'pitcher'[13]	-/-
6	'roof', 'house'	peti, -peno Trinitario 'house'; peti, -pena Ignaciano 'house'	pʰit 'roof' (Olson and Olson 2021)[14]	-/-
7	'salt', 'saline'*	čove Bauré 'salt'	č'uyi 'salty'	-/-
8	'skin', 'wool'*	-čom Bauré 'skin'	čoma 'wool'	-/-
9	'stone'*	mari Trinitario, Ignaciano	maṣ	<mási>

Table 7. Some Arawakan-Uru-Chipayan lexical correspondences. Proto-Arawakan data are from Payne (1991), Bauré data from Danielsen (2007), Ignaciano data from Key (2021a), Trinitario data from Gill and Gill (2021), if not indicated otherwise. Chipaya data from Cerrón-Palomino and Ballón Aguirre (2011), except if indicated otherwise, Uru Ch'imu data from Cerrón-Palomino with Barrientos Quispe and Cangahuala Castro (2016).

Most sets shown in Table 7 either concern (1) borrowings shared with other languages, such as the terms for 'eye', 'foot', 'ear' (see Subsection 11.4 below) or 'stone', which has a counterpart in Pano-Tacanan (Fabre 1995, 63), and (2) forms that belong to cultural vocabulary, such as the terms for 'roof' and 'pot'/'pitcher'.

It is remarkable that Chipaya has two etymologically connected body-part terms – čʰuki 'eye', yuk(i) 'face' – that seem to be related to Proto-Arawakan *[ʟ]ukɨ/e 'eye'.

13 [ˈkewi ~ ˈkeβi] 'large clay pitcher to store water or products' (Cerrón-Palomino and Ballón Aguirre 2011, 106).
14 Not in Cerrón-Palomino and Ballón Aguirre (2011). For a similar correspondence, compare Trinitario -sii-peno 'nostril' (Gill and Gill 2021), Chipaya pʰeta 'hole'; oṣ-pʰeta 'nostril' (Cerrón-Palomino and Ballón Aguirre 2011, 239, 245).

Actually, 'eye' terms are diachronically quite stable, that is, they are quite rarely replaced by another term which changed its meaning or by a borrowing or neologism (Holman *et al.* 2008, 546). Chipaya *čʰuki* 'eye' versus *yuk(i)* 'face' are also noticeable for their onset consonants – a stop in the 'eye' term, a glide in the 'face' term. Similar phenomena occur in Auishiri (isolated) <atŭka> (Tessmann 1930, 486), Proto-Chapacuran *tok (Angenot-de Lima 1997, 86), Choroti (Matacoan) *-tokʸoʔ ~ -tʸokʸoʔ* (Gerzenstein 2021), Proto-Tacanan *(a)tuka (Girard 1971, 127), Vilela <toque> 'eye' (Gilij 1782, 366) with a stop in the onset and referring to 'eye', versus Lule <yocus> (Machoni de Cerdeña 1732, 34), Pukina <yuke> (Emlen *et al.* in press), Trumai *huk* 'face' (Monod-Becquelin 2021), Yanomámi *pei huko* 'forehead' (Lizot 2021), with a fricative or glide in the onset and referring to 'face' or 'forehead'. This phenomenon needs further investigation.

8. Kunza

Kunza is a language isolate of northern Chile which became extinct probably in the first half of the 20th century. In the southern Andes, and compared with Quechuan, Aymaran, Uru-Chipayan and Mapudungun, Kunza is a typological outlier, for its use of person-marking prefixes in possessive constructions and for marking the possessed status of the entity referred to by a dedicated suffix (Adelaar 2003). Although Kunza is spoken relatively far away from Arawakan languages, there is some shared vocabulary, most of which concerns frequently borrowed items such as animal or astronomic terms, or 'basic-vocabulary *Wanderwörter*', as it were, such as the term for 'foot' which also has corresponding counterparts in Candoshi and Uru-Chipayan (see Subsection 11.4 below).

	English	Proto-Arawakan	Kunza
1	'duck'	*hʋbai (Ramirez 2020-2021)	<tchockbar; chopor>
2	'foot'	*kihti[ba]	<ckutchir; cuchi; khoche>
3	'mouse'	*kihɨli	<ckilli; ckilir; killi>
4	'river'	*wakʋ (Ramirez 2020-2021)	<backcka; vacka>
5	'star'	Trinitario *hreeɣi*; Ignaciano *harairiki*	<haalar; halar; ahlar>
6	'sun'	*kamui 'sun, (summer)'; Yavitero <kaˈmuʝi> 'sun' (Key 2021c)	<ckamur; cáhmor> 'moon'
7	'sun', 'year'	*keči 'sun, day'	<cketi> 'year'
8	'water'	*uni	<puri; puy>

Table 8. Some Arawakan-Kunza lexical correspondences.
Proto-Arawakan data from Payne (1991), if not indicated otherwise, Ignaciano data from Key (2021a), Trinitario data from Gill and Gill (2021), Kunza data from Lehnert Santander (2021).

Although an in-depth-account would be beyond the scope of this paper, it should at least be briefly mentioned here that Kunza has been shown to have a number of correspondences in Mochica (Adelaar 2003; Jolkesky 2016, 549-550), Uru-Chipayan (Adelaar 2003; Jolkesky 2016, 531), Mapudungun (Adelaar 2003; Jolkesky 2016, 508-509), Yahgan (Pache, Wichmann and Zhivlov 2016, 399) and, above all, in Candoshi (Jolkesky 2016, 401-402), a language that has repeatedly been claimed to be distantly related to Arawakan (Payne 1989; Kaufman 1990; Jolkesky 2016).

9. Mapudungun

If Arawakan is particular among the language families of South America in that it seems to be an important source language for borrowings – a claim that needs to be elaborated and substantiated in more detail – Mapudungun is particular among South American languages in that it has received so many influences, both from the lowlands and from the Andes. One of the most important influences in Mapudungun lexicon has been argued to be from Arawakan (Adelaar and Pache 2022).

At present, Mapudungun is spoken in southern central Chile and also in parts of Argentina. In the mid-19th century, in coastal regions, the area of distribution of this language seems to have reached far into the arid north of Chile (d'Ans 1977). A possible genealogical Arawakan-Mapudungun connection has been deemed worth being explored (Payne 1990, 78) and underpinned with some lexical and grammatical correspondences (Croese 1991). Indeed, Mapudungun presents a number of remarkable lexical correspondences with Arawakan. The forms in question are shown in Table 9; correspondences already discussed by Croese (1991) are marked with a postposed asterisk, those marked with a cross are discussed by Adelaar and Pache (2022).

As they are now, these correspondences are not sufficient to classify Mapudungun as an Arawakan language (see Adelaar and Pache 2022 for a discussion). Among the other languages that left their traces in the Mapudungun lexicon and sometimes also morphosyntax are, above all, Jivaroan, Aymaran and Quechuan. Contact of Mapudungun with Quechuan and Aymaran must have occurred both in Inca and in pre-Inca times (Pache 2014), contact with Arawakan and Jivaroan in pre-Inca times. The different layers of influence from central Andean and Amazonian languages suggest a homeland of Mapudungun in western Amazonia (Adelaar and Pache 2022), possibly quite close to the Proto-Arawakan homeland; the matter needs further investigation.

	English	Proto-Arawakan	Mapudungun
1	'black'*	*kʰuere	*kuɹi*
2	'brother'†	*peri[pe]	*peñi* 'brother (of a male ego)'
3	'fat, grease'†	*yui[n][ka]	*yiwiñ*
4	'fear'†	*pɨnka 'fear, (respect)'	*peᵇʸke* 'to be in a hurry' (Huilliche)
5	'flower'†	*dewi	*ɹayi-* 'to flower'
6	'forehead'*	*du[tʰi]	*toḻ ~ ṭoḻ*
7	'good'*	*kʰeimi	*kɨme*
8	'grass'*	*kačau	*kaču*
9	'liver'*	*uhbana	*pana*
10	'root'*	*pale	*folil*
11	'red'*	*kɨra	*keli*
12	'salty', 'sour'*	*ka¢o[rɨ] 'sour'	*koči* 'salty, sour'
13	'sand'	*kadɨ (Ramirez 2020-2021)	*koɹel* (Huilliche)
14	'sister-in-law'*	*natʰu	*ñaθo*
15	'smoke' 'fire'†	*kɨča[li] 'smoke'	*kičal* 'fire'
16	'to sleep'*	*imaka	*umaɣ-*
17	'sky'*	*yenuh[kɨ] 'up, above, (sky)'	*wenu* 'sky'

Table 9. Some Arawakan-Mapudungun lexical correspondences. Proto-Arawakan forms from Payne (1991), if not indicated otherwise; Mapudungun data from Augusta (1916).

10. Yahgan

Yahgan, a language isolate, was the southernmost language of the world; its last fluent speaker, Cristina Calderón, passed away in February 2022. The language has been documented since the early 19th century, and various works have been published on Yahgan lexicon (e.g., FitzRoy 1839; Bridges 1933). At present, Yahgan morphosyntax is being investigated with the help of published and manuscript materials (e.g., Regúnaga 2015; 2019; Regúnaga and Meroz 2016). In terms of external relations, there are correspondences of Yahgan with Selk'nam, a Chonan language of Patagonia and Tierra del Fuego, and with Qawasqar, a language isolate of Chilean Patagonia, which are due to language contact. In the case of Qawasqar, a remote genealogical connection has also been proposed (Viegas Barros 2005, 99-107). Although the existence of non-fortuitous correspondences between Yahgan and Arawakan languages may be unexpected, there are some suggestive sets, shown in Table 10.

	English	Proto-Arawakan	Yahgan
1	'animal'	*pɨra 'domesticated animal', *kudɨ[pɨra] 'bird'	*pixa* 'animal', *pix* 'bird'
2	'foot', 'leg'	*kɨhti[ba] 'foot'	**late**š 'leg'
3	'hand', 'arm'	*kʰapɨ 'hand'	*kamei* 'arm'
4	'leg', 'foot'	*kawa 'leg (shin)'	*kouya* 'foot'
5	'nose'	*kɨri	**kašuš**
6	'red'	*kɨra	*luša*
7	'reflexive'	*pa- 'impersonal, reflexive' (Aikhenvald 2020)	*ma-* 'reflexive, ?reciprocal' (Regúnaga 2015; 2019)
8	'river'	*wakʊ 'river' (Ramirez 2020-2021)	*waya* 'bay'
9	'root'	*pale	*mali*
10	'seed', 'stone'	*aki 'seed (fruit, egg)'	*aiya*, *awi* 'stone'
11	'sun'	*kamui 'sun, (summer)'	*lam*
12	'tongue'	*nene	*lan*
13	'up, above'	*yenuh[kɨ]	*inu*
14	'wet'	*isa[pʰa]	*ixa*

Table 10. Some Arawakan-Yahgan lexical correspondences. Proto-Arawakan forms from Payne (1991), if not indicated otherwise, Yahgan forms from Guerra Eissmann (2021), if not indicated otherwise.

The correspondences shown in Table 10 need further investigation: Arawakan *k seems to correspond to *k*, *y*, or *l* in Yahgan as it also seems to do in Sechura and Tallán (see Section 3 above). The exact nature of a connection between Yahgan and Arawakan appears worth exploring; Proto-Arawakan and Yahgan morphosyntax also need to be systematically compared for this.

11. Summary and conclusion

This article has illustrated evidence for language contact between Arawakan and Andean languages. The reflexes of this contact are quite heterogeneous in the languages of the northern and southern periphery of the Andes and in the central Andes, as summarized in (11.1) to (11.3). In several cases, above all in the languages of the Andean periphery, they may be the result of indirect contact and of contact networks (11.4). Besides summarizing the results presented above, this final section suggests further lines of investigation.

11.1 Languages of the central Andes

Borrowings from Arawakan into Quechuan and Aymaran reflect occasional, direct contact in the case of terms for trade goods or animals associated with the lowlands, such as monkeys or tobacco. Some of these lexical correspondences seem to originate in contact between single varieties, for instance, between the ancestor of a present-day southern Quechuan variety and a neighboring Arawakan language (terms for 'grass' or 'female'). In other instances, the sets concern extensively distributed *Wanderwörter* such as related terms for 'honey' or for 'fear', attested in Arawakan, Quechuan and Aymaran (Section 5), but also in languages of the Andean periphery and beyond, such as Candoshi (e.g., <kan**íbagá**maama> 'to scare, to frighten', Payne 1989) and Mapudungun (e.g., Huilliche *peľke* 'to be in a hurry', Augusta 1916, 34).[15]

In the case of Uru-Chipaya, a genealogical link with Arawakan has repeatedly been claimed in the past (e.g., Créqui-Montfort and Rivet 1925-1927; Greenberg 1987, 83-84). Yet, there is surprisingly little solid lexical evidence for a connection beyond single loanwords (see Section 7). There are a number of corresponding body-part terms which, however, do not indicate an exclusive Uru-Chipaya-Arawakan relation since they also have counterparts in other, non-Arawakan languages discussed here ('foot', 'ear', 'eye', 'face'). Most other Arawakan-Uru-Chipaya correspondences discussed here might be best explained as the result of relatively recent contact; the exact context and borrowing direction remain to be investigated (terms for 'pot', 'salt', 'wool') (Section 7).

Puquina is an exception in the central Andes in that the correspondences with Arawakan are qualitatively different from the other cases discussed in this subsection: in addition to lexical roots with counterparts in several other languages dealt with in this paper ('face', 'sun'), there are also some Puquina-Arawakan sets including near-synonymous verbs ('to stand'/'to live') and a shared paradigm of person markers which has been argued to suggest a remote genealogical connection. Certain forms ('eye', 'high') have exclusive correspondences in a living Arawakan language, Bauré of the Bolivian lowlands. If they are borrowings, Bauré is the donor, not Puquina, since the forms are morphologically transparent in the former, not in the latter language (Section 6).

11.2 Languages of the Andean near periphery

This paper has dealt with several extinct languages of the near periphery of the central Andes: Mochica (Section 4), Sechura and the Tallán languages Catacaos and Colán in the north (Section 3) and Kunza in the south (Section 8). These languages also have a

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15 Borrowing of emotion terms is not uncommon in Andean languages. The emotion terms in question may have been borrowed in emotionally loaded situations, which enhanced their memorability (cf., e.g., McGaugh 2013) and eventually their borrowability.

few structural features that approximate them to the typological profile of Arawakan languages, for example in the domain of possessive marking (Mochica, Tallán, to some extent also Kunza). Only a small amount of Mochica and Kunza vocabulary presents correspondences with Arawakan. Correspondences mostly concern vocabulary that is widely borrowed anyway in western South America, including basic vocabulary items for 'eye', 'face' (Mochica) or 'foot' (Kunza). In Kunza, astronomy ('moon', 'sun', 'year') and animals ('duck', 'mouse') are among the semantic fields which are represented in the sets discussed here.

In Sechura and Tallán, more formal correspondences can be found with Arawakan than in the case of Mochica and Kunza. They encompass some basic body-part terms ('eye', 'hand', 'heart', 'nose') and some astronomic terms ('sky', 'sun'). As the available data are scarce in the case of the two Tallán languages in particular (43 words for each, among which are two borrowings from Spanish), the number of correspondences is quite high in relative terms; there are also some grammatical correspondences. Since Sechura and Tallán are extinct and hardly documented, the exact nature of the connection with Arawakan will probably always remain open, although it is probably not too bold to tentatively hypothesize a remote genealogical link. In any case, the correspondences discussed in Section 3 suggest an eastern homeland of Sechura-Tallán.

11.3   Languages of the Andean distant periphery

Correspondences with Arawakan also occur with some languages that are spoken in the distant periphery of the central Andes: Umbra in the northern Andes, and, somewhat more remarkable, since further away from the Arawakan homeland, Mapudungun and Yahgan in the south.

In the northern periphery of the Andes, Umbra of southern Colombia has been found to share some relevant parts of its basic vocabulary with Arawakan (Section 2). These correspondences include basic vocabulary items ('arm', 'eye', 'louse'). The sound correspondences appear to be quite regular and straightforward, but the origin of these so far almost exclusively lexical parallels needs further investigation.

In the southern periphery of the Andes, correspondences of Arawakan basic lexicon have been noticed in Mapudungun (Payne 1991, Section 9); they have been argued to reflect a homeland of Mapudungun in northwestern Amazonia (Adelaar and Pache 2022) and have been widely discussed in the literature (e.g., Payne 1990; Croese 1991).

In the case of Yahgan (Section 10), correspondences with Arawakan are even more difficult to explain. Tierra del Fuego is nearly 4,000 kilometres away from the southernmost area known to have hosted Arawakan-speaking groups, the Chané of the Salta province in northern Argentina. In the case of Mapudungun and Yahgan, the sound correspondences with Arawakan are less straightforward than, for instance, in Umbra, and need further investigation. In the case of Arawakan *k and its counterparts

in Yahgan, there are some similarities with the correspondences of Arawakan *k in Sechura and Tallán (Section 3). A more comprehensive comparison of Yahgan with (Proto-)Arawakan remains forthcoming and may shed more light on the issue.

11.4 Complexities and outlook

The correspondences of the languages described here, mostly the peripherical ones, are remarkable: they do not only concern Arawakan, but the languages themselves seem to be interrelated in several cases and at different levels. For instance, Yahgan does not only have a number of basic lexical correspondences with Arawakan, but also with Candoshi (not addressed in detail here for spatial restrictions)[16] and with Kunza (Pache, Wichmann and Zhivlov 2016, 399). Kunza, in turn, also has several lexical counterparts in Sechura and Tallán of the Peruvian north coast (Urban 2019, 208), summarized in Table 11. They include a number of shared astronomic terms and reflect some recurrent sound correspondences – Kunza <ck> versus Sechura-Tallán <n> in Kunza <ckamur, cáhmor> versus <nam> Catacaos 'moon' and in Kunza <ckapin, caapin> versus Catacaos <nap> 'sun' – which are reminiscent of those found between Proto-Arawakan and Sechura-Tallán (*k : <n>, see Sets 4 and 9 in Table 11). The asterisk indicates that the set in question is mentioned in Urban (2019, 109-208).

Thus, in order to gain a fuller picture, it will eventually also be necessary to investigate the interrelationships of the languages dealt with here (for a typological comparison, see Urban *et al.* 2019). What is clear, for the moment, is that Arawakan languages have been a fundamental part of this network of lexical correspondences which includes several Andean languages spoken in distant areas. On a typological level, at least Kunza, Mochica and Tallán have some features in common with Arawakan in terms of possessive marking.

Another conspicuous finding of this paper is that in a number of cases, an Arawakan lexical item has a corresponding form not only in one of the languages discussed above, but in several of them, and additionally also in other languages not dealt with here. This is summarized in Table 12. The forms in question are remarkable insofar as several of them ('eye', 'foot', 'louse') do not belong to the vocabulary which is typically borrowed (see Haspelmath and Tadmor 2009).

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16   Some examples for possible Candoshi-Yahgan lexical correspondences are Candoshi <**kach**ich> 'eye', Yahgan *uškaš* 'forehead'; Candoshi <charo> 'forehead', Yahgan *tala* 'eye', Candoshi <siina> 'rain' (noun), Yahgan *sima* 'water'; Candoshi <vigo>, Yahgan *peka* 'shore' (cf. Tuggy 1966; Guerra Eissmann 2021).

	English	Kunza	Tallán, Sechura
1	'dog'	<ckuru> 'dog, puma', <kúh-ri> 'puma'	<tono> Sechura 'dog'
2	'foot'	<ckutchir>; <cuchi>; <khoche> 'foot'	<**tucci**càs> Catacaos 'trunk'
3	'to kill', 'to die'*	<latan-tur; latta-tur> 'to kill'	<dlacati> Colán, <lacatu> Catacaos, <lactuc> Sechura 'to die'
4	'moon'	<ckamur, cáhmor>	<nam> Catacaos
5	'mouth'	<ckoiyi> 'edge'; <ckaipi, khaipe, quaipi> 'mouth'	<collo> Sechura 'mouth', <coyu roro> 'beach' (<roro> 'sea')
6	'fire'*, 'smoke'	<ttoyur> 'smoke', <humur> 'fire'	<huyũr> Colán 'fire'
7	'snake'	<tto**ckomar**>; <to**ckma**>[17]	<kon'mpar> Sechura
8	'stream'	<khuro>, <ckuri>; <khuri>[18] 'wind'	<turu-yup> Catacaos 'river' (<yup> 'water'), <tulut> Sechura 'river'
9	'sun'	<ckapin, caapin>	<nap> Catacaos
10	'water'*, 'rain'*	<puri, puy> 'water'	<purir> Sechura 'rain'
11	'year', 'sky'	<cketi> 'year'	<cutũc-nap> Colán, <cuchuc-yor> Sechura 'sky'

Table 11. Lexical correspondences between Kunza and Sechura-Tallán. Kunza data from Lehnert Santander (2021), Tallán and Sechura data from Martínez Compańón (1985 [1782-1790]) and from Urban (2015).

Thus, rather than reflecting exclusive contact with or influence from Arawakan, in the cases shown in Table 12, the lexicon may also have been shared through wider borrowing networks which covered parts of lowland South America.

A remarkable phenomenon observed here is that basic vocabulary (cf. the Arawakan terms for 'louse', 'eye', 'foot') was apparently borrowed into and between many Andean languages via a star or chain pattern (cf. Haynie *et al.* 2014). Star- and chain-like borrowing patterns are expected to occur in vocabulary that refers to hitherto unknown and/or cognitively salient entities, given that salient contents spread more easily (for an example in oral traditions, see Pache 2012). Why such borrowing patterns also occur in basic vocabulary items of several Andean languages – with the exception of Quechuan and, above all, Aymaran – must remain a matter of future modelling.

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17 The segmentation of the Kunza form is tentative and mine. Compare also Chipaya *kumari* 'snake' (Olson and Olson 2021); Kallawaya *čumalʲi* 'snake' (Oblitas Poblete 1968).
18 Compare also Mapudungun *kuɹif* 'wind' (Jolkesky 2016, 509).

English	Proto-Arawkakan	Corresponding forms in other languages dealt with here	Corresponding forms in other languages not dealt with here
'brother'	*peri[pe]	Kunza (probably via Southern Quechua), Mapudungun, (Puquina), Quechuan	Unknown
'ear'	*[da]keni[aku]	Uru-Chipayan	Candoshi <**kíts**ích> 'ear'; <**kíts**íshi> 'hearing' (Spanish *oído*) (Tuggy 1966, 194)
'eye'	*[l]ukɨ/e	Mochica, Puquina, Umbra, Uru-Chipayan	Auishiri <atŭka̩> 'eye' (Tessmann 1930, 486); Lule <yocus> 'face' (Machoni de Cerdeńa 1732, 34); Proto-Chapacuran *tok 'eye, seed, stone' (Angenot-de Lima 1997, 86); Trumai *huk* 'face' (Monod-Becquelin 2021), among others.
'fear'	*pɨnka	Aymaran, Quechuan, Mapudungun, Puquina	Candoshi <kaní**bagá**maama> 'to scare, to frighten' (Tuggy 1966, 20)
'foot'	*kɨhti[ba]	Chipaya, Kunza,	Candoshi <**kots**ich> (Tuggy 1966, 201); Proto-Chibchan *kihtsa ~ *kihsa (Pache 2018b, 108)
'forehead'	*du[tʰi]	Mapudungun, Mochica	Guató *tori* 'face' (Palácio 1984, 144); Trumai *til* 'seed' (Monod-Becquelin 2021); possibly also related to Candoshi <charo> 'forehead' (Tuggy 1966, 168); Kunza <tan-ti> 'seed' (Lehnert Santander 2021); Yurakaré *tanti* 'eye, seed' (Van Gijn 2006, 201, 274); Yahgan *tala* 'eye' (Guerra Eissmann 2021)
'grass'	*kačau	Cuzco Quechua, Mapudungun	Unknown
'heart'	*[ni]ahkɨ[ni]	Tallán, Yahgan	Unknown
'louse'	*(i)ni (Aikhenvald 2002); *ini (Ramirez 2020-2021)	Umbra	Candoshi <iisi> (Tuggy 1966, 202); Maku *i:ne* 'louse' (Migliazza 1978, 136)
'mouth'	*numa (Aikhenvald 2002); *numa, *-nʊma 'mouth' (Ramirez 2020-2021)	Umbra	Proto-Chapakuran *topak (Angenot-de Lima 1997); Páez *yuwe* 'mouth' (Gerdel 2021)

English	Proto-Arawkakan	Corresponding forms in other languages dealt with here	Corresponding forms in other languages not dealt with here
'nose'	*kɨri	Sechura, Yahgan	Unknown
'red'	*kɨra	Mapudungun, Mochica, Yahgan	Unknown
'root'	*pale	Mapudungun, Yahgan	Lule <pys> (Machoni de Cerdeña 1732, 112)
'sky'	*yenuh[kɨ] 'up, above, (sky)'	Mapudungun, Yahgan	Unknown
'sour'	*ka¢o[rɨ]	Mapudungun, Puquina, Quechuan	Candoshi <kasha> 'acid' (Tuggy 1966, 119); Sanapaná-Enlhet *kas* 'bitter, sour, acid' (Unruh and Kalisch 2021)
'sun'	*kamui	Kunza, Puquina, Sechura, Tallán, Yahgan	Proto-Chapakuran <*komeN> (Angenot-de Lima 1997, 147); Cholón *nem* 'day' (Alexander-Bakkerus 2005: 362); Cofán $k^h o \beta ɨ$ 'moon, month' (Borman 2021)
'sun, day'	*keči	Kunza, Mochica, Sechura, Tallán, Umbra	Wichí *kaˀtes* 'star' (Braunstein 2021) and related forms in other Matacoan languages

Table 12. Arawakan forms with counterparts in more than one of the languages discussed here.

Another issue for further investigation are the specific contact scenarios underlying Arawakan-Andean correspondences, which appear to be very different in a number of cases: In some languages, the correspondences with Arawakan are quite homogeneous; for instance, they only concern non-basic vocabulary in the case of Aymaran, suggesting relatively late and superficial contact. By contrast, they only concern quite basic vocabulary in the cases of Umbra and Mapudungun. Finally, in the case of Puquina, correspondences are more heterogeneous: they are found in Proto-Arawakan (e.g., a paradigm of person markers), but also in Bauré, in which case they may sometimes be of relatively recent origin, if they are borrowings. In the languages dealt with here, different layers may sometimes superpose each other like in a palimpsest.

Finally, this paper has shown that in order to gain a fuller picture of the linguistic prehistory of the Andes and the far west of South America, lowland South American languages should also be taken into account. In particular, Arawakan languages turn out to play an essential role in this context.

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