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How grammar and culture interact in Zamucoan¹

Luca Ciucci

1. Introduction

This chapter investigates the integration of language and society in Zamucoan, a family consisting of three languages traditionally spoken in the Boreal Chaco of South America: †Old Zamuco, Ayoreo and Chamacoco. Zamucoan is characterized by a split which crucially affects the reciprocal interaction of language and society: Old Zamuco and Ayoreo share the same cultural background (although relatively little is known about the Old Zamuco culture), while Chamacoco shows both cultural and linguistic innovations (Ciucci 2019).

Following this brief introduction, section 2 will introduce the family and its main typological features (§2.1). Zamucoan displays a rare system of nominal suffixation, which comprises gender marking (masculine vs. feminine), number and the category of ‘form’. I will first analyze the Ayoreo origin stories, in order to show a connection between the grammatical gender of nouns for non-humans and a poetic metaphor for their personification (§3). This kind of connection is found in many languages with grammatical gender (Aikhenvald 2016), but the peculiarity of Ayoreo is the pervasive character of this association, which involves almost everything known to the Ayoreo traditional culture. By contrast, Chamacoco has lost most origin stories, where a non-human is linked to a mythological character (§4). This correlates with one morphological innovation of Chamacoco. In Zamucoan, terms for humans usually have gender switch, that is, they morphologically differentiate between masculine and feminine following the natural gender of the referent. Chamacoco has extended gender switch to animal nouns, and one can see the

effect of this innovation in some Chamacoco stories (§4.1). The presence of a teknonymic suffix in Ayoreo may have to do with the importance of the relationship between the father and the first legitimate child, which in the past often led to extreme acts (§5). In section 6, I will show that the morphological difference between direct vs. indirect possession and the fact that animals and plants cannot be directly possessed may reflect the attitude of the Zamucoan peoples towards consumable resources and their environment. Old Zamuco, the most conservative Zamucoan language, shows traces of a situation in which it had originally no specific comparative structures: this is characteristic of egalitarian societies and corresponds to what is known about the Old Zamuco/Ayoreo peoples (§7). Equality in Old Zamuco/Ayoreo society also involves gender balance, and some mismatches between linguistic and natural gender appear to be indicative of the important role occupied by women (§8). Section 9 will mention the secret register used by the Chamacoco speakers, a consequence of cultural and linguistic change which occurred after contact with Western society. Section 10 concludes the discussion.²

2. The Zamucoan family

The Zamucoan family consists of three languages spoken in the northern Chaco: †Old Zamuco, Ayoreo (ca. 4,500 speakers) and Chamacoco (ca. 2,000 speakers). Old Zamuco was spoken in the 18th century in the Jesuit mission of *San Ignacio de Samucos*, one of the Jesuit missions of Chiquitos. The family-internal comparison shows that Old Zamuco is the most conservative language (Ciucci 2016 [2013]; Ciucci and Bertinetto 2015, 2017, 2019; Bertinetto and Ciucci 2019). Most of the documentation available so far consists of a grammar by the Jesuit Ignace Chomé (1958 [ante 1745]), but the recent discovery of Chomé's dictionary (see Ciucci 2018 for details) will soon make available the most important

source of data for this language (Ciucci forthcoming, a). Zamucoan is genetically isolated, as confirmed by biological studies on Native American populations (Demarchi and García Ministro 2008; Rickards *et al.* 1994). At the same time, traces of contact with other Chaco languages have emerged (Ciucci 2014): in particular, comparison with Mataguayan and Guaycuruan shows several morphological borrowings in and from Zamucoan.

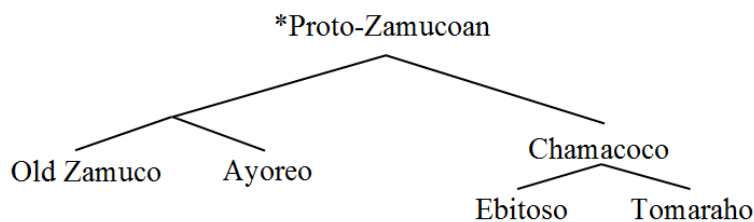


Figure 1: Internal classification of Zamucoan

As I will demonstrate, linguistic proximity goes hand in hand with cultural proximity in the languages discussed in these chapters. Figure 1 shows the internal classification of the Zamucoan family. Old Zamuco and Ayoreo are very close to each other from both a morphological and lexical point of view (Kelm 1964; Ciucci 2016), while they only share 30% of the lexicon with Chamacoco. Diachronic studies show that Ayoreo does not directly stem from Old Zamuco, but from one or more sister languages, already spoken at the time of the Jesuits (Ciucci 2016; Ciucci and Bertinetto 2015, 2017). Since Old Zamuco and Ayoreo are two distinct languages, it sometimes happens that only one of the two shares archaic morphological features with Chamacoco: this is mostly the case in Old Zamuco, but it can also happen for Ayoreo (Bertinetto and Ciucci 2019).

There is little information about the Old Zamuco culture (see Combès 2009 for the available historical sources), but there is some evidence that the Old Zamuco ethnic population had the same cultural background as the ancestors of the Ayoreo (Ciucci 2019), so that considerations on the Ayoreo culture presented in this chapter very likely also apply to

Old Zamuco. The Ayoreo had the first stable contacts with the Western culture in 1947, but they had largely been affected by 18th-century contact with Jesuits, and at least some of their ancestors had lived for a while in the Jesuit missions (Fischermann 1988, 1996; Combès 2009). In conclusion, although there is no language continuity, one can speak of cultural continuity between Old Zamuco and Ayoreo, and in this chapter, I will discuss some historical and linguistic evidence concerning mythology (§3.4), naming practices (§5), the lack of a strict societal hierarchy (§7) and the status of women (§8).

Chamacoco is, by contrast, the most innovative language of the family, and this correlates with cultural innovation. While both the Ayoreo and the Chamacoco are traditionally semi-nomadic populations with a similar material culture, the Chamacoco religious view is reasonably different from that of other Chaco populations, including the Ayoreo. The cultural and linguistic change was due to contact with surrounding ethnicities (Cordeu 1997). Cordeu (1989-1992; 1997) points out the influence of Jê groups on the Chamacoco, but cultural similarities with the Chiquitano (unclassified) (Sušnik 1969) and the Kadiwéu (Guaycuruan) (Cordeu 1989-1992) also emerge. Recent studies have found shared linguistic elements with Kadiwéu (Ciucci 2014, Aikhenvald 2018) and Tupí-Guaraní (Ciucci and Bertinetto 2015), among others (cf. Ciucci 2014). Besides, after the first contact with Western society, in 1885, Chamacoco was profoundly affected by Spanish. In this chapter, I will refer to the pre-contact Chamacoco culture, but in §9 will discuss a recent development in the interaction between the language, heavily influenced by Spanish, and Paraguayan society, where the Chamacoco now live.

The Chamacoco are now divided into two groups, corresponding to two dialects: Ebitoso (or Ybytosos, *Ibitoso* in proper Chamacoco spelling) and Tomaraho. According to DGEEC (2014), there were 1,915 Ebitoso and 152 Tomaraho in 2012. In this chapter, I will use the term ‘Chamacoco’ to refer only to the Ebitoso (or *Ibitoso*) people, among whom I

have done my fieldwork. Although the two groups used to share the same culture, the present-day situation is very different: the Ebitoso have lost many elements of their cultural tradition, which are still preserved among the Tomaraho, who have lived in isolation from Western society for a more extended period (on Tomaraho, see Sequera 2006 and Escobar 2007).

2.1 Main features of Zamucoan

Zamucoan languages are fusional. The main constituent order is A-V-O or S-V. The possessor precedes the possessum, and adjectives follow the head of the NP. The three major word classes are verbs, nouns and adjectives. They are generally open, and their morphology will be dealt with throughout the chapter. Minor word classes common to all Zamucoan languages include adpositions, adverbs, connectives, demonstratives, interrogatives, negators, pronouns, number words, possessive classifiers and interjections. All have possessive classifiers (Ciucci and Bertinetto 2019), addressed in §6. Verbs have prefixes marking subject (A/S) and mood (realis vs. irrealis), with plural number usually expressed by verb suffixes. Realis and irrealis are frequently neutralized, in which case, I will not indicate the mood in the glosses. Most verbs are strictly transitive or intransitive. There is also a group of extended transitives and a few positional verbs (overlapping with existential verbs and, in Ayoreo, the copula). Nouns are divided into inflected and uninflected for possessor, with the former having pertensive prefixes to mark the possessor (see §6).

Bertinetto and Ciucci (2015) point out several rare or unusual features found in Zamucoan, such as para-hypotaxis (Bertinetto and Ciucci 2012), the presence of voiceless nasals (Bertinetto, Ricci and Zhi 2010), the radical tenselessness of verbs (Bertinetto 2014b) and gender marking on possessive classifiers (Ciucci and Bertinetto 2019; see §6). A unique

feature of Zamucoan needs to be introduced here, in order to make the glosses of this chapter intelligible. Nouns and adjectives have one suffix which obligatorily expresses gender (masculine or feminine), number (singular or plural) and nominal form. As far as the last feature is concerned, Zamucoan nominals distinguish between a PREDICATIVE FORM, an ARGUMENT FORM and an INDETERMINATE FORM. This very tripartition is a peculiar feature of Zamucoan. Table 1 offers a synopsis of nominal suffixation in the three Zamucoan languages.

	Old Zamuco		Ayoreo		Chamacoco	
	Singular	Plural	Singular	Plural	Singular	Plural
Masculine Predicative Form	-Ø	-(y)o, -ño	-Ø	-(y)o, -ño	-Ø, -k, -(y)ak	-(y/w)o, -(y)e, -tso, -cho, -lo, -no
Masculine Argument Form	-(i)tie (-re)	-oddoe, -onnoe	-i,	-ode, -one	-(i)t, -(i)ch	
Masculine Indeterminate Form	-nic, -ric, -tic	-nigo, -rigo, -tigo	-nic, -ric, -tic	-ningo, -rigo, -ringo, -tigo	-ĩrk, -tĩk,	-tiyo, -ĩr
Feminine Predicative Form	-Ø	-(y)i, -ñi	-Ø, (-e)	-i	-Ø, -a [?] , -e [?] , -o [?] , -i [?]	-(y/w)e
Feminine Argument Form	-(i)tae	-(i)yie, -(i)ñie	-Ø, -(i)a, (-e)	-(i)die, -(i)nie	-(i)ta, -(i)cha	
Feminine Indeterminate Form	-nac, -rac, -tac	-rigui	-nac, -rac, -tac	-ningui, -rigui, -ringui, -tigu	-rã(k), -tã(k)	-ĩr

Table 1: The Zamucoan threefold system of nominal suffixation (cf. Ciucci 2016; Ciucci and Bertinetto 2019)

The PREDICATIVE FORM carries out nominal predication in the absence of a copula, while the ARGUMENT and INDETERMINATE FORMS are used in argument position, as is evident in the contrast between the PREDICATIVE (1) and the ARGUMENT FORM (2) of ‘jaguar’. At the core of

the Zamucoan nominal tripartition, there is a contrast between the predicative vs. argument function. What makes the system unique is the presence of the INDETERMINATE FORM, differing from the ARGUMENT FORM because it conveys non-specific reference, as in (3). For a typological comparison of Zamucoan nominal tripartition, see Bertinetto, Ciucci and Farina (2019).

(1) Ayoreo

¡[**Carataque**]_{INTRANSITIVE.PREDICATE} que don Pedro a!
 jaguar.m.sg.PF RETR don Pedro MOD

It was a jaguar, don Pedro! (Briggs 1972, II: 35; cit. in Bertinetto 2014a)

(2) Ayoreo

Ch-uninga mu [**carata-i**] t-õraja guesi
 3-be_surprised but jaguar-m.sg.AF 3-throw_into outside

He was surprised but the jaguar came out. (Briggs 1972, II: 36)

(3) Ayoreo

A ore ch-ajna [**ajarame-tique**]. [**Aramoro-raque**] a deji
 MOD 3pl 3-follow armadillo-m.sg.IF brown_brocket-f.sg.IF MOD 3.EXIST

They are following an armadillo, or perhaps a brocket. (Briggs 1972, II: 28)

Examples (1-3) show the primary uses of the nominal forms. In Zamucoan, adjectival modifiers follow the head of the NP. Noun and adjective(s) always agree in gender. As far as number and form are concerned, there are two different configurations within the NP. In Ayoreo and Old Zamuco, the form and number required by the context, such as the plural

ARGUMENT FORM, are only marked on the last element of the NP (4), while all preceding nominals are in singular PREDICATIVE FORM. This occurs even though the referent is plural, as in (4), where ‘jaguar’ and ‘two’ are morphologically singular PREDICATIVE FORMS, while the final adjective is in plural ARGUMENT FORM.

(4) Ayoreo

Ch-imo [carataque gare querujn-ane] iji ta
 3-see jaguar.m.sg.PF two.m.sg.PF very_big-m.pl.AF LOC there

He saw two big jaguars right there. (Briggs 1972, I: 31; cit. in Bertinetto 2014a)

In Chamacoco, there is generally agreement, not only in gender, but also in number and form, between the head and its adjectival modifiers (5).

(5) Chamacoco

Esee=ni hno o-ch-ichew [jotsi-t bahlu-t]=ni
 DM=RETR 3.REAL.go pl-3.REAL-dig hole-m.sg.AF big-m.sg.AF=RETR

Then, they went to dig the deep hole.

Since one has to report nominals in one of the three forms, nominals will be cited in singular ARGUMENT FORM, which is also the citation form most frequently used by the Ayoreo and Chamacoco speakers when they are asked for a word.

3. How grammatical gender shaped Ayoreo mythology

As is known, linguistic gender can exert an influence on culture (Aikhenvald 2016; chapter 1). In Ayoreo, grammatical gender has deeply influenced mythology, and such a pervasive

connection is hardly found in any other language in the world. In this section, I will expand on several points raised in Ciucci (2019), showing how linguistic gender has systematically shaped Ayoreo mythology.

As already mentioned, Zamucoan has a small gender system distinguishing masculine and feminine. Gender is overtly marked on nouns. Human nouns follow their natural gender, and most of them have gender switch depending on the referent's natural gender. In the case of non-human nouns, one can identify some tendencies: for instance, in the whole family, plant and tree names are mostly feminine, but the exact rules for gender assignment have not been identified so far (Ciucci & Bertinetto 2019). In Zamucoan, adjectives, demonstratives and possessive classifiers agree in gender with nouns. In Chamacoco, where articles exist, they too agree in gender with the head of the NP. The Chamacoco nouns for animals usually show gender switch depending on the (often alleged) natural gender of the animal. This is an innovation of Chamacoco, which is discussed in §4.1.

3.1 On Ayoreo myths

In the traditional Ayoreo culture, myths, called *adode* (3.m.pl.AF), are sacred texts. The act of telling myths (*adode*), independently of the narrator's intention, can have magic consequences. These are often nefarious (see the examples in Idoyaga Molina 2000: 69-98), but can be positive in some cases: for instance, telling the story of *Guebi* 'small rain' is a way of calling the rain (Pia 2018: 83). Some myths are only known by shamans, and the degree of secrecy depends on each myth or even on single parts. The shaman proper is called *daijnai/naijnai* (m.sg.AF). Similar to a shaman, although at a much lower level, is the *igasitai* (m.sg.AF), because he knows myths and magic formulas (Pia 2016: 37-38). Telling a myth considered taboo, or even a tabooed part of a story, is very dangerous for both the narrator

and the listener. For instance, the taboo part of the story of *Pamoi* (GF.m.sg.AF) ‘woven belt used by elderly people to sit with’ will cause the death of a pregnant woman close to childbirth (Bórmida 2005: II, 27). This can also have repercussions in the community where something secret has been revealed, and this is another factor which prevents people from telling sacred stories: the narrator could be accused by the community of having caused adverse events. Some years ago the Ayoreo of Jesudi (Paraguay) attributed a series of divorces occurring at around the same time to the fact that a myth had just been recounted on a local radio (Otaegui 2014: 81-82).

As Otaegui (2014) points out, the motivation for secrecy in the Ayoreo culture has to do with the centrality of language in traditional religious beliefs. Some particular stories or formulas exert power on reality; it is not the person who pronounces some words, or the spirits listening to them, but the words themselves which can have magic power. This has significant consequences for the available documentation of myths: in Bórmida (2005 [1973-1979]) and Fischermann (1988), many myths are incomplete or interrupted because, according to the informants, it was dangerous to tell the rest of the story. The same picture emerges if one compares the recompilations of the Ayoreo and Chamacoco myths published at UCLA (Wilbert and Simoneau 1989 for Ayoreo, Wilbert and Simoneau 1987 for Chamacoco): owing to the taboo, the Ayoreo myths are usually shorter than the Chamacoco ones.

The brilliant young anthropologist Lucien Sebag committed suicide in 1965. According to the Ayoreo, this was because he had been told prohibited stories by a shaman, who allegedly suffered from mental disorders as a consequence of telling narratives that he was not supposed to tell (Bórmida 2005, I: 106). Pia (2016: 41) reports that Sebag brought another informant to Sucre, far from the Ayoreo communities, so that the dangerous consequences following his revelations could not manifest themselves in the Ayoreo territory.

Telling a prohibited myth can have consequences going much beyond a single unlucky event: Rosadé, one of the informants who had worked with Sebag and Bórmida, had to face social disapproval for having told myths and ritual formulas and ultimately abandon his village, because, according to the people of his community, his doing so had caused accidents (Idoyaga Molina 2000: 89-91).

Gabriella Erica Pia spent many years living with the Ayoreo, in order to document myths and other sacred texts. She could get access to most of them only after having been adopted by the clan *Etacōri* (Pia 2014: 48). Since the degree of prohibition varies according to each myth, she could then collect those stories which are taboo for the non-Ayoreo, but which can be recounted to the members of the community. She continued the documentation, but it took her some years before she was able to record one particular story which was considered extremely dangerous (Pia 2014: 54-56). In many cases, her informants wanted to remain anonymous and only shared with her fragments of stories, or stories in a concise form, in order to avoid unpleasant consequences (Bertinetto, Ciucci and Pia 2010: 112-113).

3.2 The Ayoreo origin stories and their characters

A great deal of Ayoreo myths explain the origin of non-human entities (animals, plants, natural phenomena, traditional objects, etc.). I will show in §3.3 that linguistic gender plays a fundamental role in these origin (or etiological) narrations. For the Ayoreo, almost all non-human entities are the result of a transformation of an Ayoreo who, for different reasons, decided to turn into a given entity.³ The ethnonym *Ayoreo* in the homonymous language is properly the masculine plural PREDICATIVE FORM of *Ayorei* (m.sg.AF), which means ‘human being, real person’. The people who gave rise to the entities of this world in a mythological past are the ancestors of the Ayoreo and are the ‘first men’ (*jnani bajade*, m.pl.AF) and ‘the

first women' (*cheque bajedie*, f.pl.AF) (Pia 2014: 49).⁴ They are also called *cuchade quicujaidie*, lit. 'the ancestors of the things', or *quicujaidie* (3.f.pl.AF) 'the ancestors' (singular *quicujadia* 3.f.sg.AF, see §8, ex. 23b). For reasons of simplicity, I will refer to them as 'the ancestors'.⁵ Data on a sample of mythological ancestors are reported in Table 3 in the Appendix.

One can see here a possibly universal cultural feature of the Lowland South American peoples, which is also found in other hunter-gatherer societies across the world: the idea that in the past humans and animals shared a primordial state of humanity. While mythology explains how animals have lost the original human bodily form, human and animal consciousness have remained identical. This cultural trait, termed 'Amerindian perspectivism', and theorized by Viveiros de Castro (1998, 2004), mostly applies to certain species of animals considered important for cultural or practical reasons. However, it can also extend to all animals, plants, and even include virtually all non-human entities, as in Campa cosmology (Viveiros de Castro 2004: 465), which in this respect is very similar to that of the Ayoreo: Indeed, the mythological ancestors of today's Campa were "the primal substance out of which many if not all of the categories of beings and things in the universe arose" (Weiss 1972: 170).

In Ayoreo origin myths, non-human entities are generally named after the ancestors who turned into them. Given the systematicity with which this scheme occurs in Ayoreo stories, the few exceptions are noteworthy: *Sumajningai* (m.sg.AF) 'courage' never underwent any transformation (see Table 3). Similarly, *Guebi* (DIM.m.sg.AF) 'small rain' is the personification of a sudden and short downpour. He did not transform into the atmospheric event he impersonates, but is described as a non-Ayoreo boy who fell from the sky; he was adopted by an Ayoreo and then went back to the sky (see Table 3 and Pia 2018: 83-97). Even

without metamorphosis, *Sumajningai* ‘courage’ and *Guebi* ‘small rain’ are, however, relevant to the present discussion on gender, because they personify non-humans.

There are also some stories, i.e. those of *Dacaterato* ‘red rope’, *Gase* ‘pitchfork’, and *Pibotai* ‘drinking tube’ (Table 3), where an object is mentioned before the metamorphosis. For instance, *Pibotai* (m.sg.AF) ‘drinking tube’ was a young man who was able to hunt in places where water is scarce. He invented a drinking tube to drink the water contained in tree hollows. At the end of the story, he turned into a drinking tube (Pia 2018: 60-61). In order to explain such chronological inconsistencies, Pia (2018: 52) hypothesizes that the object can be interpreted as the soul of the person who later transforms themselves into it.

Like the present-day Ayoreo, the ancestors also belong to one of the seven Ayoreo clans (cf. Bórmida 2005, II: 187-205 and Fischermann 1988); all entities are assigned to the clan of the ancestor from whom they transformed, and there is a distinction between strong and weak clans depending on whether the number of entities that they symbolically own is high or low. For a list of entities and the respective clans, see Fischermann (1988). Even though the reason for the transformation is often a conflict between the ancestors and the rest of the community of the time, just before their transformation into entities, the ancestors are asked to leave something useful, and give the Ayoreo a ritual formula or song, used to perform some magic, mostly healing a specific disease.

Each mythological ancestor usually has at least one ritual formula, or *sari* (m.sg.AF).⁶ These formulas, *sarode* (m.pl.AF) in the plural ARGUMENT FORM, can be used by everybody and are also the most common healing technique in the Ayoreo traditional culture, so that their importance strengthens the interdependency between mythological ancestors, the non-human entities they transformed into and today’s people. In myths, the ancestors explain the specific use of *sarode* (m.pl.AF) ‘magic formulas’ and the taboo concerning the narration of their stories (Idoyaga Molina 2000: 84).

3.3 The role of grammatical gender in Ayoreo origin myths

The ancestors turning into non-human entities in Ayoreo origin stories always have a well-defined natural (and social) gender, about which speakers are never confused (Pia 2016), although the Ayoreo are not aware of the reason why an ancestor belongs to one or the other gender (Bórmida 2005). Also the mythological characters not involved in a metamorphosis, such as *Guebi* (DIM.m.sg.AF) ‘small rain’ and *Sumajningai* (m.sg.AF) ‘courage’ (§3.2), have a well-defined gender (Table 3).

I have analyzed a sample of Ayoreo origin myths in order to see whether there is an identity between the natural gender of the ancestor who turned into a non-human and the grammatical gender of the Ayoreo noun for that entity. The data are reported in Table 3 in the Appendix. The stories examined come mostly from Pia’s Ayoreo anthropological dictionary (*Diccionario antropológico ayoreo*; Pia 2014, 2015, 2016, 2018).⁷ Owing to the secrecy involving myths, Pia sometimes had to assemble, like pieces of a mosaic, many fragments of Ayoreo myths, often narrated at different times by different informants over years of work. Another problem for the documentation of these stories is that only shamans have access to complete information (§3.1), but shamans are now disappearing owing to cultural change, so that the older people interviewed form the last generation to have lived a part of their life according to their traditional culture. Other sources of myths used in compiling Table 3 were Bórmida (2005 [1973-1979]), Fischermann (1988) and Idoyaga Molina (1998). Wilbert and Simoneau (1989) is a recompilation of stories which also includes those collected by Bórmida and Fischermann. I only considered stories for which there is enough information on the natural gender of the character, the name assigned to the character by the Ayoreo themselves, and the transformation they have undergone. Such data are often lacking, since

many texts are very short for the reasons explained in (§3.1), or the transcription of nouns is not accurate (an exception are nouns reported in Pia or Fischermann's works).

As one can see from Table 3 (in the Appendix), the gender of the ancestor always coincides with the morphological gender of the common noun. There is only one apparent exception to the identity between the natural gender of the ancestor and the linguistic gender of the entity they originated. I will discuss this exception in §3.4. In Table 3, the names of the ancestors always appear in singular ARGUMENT FORM (§2.1): this form has a higher frequency than the PREDICATIVE and the INDETERMINATE FORM, and, as already mentioned, is the citation form generally used by speakers. Nouns for objects can inflect for possessor (see also §6). While gender, number and nominal form are marked at the right periphery of a nominal, possession instead involves the left periphery of a noun. If the noun for an object inflects for possessor, the name of the ancestor is in third-person possessor form or, whenever available, in the so-called 'generic form' (GF), which indicates an unspecified possessor.

In the plot of each story, the entity concerned is named after an ancestor. However, in the ontogenesis of that story, the grammatical gender of an Ayoreo common noun has actually determined the natural gender of the character associated with it, and, consequently, many aspects of the narration.⁸ This is an example of how grammatical gender affects cognition, providing a source of metaphors, whereby the linguistic gender of an entity turns into its natural and social gender (Aikhenvald 2016). The grammatical gender of the name of the entity has been projected onto its personification through the mediation of shamans. Indeed, the role of the shaman is central to Amerindian perspectivism: only shamans can see the internal human form of non-human entities, enter into a relationship with them and share their message with the rest of the tribe (Viveiros de Castro 1998, 2004). The Ayoreo myths have been elaborated by shamans through the visions they have when they are in a trance (on Ayoreo shamanism and how trance is provoked, see Sebag 1965). When the Ayoreo shamans

are in a trance, they communicate with natural entities, which appear in the form of the ancestors who turned into them. For this reason, the Ayoreo shamans can provide descriptions of the human being associated with each entity (there are several examples in Idoyaga Molina 1998).

The Ayoreo myths would be very different if the Ayoreo language had no linguistic gender. For instance, in the stories, the natural gender of the ancestor (emanating from the linguistic gender of the entity concerned) correlates with its social gender and gender-specific roles or activities. In both Ayoreo society and narratives, men are military leaders, warriors, hunters and honey gatherers; they fight and kill people. Women, by contrast, wear makeup, produce woven fabrics or make skirts, an activity prohibited for men. The ancestor *Dacaterato* (f.sg.PF/AF) ‘red rope’, for instance, was a woman who continued to wear makeup after her marriage, thus breaking a traditional taboo and turning into a red rope (Pia 2016: 100). In some myths, overcoming social gender differences actually causes the loss of human nature: *Durujnai* (m.sg.AF), a young male, was transformed into a palm, because he performed some activities which are only allowed for women, such as picking the caraguata plant (Pia 2014: 59). This story is iconic; most plant nouns are grammatically feminine, but *durujnai* (m.sg.AF) ‘type of palm’ (*Trithrinax schizophylla*) is masculine. There are also stories concerning attractive women, who turned into non-human entities because of the problems caused by their beauty. Female characters can get pregnant, such as *Cuco* (f.sg.PF/AF) ‘type of tree’, who, having no partner, secretly gave birth to a child, and then married *Tobejnai* (m.sg.AF) ‘hook-billed kite’. *Carujnanguejna* (f.sg.PF/AF) ‘purpleheart’, a plant whose wood is purplish, lost too much blood during menstruation. However, she managed to heal herself and even to give birth to a child. Her history serves to help women during childbirth (Pia 2016: 40-41).

Ancestors of opposite sex formed a couple and turned into different entities (see Bórmida 2005, I: 50-51): *Doridi* (m.sg.AF) and *Bujote* (f.sg.PF/AF) or *Choyo* (f.sg.PF/AF) were partners who turned into birds. *Chibisidi* (m.sg.AF) and *Chibiside* (f.sg.PF/AF) were also a couple and turned together into plants. Another couple were *Pugutadi* (GF.m.sg.AF) ‘mortar’ and *Parangue* (GF.f.sg.PF/AF) ‘pestle’. *Potaquero* (f.sg.PF/AF) ‘rufous nightjar’ fell in love with *Potatai* (m.sg.AF) ‘scissor-tailed nightjar’. Love can also have harmful consequences: *Ajacaratai* (m.sg.AF), a plant (*Jatropha grossidentata*), fell in love with the wife of his brother *Chicōri* (m.sg.AF) ‘tuber plant’, who subsequently killed him. *Erejnai* (m.sg.AF) was unsuccessful with women, became evil, and transformed himself into a climbing plant.

All of these stories have been shaped by the arbitrarily assigned grammatical gender of common nouns and its influence on the shamanic vision of the world.⁹ Before gender could affect stories, the assignment of grammatical gender may have been influenced by cultural factors (see the possible example of *Guede* ‘sun’, below), but such cases are very hard, if possible at all, to identify, because they took place a long time ago. For this reason, the only possibility is to consider the Ayoreo grammatical gender as the starting point for the interaction between gender and mythological metaphors.

Two examples in which gender assignment is based exclusively on grammatical principles are *dequeyutigui* (m.sg.AF) ‘smallpox’ and *pitijinaquei* (GF.m.sg.AF) ‘joy’. They are derived via the suffixes *-tigui* and *-quei*, respectively, which form abstract nouns and are always masculine (see Ciucci 2016). Consequently, ‘smallpox’ and ‘joy’ are represented as men. Similarly, *guebi* (DIM.m.sg.AF) ‘small rain’ and *cuguebi* (DIM.m.sg.AF) ‘buff-throated woodcreeper’ (a bird) are diminutives of two masculine nouns (see Table 3), and inherit the gender of their bases. The name can also shape characters in other ways: e.g. the already mentioned *cuguebi* (DIM.m.sg.AF) ‘buff-throated woodcreeper’ is the diminutive of *cuguei* (m.sg.AF) ‘bean’. The semantic association between *cuguei* and *cuguebi* is not

straightforward. The myth explains that *Cuguebi* (DIM.m.sg.AF) was a young man who devoted himself to agriculture and liked to grow beans. Then, since too many people wanted a part of his harvest, he decided to transform himself into a woodcreeper.

In some languages, the linguistic gender of some nouns is assigned on the basis of legend and beliefs, as in Dyirbal, an Australian language from North Queensland (Dixon 2015: 19-43), and in Manambu, a Ndu language of Papua New Guinea (see Aikhenvald 2016: 120-121 for more examples). In Ayoreo, the opposite occurs: it is the overtly marked gender which has affected mythology. As already mentioned, one cannot exclude the possibility that myths might occasionally have influenced linguistic gender, but this is far from certain, and could only have happened in the case of a few, culturally significant words. Besides, the secrecy of many Ayoreo stories could have made it harder for these stories to produce systematic changes in the language.

An example in which cosmovision may have affected grammatical gender is the case of *Guede* (m.sg.PF/AF), the sun. *Guede* used to be the most important figure of Ayoreo mythology, and during the contact with the Jesuits it was associated with *Dupade* (m.sg.AF), the Christian God (Fischermann 1988; Idoyaga Molina 1998: 55). Morphologically, the Ayoreo word for ‘sun’ *guede* (m.sg.PF/AF) is irregular, because it is the only masculine noun whose singular ARGUMENT FORM lacks the suffix *-i* and is identical with the PREDICATIVE FORM (unmarked for gender), two features found instead in feminine nouns. A similar irregularity existed in Old Zamuco: *guiede* (m.sg.PF) ‘sun’ is properly a singular masculine PREDICATIVE FORM (also unmarked for gender), but it is generally used instead of the ARGUMENT FORM *guiedetie* (m.sg.AF), in which gender is overtly marked by *-tie*. The form *guiedetie* (m.sg.AF) ‘sun’, which is seldom used, is possibly an Old Zamuco innovation caused by regularization. If this is so, the salience of the sun in traditional religious beliefs

and the original lack of overt gender marking on ‘sun’ in Ayoreo and Old Zamuco may suggest that here linguistic gender has been assigned by mythological representation.

One has to exclude that Ayoreo non-human entities are named after dead people who may have had some particular connection with them during their lifetime. Although there are stories in which an Ayoreo makes or invents an object before turning into it, they are not the general rule. The hypothesis that ancestors (or at least some of them) may be eponyms is not supported by what we know of Ayoreo naming practices. The Ayoreo people are named with common nouns, often related to a significant event that happened to them at the time of their birth or before, to someone in their family. There is no set of lexical units specialized as proper nouns, as, for example, in Indo-European languages (Ciucci and Pia 2019: 45-47).¹⁰ All traditional Ayoreo names for men include the teknonymic suffix *-de/-ne* after the birth of their first legitimate child (see §6), but never do the names for mythological male ancestors show such an ending. In Table 3, there are only two apparent exceptions: *Guede* ‘sun’ and *Guedoside* ‘moon’. While in ‘sun’ *guede* (m.sg.PF/AF) coincides with the root, in *guedosi-de* (m.sg.AF), the final *-de* is the relic of a suffix which is no longer used to mark the singular ARGUMENT FORM (see Ciucci 2016: 454). Finally, the names of the dead people are a linguistic taboo (Ciucci and Pia 2019: 47); once someone is dead, people try to avoid mentioning them to protect themselves from grief and sorrow. Such a habit makes it very hard to preserve the memory of the dead in stories.

To sum up, many Ayoreo myths explain the origin of the world’s entities, and the linguistic gender of the common noun for each entity, masculine or feminine, has characterized the characters of the story and its plot. The Ayoreo have stories dealing with almost everything belonging to their traditional culture, since almost everything used to be an Ayoreo, so that linguistic gender has shaped stories to an unusually large extent.

3.4 Cultural continuity and innovations in origin stories

Ayoreo and Old Zamuco have the same cultural background (Ciucci 2019), so that it is very likely that what is explained in §3.3 on the role of grammatical gender in the Ayoreo origin myths also applies to Old Zamuco, although no stories of the Old Zamuco-speaking people were recorded. The high percentage of lexical similarity between Ayoreo and Old Zamuco, as well as traces of the contact with the Jesuits in the Ayoreo culture, indirectly suggest that also many, if not most stories, date back at least to the split between the Old Zamuco/Ayoreo and the Chamacoco branches of the family. However, one could even hypothesize that many stories come from the *Proto-Zamucoan culture, considering that the Chamacoco cosmovision is innovative, owing to contact with other populations (Cordeu 1989-1992).

In Table 3, there is one exception to the otherwise consistent identity between the natural gender of the ancestor and the linguistic gender of the entity from which they originated. *Cucujna* was a boy who turned into the Bolivian tuco-tuco (*Ctenomys boliviensis*), a type of rodent. The word *cucujna* (f.sg.PF/AF) is feminine in Ayoreo, but its Old Zamuco cognate *cucudda* (m.sg.PF), *cucuddatie* (m.sg.AF) is masculine. Since Old Zamuco is more conservative than Ayoreo, linguistic gender shift has possibly occurred in the latter language, and the myth originated before this change. If this is so, Old Zamuco still preserves the exact correspondence between the linguistic gender of the noun and the natural gender of the mythological ancestor.

There are also myths which may be relatively recent, meaning that shamans have continued to elaborate stories in which linguistic gender plays a role. A very dangerous myth is the one of *Chunguperdatei* (m.sg.AF), the jabiru (*Jabiru mycteria*), a large stork. Anthropologists such as Sebag and Bórmida could only collect parts of this story, and even then, the narrators were considered responsible for the death of some Ayoreo who had

listened to those parts (Fischermann 1988: §3.2.2). In the version reported by Fischermann, *Chunguperedatei* (m.sg.AF) ‘jabiru’ was a mighty chief and the husband of *Queneguete* (f.sg.PF/AF) ‘spider’ (see Table 3). Since this stork is mostly white, he was a white man, which is unusual in the Ayoreo stories, but this is a first sign that the myth developed at least after the first contacts with Spaniards. At some point, *Chunguperedatei* became the owner of most iron objects and was killed for that by the Ayoreo. This is another hint that contact with Spaniards is the *terminus post quem* for the origin of the story, since the Ayoreo only learned about iron objects after the first contacts with Spaniards. Until the recent sedentarization of the Ayoreo, they only had iron objects that they had stolen or found in the jungle among abandoned war materials from the Chaco war.

Another example of a fairly recent story is that of *Dequeyutigui* (m.sg.AF) ‘smallpox’, who used to be a powerful Ayoreo leader (only men can be leaders). Smallpox is a disease brought after the first contacts with the Spaniards. The epidemics in the Jesuit missions, which ultimately led to the abandonment of the mission of *San Ignacio de Samucos* in 1745 (Combès 2009: 83), still remain in the memory of the Ayoreo (Fischermann 1988: myth number 65). Contact with missionaries in the 20th century also caused epidemics (Pia 2014: 43-44). Apart from these historical points, one has to note that *Dequeyutigui* ‘smallpox’ derives from *eyutigui* (m.sg.AF) ‘weariness, fatigue, tiredness, emptiness, destruction’ (Higham et al. 2000: 309). This noun does not inflect for possessor, yet *dequeyutigui* (m.sg.AF) ‘smallpox’ shows the prefix /dek-/. This is the prefix for the unspecified possessor of possessable nouns (the ‘generic form’, §3.3), but here /dek-/ is used for derivation. This irregularity suggests that *dequeyutigui* ‘smallpox’ is an innovation, and so must be its mythological association with a former Ayoreo leader. Besides, this term is not documented in Old Zamuco, which lacks a specific lexeme for ‘smallpox’.

In conclusion, as Aikhenvald (2016: 121) puts it: “Linguistic Genders influence beliefs, superstitions, and poetic metaphors revolved around an inanimate referent, which is then promoted to the status of an ‘honorary’ human, or ‘anthropomorphized’”. This is precisely what has happened, but, unlike the many cases in which linguistic gender has been a mere source of poetic inspiration (Aikhenvald 2016), in the Ayoreo cosmovision, anthropomorphized entities have turned into the real characters who gave rise to almost all non-human entities. In other words, in the religious belief, the actual mythopoetic process (grammatical gender of the non-human entity > natural gender of the mythological ancestor) has been reinterpreted in the reversed order (natural gender of the mythological ancestor > grammatical gender of the non-human entity). Next to psycholinguistic experiments to assess the influence of linguistic gender on cognition (Aikhenvald 2016: 126-127), one might consider the genesis of the Ayoreo origin myths an unusual and systemic phenomenon in which linguistic gender has subconsciously affected human cognition, thus influencing the (secret) culture of a whole population.

4. Cultural change and linguistic change in Chamacoco

The Chamacoco traditional religious culture is very different from the Old Zamuco/Ayoreo one. This was possibly due to extended contact with other indigenous populations (Cordeu 1989-1992), and coincides with the loss of a high percentage of the original Zamucoan lexicon. Like the Ayoreo, the Chamacoco have stories where a human being, owing to discomfort, unease or conflict, originates a new entity by turning into it. However, while this kind of narration dominates the Ayoreo cosmovision, it plays a less important role in the Chamacoco one (Cordeu 1989-1992). Indeed, the Chamacoco stories concerning the metamorphosis of a human into a non-human entity are few compared to Ayoreo mythology,

and only concern animals and celestial bodies. So far, I have found no plant, traditional object or any other inanimate entity with a human origin, as in the Ayoreo stories.

Wilbert and Simoneau (1987) is a collection of all traditional stories documented by the Chamacoco ethnographers up to the time of its publication.¹¹ In this corpus, one can find only a few animals whose origin is due to the metamorphosis of a human. Reading the Chamacoco stories, one has the impression that, in the Chamacoco cosmovision, the explanatory purpose of the origin myths plays a secondary role when compared with the Ayoreo cosmovision. In the Chamacoco narratives, it can sometimes be a matter of interpretation whether or not a transformation originates a new non-human entity. This is in stark contrast to the countless Ayoreo origin myths, which serve to explain the origin of almost everything (see §3.2).

There is another difference between the Ayoreo and Chamacoco stories: before metamorphosis, each Ayoreo mythological character leaves a specific magic formula/song, the so-called *sarode* (m.pl.AF) (§3.2). The Ayoreo have a massive inventory of *sarode*, whose words are considered powerful and taboo. Through these formulas, the power of the Ayoreo ancestors, from whom the entities of the world originated, still manifests itself. This creates a strong linkage between the Ayoreo mythological characters and the entities they turned into. By contrast, such magic formulas are absent from Chamacoco origin stories, which thus do not have the same importance they have for the Ayoreo.

In conclusion, the comparison between Ayoreo and Chamacoco mythology shows that a significant change has occurred in the Chamacoco cosmovision: the systematicity of the association between mythological human beings and non-human entities (originated by the former) has disappeared. In the following section, I show that such cultural change has a relation with a Chamacoco morphological innovation: the gender switch characterizing animal nouns.

4.1 Myths and gender switch for animal terms: a reciprocal interaction

Both Ayoreo and Old Zamuco have gender switch for nouns referring to humans, but not for animal nouns. If needs be, the natural gender of the animal can be specified by adding the words ‘animal male’ or ‘female, woman’, as in example (6) for Old Zamuco and (7) for Ayoreo (see Kelm 1964: 475).

(6) Old Zamuco (Chomé 1958: 132)

- a. *ibohi* (monkey.f.sg.PF) → *ibohi* (monkey.f.sg.PF) *choqui-tie* (male-m.sg.AF) ‘male monkey’
- b. *potit* (dog.m.sg.PF) → *potit* (dog.m.sg.PF) *cheque-tae* (female-f.sg.AF) ‘female dog’

(7) Ayoreo (Morarie 2011)

- a. *carata-i* (jaguar-m.sg.AF) → *carataque* (jaguar.m.sg.PF) *cheque* (female.f.sg.PF/AF) ‘female jaguar’
- b. *arapujnangue* (fox.f.sg.PF/AF) → *arapujnangue* (fox.f.sg.PF/AF) *choqui* (male.m.sg.PF/AF) ‘male fox’

By contrast, most animal nouns in Chamacoco have gender switch, which expresses the natural, or sometimes supposed, gender of the animal (8) (see Ciucci 2016: 567-583 for more examples; this work also explains the criteria for morphological segmentation).

(8) Chamacoco (Ciucci 2016)

- a. ‘armadillo’ *ahmurmi-t* (m.sg.AF), *ahmurm-o* (m.pl), *ahmurmi-k* (m.sg.PF)
→ *ahmurmi-ta* (f.sg.AF), *ahmurm-e* (f.pl), *ahmurme*² (f.sg.PF)

- b. ‘dog’ poho-ch / pohi-ch (m.sg.AF) ‘dog’, poyt-o (m.pl)
 → poytii-ta (f.sg.AF) ‘dog’, poytii (f.pl), poytii[?] (f.sg.PF)
- c. ‘capybara’ kerpish-t (m.sg.AF), kerpish-o (m.pl), [no m.sg.PF]
 → kerpish-ta (f.sg.AF), kerpish-e (f.pl), kerpish-i[?] (f.sg.PF), from Spanish carpincho
- d. ‘jaguar’ ilpiyo-t (m.sg.AF), ilpiy-o (m/f.pl), ilpiyo[?] (m.sg.PF)
 → ilpiyo-ta (f.sg.AF), ilpiy-o (m/f.pl), ilpiyo[?] (m/f.sg.PF)

Gender switch for animal terms seems an innovation correlated to the changes that occurred in the Chamacoco culture. In the Ayoreo cosmovision, animals are associated with the person who originated them, whose natural gender is rigidly associated with the grammatical gender of the animal noun. This was most likely a cultural block to the development of gender switch for animal nouns. By contrast, the loss of the systematic association between person and animal in Chamacoco origin myths has enabled the gender switch mechanism, which exists for human nouns in all Zamucoan languages, to spread to Chamacoco animal nouns.

Since, as seen for Ayoreo, grammatical gender shapes culture, the gender switch in Chamacoco animal nouns correlates with, and has most likely caused, considerable gender-related changes in the few Chamacoco stories in which the metamorphosis of a person originates an animal. Indeed, in Chamacoco myths both a man and a woman can turn into the same animal species. This does not happen in the Ayoreo narratives, where the ancestor of each non-human entity is either a man or a woman.

In one Chamacoco story, for example, the alligator was a young man who felt tired of his married life, so that he jumped into the water and became an alligator. His wife then followed him, turning into an alligator as well, supposedly into a female alligator (Wilbert and Simoneau 1987: 223-230). Similarly, the red woodpeckers were generated by the transformation of both a young man and his grandmother, who fled from their group members (Wilbert and Simoneau 1987: 234-242).

There are two different stories for the origin of the capybara: in one, it used to be a woman, in the other a young man (Wilbert and Simoneau 1987: 232-233, 242-247). The term currently in use for ‘capybara’, *kerpisht* (m.sg.AF), has gender switch (8c). *Kerpisht* (m.sg.AF) is a loanword from Spanish *carpincho* ‘capybara’, which shows that gender switch is not only still productive, but may even have been reinforced by the similar mechanism of gender switch in Spanish. Note also that the archaic Chamacoco term for ‘capybara’ has gender switch: *olokihlt* (m.sg.AF) ~ *olokihlta* (f.sg.AF).

The jaguar (8d), a culturally significant animal, is maybe the most compelling case. This story, for which Wilbert and Simoneau (1987: 186-220) report several versions, can be seen as iconic of the spread of gender switch to animal terms: the first part explains the origin of *ilpiyot* (m.sg.AF), the male jaguar, the second the origin of *ilpiyota* (f.sg.AF), the female jaguar, a Chamacoco linguistic innovation (assuming that the word was initially masculine).

In conclusion, in the Chamacoco cosmovision, animals have lost their systematic association with the human beings who originated them, and whose natural gender was always well-defined. This loss of primordial humanity has allowed Chamacoco animal nouns to acquire gender switch, a morphological feature restricted to human nouns in Ayoreo and Old Zamuco. If cultural change has first affected grammar, then the Chamacoco innovative gender switch for animal terms has made it possible to use both grammatical genders as a source of poetic metaphor for some characters who brought animals into being in origin

stories.

5 The Ayoreo teknonymic suffix *-de/-ne*

The birth of the first legitimate child is an important moment for the Ayoreo. After this child is born, family members are referred to as the father, mother, grandfather and grandmother of the firstborn. This practice is known as ‘teknonymy’. For the father, the language has a specific teknonymic suffix *-de*, with allomorph *-ne*, depending on the variety of Ayoreo and on the occurrence of nasal harmony. The suffix *-de* stems from *dai* (3.m.sg.PF) ‘father’ (9), from Proto-Zamucoan **daj* (3.m.sg.PF), through the process *ai/aj > e*.¹²

(9) a. Old Zamuco: *dai* (3.m.sg.PF), *daitie* (3.m.sg.AF)

b. Ayoreo: *dai* (3.m.sg.PF/AF), *daye* (3.m.sg.PF/AF)

Children are named after an object or a natural entity connected with a fact that has happened in the period of their birth, or in the past to someone of the family. A common noun thus turns into a proper noun (§3.3). The linguistic gender of the noun chosen generally corresponds to the natural gender of the child (for examples, see Ciucci and Pia 2019: 45-47). After the first child has been born and accepted as legitimate, they receive a name, and the marriage turns into a permanent union (Fischermann 1988: §2.5.3). The new name of the father is the name of the child, plus the teknonymic suffix: *Caitabi* (the proper name of the child) + *-de* → *Caitabide* lit. ‘the father of Caitabi’; *Ejei* + *-ne* → *Ejeine* lit. ‘the father of Ejei’; *Sama* + *-ne* → *Samane* lit. ‘the father of Sama’.

The father can also be referred to with a possessive NP which is equivalent to the teknonym: e.g., *Caitabi daye* ‘the father (*daye*) of Caitabi’, *Ejei daye* ‘the father of Ejei’,

Sama daye ‘the father of Sama’, etc. The other kinship relationships have no specific teknonymic suffix; they are expressed by a possessive NP consisting of two phonological words, so that one can say *Caitabi date* ‘the mother (*date*) of Caitabi’, *Caitabi daquide* ‘the grandfather (*daquide*) of Caitabi’, *Caitabi dacode* ‘the grandmother (*dacode*) of Caitabi’. Note that this practice occurs regardless of whether the first child is a boy or a girl; no sexual discrimination is made.

The development of a teknonymic suffix for the father has to do not only with the importance of the first legitimate child for the couple, but also with: (i) the importance of the father in order to feed the family; (ii) the need for the father to be sure that he is the biological father of the child. From a social and practical point of view, a mother cannot have a child if she has no husband, because a man who hunts is absolutely needed. The child of a woman without a husband is considered a child without value. They are called *emi abi* ‘child of the wind’ (*em-i* wind-m.sg.AF; *ab-i* 3.child-m.sg.AF) and telling someone that they have no father is a severe offense (Ciucci and Pia 2019: 45). In the past, if a woman had a child and she was not married, or if the husband died during her pregnancy, the child was buried alive immediately after birth.

At the same time, the father needs to be sure about the baby’s biological paternity. This has to do with the remarkable sexual freedom enjoyed by men and women before marriage (Ciucci and Pia 2019: 41). Since the woman is free to have sexual intercourse with whomever she wants to, until she marries, it is assumed that the paternity of the first child is uncertain and that the child has all defects of the previous partners of the woman. In pre-contact times, burying the child alive was considered the only option (Pia 2015: 16).¹³ By contrast, the second child of a married woman is considered the real child of her husband and the legitimate firstborn child, so that their father is named after them.

The practice of burying children alive was prohibited by missionaries, so that it has stopped among sedentarized Ayoreo, but one can see a connection between the cultural motivations leading to infanticide and those yielding the teknonymic suffix for the father. In the Ayoreo culture, the names of the dead people are no longer pronounced, in order to avoid the grief for the loss of a loved one (§3.3). For this reason, if the first legitimate son or daughter dies, the father changes his name, adding the teknonymic suffix to the name of his next living son or daughter (Ciucci and Pia 2019: 46-47). To sum up, the development of a teknonymic suffix correlates with the importance of the connection between the firstborn child and the father in the Ayoreo culture.

No teknonymic suffix is found in Chamacoco, whose traditional culture was very different in this respect. For the Chamacoco, the relationship between father and children was less important. Having a small child, but not a husband, did not preclude women from getting married (many family stories I have heard prove this). Infanticide was not unknown in the past, but happened for other reasons than ensuring that the child was legitimate (Sušnik 1969: 139, 167). Apart from the father, other family figures were also important for the child: “the Chamacoco think in terms of ‘grandfathers-grandchildren’ and not directly in terms of ‘fathers-children’ [relationship] when it comes to a domestic and residential group” (Sušnik 1969: 170, my translation). By contrast, within society, the paternal uncle (who did not live in the same domestic group), was the central figure and the main authority for the children, since he represented their clan. He was seen as a second father, and the Chamacoco traditionally used to say that the children listened to the words of their father, but understood and retained the teaching of their paternal uncle (Sušnik 1969: 176, 181).

One can wonder whether the teknonymic suffix is an Ayoreo innovation or if it was found in Old Zamuco (or its dialects), whose speakers had a similar culture. According to Tomichá (2002: 325), in the *Missions of Chiquitos*, the Jesuits used to prepose the Spanish

name given in the Baptism to the indigenous proper names. This led to the disappearance of the original proper names of the Chiquitano and other ethnicities of the missions, including the tribes speaking Old Zamuco and its dialects. The outcome of this practice of the Jesuits is evident in Chomé's grammar and dictionary of Old Zamuco (Chomé 1958; Ciucci forthcoming, a), where no indigenous proper names are reported; in the examples, there are Spanish proper names such as *Pedro*, *Pablo*, *Diego* or *Juan* (also adapted as *Yuan*). The only possible exception is the proper name *Paticu*, translated as 'Pedro', although it does not seem an Old Zamuco adaptation of this Spanish name. Indigenous names are reported in other historical documents, including a letter by Chomé (Tomichá 2003).

Tomichá (2002: 317, 326) provides two lists of indigenous proper names found in historical documents from the Missions of Chiquitos. Among them, he lists seventeen indigenous names of men speaking Old Zamuco and its dialects. He also reports *Paticu*, but from another source than Chomé. More interestingly, five Old Zamuco names end in *-de/-ne*: *Dioné*, *Gofoiidé*, *Gozocoerade*, *Sofiade* and *Tapaiuene*. One cannot be entirely sure that they are all teknonyms, although in Ayoreo this is the general rule for men's proper names. However, the fact that the Old Zamuco names are the only ones in the list which end in *-de/-ne* (there is only one exception) may be indirect evidence that they are teknonyms. Also, one can surmise that the Old Zamuco-speaking people, like the Ayoreo, used masculine and feminine common nouns as proper names for men and women, respectively. This seems to be confirmed by the proper name *Nupe*, which is the masculine singular PREDICATIVE FORM of 'earth, ground'.¹⁴ The forms in *-de/-ne* do not look like common nouns used as proper names for men, since the endings *-de/-ne* are not very frequent in the masculine singular PREDICATIVE FORM of common nouns. They often characterize the feminine singular PREDICATIVE FORM in both Old Zamuco and Ayoreo (cf. the feminine nouns in Table 3, Appendix). Indeed, the only proper name for an Old Zamuco-speaking woman reported by

Tomichá is *Assoné*. For this reason, *Dioné*, *Gofoiidé*, *Gozocoerade*, *Sofiade* and *Tapaiuene* suggest that in the Zamucoan varieties spoken in the Missions of Chiquitos there was the same teknonymic suffix *-de/-ne* as in Ayoreo, which would confirm the similarity between the Old Zamuco and the Ayoreo culture in this as well as many other respects.

6. Possession

Some features of possession in Zamucoan reflect the cultural context in which these languages are spoken. By ‘possession’, I refer here to both ‘association’ and ‘ownership’. The head of the possessive NP, the possessed, can generally be any noun, except for proper nouns. However, one has to distinguish between nouns that can be directly possessed and those that can be indirectly possessed. As in Oceanic languages, this distinction can have iconic motivation (Aikhenvald 2019: 11). In Zamucoan, as well as in most Chaco languages (Fabre 2007), nouns which are directly possessed have pertensive prefixes (term from Dixon 2010: 268). By contrast, the other nouns can be possessed through a possessive classifier or via simple apposition of possessor and possessed. The latter strategy is particularly frequent in Chamacoco. Indeed, this language shows many innovations owing to contact with Spanish: many Chamacoco nouns, for instance, have lost their pertensive prefixes, and only one classifier is regularly used, while two other classifiers are now rare. For this reason, Old Zamuco and Ayoreo better represent the traditional cultural situation.

In Zamucoan, the distinction between nouns inflected for possessor (that is, directly possessed), and those uninflected for possessor (that is, indirectly possessed) is more salient than the distinction between alienable and inalienable nouns. Indeed, some nouns inflected for possessor also have a form (here called ‘generic form’) for unspecified possessor, so that they are alienable, while the rest of nouns inflected for possessor are inalienable, in that they

necessarily mark a possessor. In other words, inalienability is subordinate to the distinction between direct and indirect possession. Kinship terms, for instance, have possessive prefixes, but no form for unspecified possessor, so that they are always treated as inalienably possessed. In Zamucoan, direct possession can be an association such as: (i) whole-part relationship (parts of human and non-humans); (ii) kinship relation (with kinship terms); (iii) attribution (for abstract nouns, such as ‘courage’, ‘excellence’); (iv) orientation or location (mostly for nouns used as postpositions or referring to places), (vi) other general associations (mostly with abstract nouns, such as ‘life’, ‘death’, ‘courage’, ‘word’ or non-kinship terms referring to humans, such as ‘friend’). If the possessed noun does not fit in one of the previously mentioned categories, the possessive relationship will most likely be one of ownership, as for ‘food’, ‘house’ and ‘stick’. These have to be understood as general rules, as there are exceptions, such as ‘lance’, which cannot inflect for possessor in Old Zamuco and Chamacoco, but it does in Ayoreo: cf. Old Zamuco *azoretæ* (f.sg.AF), Chamacoco *asõrrza* (f.sg.AF) vs. Ayoreo *asõre* (3.f.sg.PF/AF) ‘lance’.

The lack of direct possession in Zamucoan is a property of those items which cannot be owned for pragmatic reasons, such as ‘day’, ‘night’ and ‘spring’. However, one can express association through a possessive classifier, as in the following example from Old Zamuco.

(10) Old Zamuco

[Chugupêre	deha-tie	g-anec]
bird.m.sg.PF	night-m.sg.AF	3-PCLF:general.m.sg.PF
Night bird. (lit. ‘bird of the night’)		

There are two groups of terms which cannot be directly possessed: nouns for animals and plants. The fact that they cannot be directly possessed may reveal a cultural practice.

Animals, plants and fruits (which are derived from plants) can only be possessed with a

classifier. As I will show, this reflects the speakers' attitude towards consumable resources, and the need to protect their environment. The list of documented classifiers in Zamucoan is presented in Table 2. Classifiers are given in the third person. Like nominals, they also inflect for gender, number and nominal form (the citation form is also here the singular ARGUMENT FORM). The classifier's inflection depends on the different configurations within the possessive NP. The reader interested in more details on the morphology and morphosyntax of classifiers in Zamucoan can consult Ciucci and Bertinetto (2019), the source of these data.¹⁵

Semantics	Old Zamuco	Ayoreo	Chamacoco
general	<i>ganetie</i>	<i>gajnei, (yui, aniri)</i>	-
domesticated animal	<i>gachitie</i>	<i>gachidi</i>	<i>echit</i>
prey, haul	<i>yutie</i>	<i>yui</i>	-
fellow	-	<i>ujoi</i>	<i>uhut</i>
vehicles	-	<i>pi, gachidi</i>	-
plants	-	<i>acai</i> (also for fruits)	<i>ihyōrta</i>
long objects	<i>ohotae</i>	-	-

Table 2: Zamucoan classifiers (Ciucci and Bertinetto 2019).

The use of a classifier for animals specifies the kind of relationship between possessor and possessed. In Old Zamuco and Ayoreo, the classifier indicates whether the animal was captured (11) or is a domestic animal (12). In the first case, Old Zamuco uses *yutie* (3.m.sg.AF), Ayoreo *yui* (3.m.sg.AF). Since this classifier has an irregular inflection in both languages, the inflected form in (11) cannot be immediately associated with its third person in Table 2. The classifier for domesticated animals (12) is the only one found in all Zamucoan languages. In Old Zamuco and Ayoreo, it is also a deverbal noun derived from 'to rear, to breed' (whose stem is *-achia* in both languages). The Ayoreo classifier for plants (and fruits) is also a deverbal noun from the verb stem *-aca* 'to plant'. It is employed to talk about the ownership of cultivated plants or fruits (13-14).

(11) Old Zamuco

Ch-ic amitac
 1sg-PCLF:prey.m.sg.PF turtle.m.sg.PF
 My turtle.

(12) Old Zamuco

G-achide cucu
 3-PCLF:pet.m/f.sg.PF dove.m.sg.PF
 His/her/their dove.

(13) Ayoreo

B-aca-de guejna
 2sg-PCLF:plant-m.pl.AF plant_of_corn.m.pl.PF
 Your plants of corn.

(14) Ayoreo

Y-agu y-aca-die a-die
 1sg-eat 1sg-PCLF:plant-f.pl.AF fruit-f.pl.AF
 I eat my fruits. (the fruit I have cultivated)

Classifiers for animals and plants can also be used as independent nouns. Chamacoco *echit* (3.m.sg.AF) ‘domestic animal’ and *ihyōrta* (3.f.sg.AF) ‘plant’ are nouns with general meaning also used as classifiers (15). For this reason, they are the only nouns for animals and plants showing pertensive prefixes. In Chamacoco, classifiers have mostly disappeared, and also *echit* ‘domestic animal’ and *ihyōrta* ‘plant’ are now rarely used with such a function, so that

the most common strategy to express possession and ownership of plants and animals is the mere juxtaposition of possessor and possessed (16).

(15) Chamacoco

Wichi	[p-echi-t	poho-ch]
3.m.sg	1sg-pet- m.sg.AF	dog- m.sg.AF

This is my dog.

(16) Chamacoco

[Yok	poho-ch]
1sg	dog-m.sg.AF

My dog.

Fruits are not directly possessed, and one of the reasons is that, when there is a specific term for a given fruit, it is mostly derived from the name of the plant. Gender here can have a derivational function, as in (17b-c), where plants are feminine and their fruits masculine:

(17) a. Old Zamuco: *cuco* (f.sg.PF) ‘species of tree’ (*Ceiba ventricosa*, *Ceiba speciosa*) →

cuca (f.sg.PF) ‘fruit of *cuco*’ (Ciucci forthcoming, a)

b. Ayoreo: *cuya* (f.sg.PF/AF) ‘plant’ (*Capparis retusa*) → *cuya-i* (m.sg.AF) ‘fruit of *cuya*’

(Pia 2014: 58; Morarie 2011: 98).

c. Chamacoco: *hnimi-ta* (f.sg.AF), *hnimiʔ* (f.sg.PF) ‘cactus’ → *hnim-oʔ* (m) ‘cactus fruit’

(Ciucci 2016: 587)

To sum up, nouns for plants, fruits and animals can only be indirectly possessed, and a classifier specifies the kind of possessive relationship. A reason for this is that the Zamucoan people were traditionally semi-nomadic, and had to move in order to make the most of the

few resources available in the northern Chaco. Hence, the impossibility of owning animals and plants. Most Chaco languages have possessive classifiers, which is a possible areal feature, and, if they have classifiers, they have one for (domestic) animals (Ciucci 2020). This also occurs in Bororo (Macro-Jê) (Crowell 1979), not a Chaco language, but close enough to the Chaco. From a cultural point of view, animals are considered autonomous entities which are not owned by Chaco populations (Comrie et al. 2010: 113). The fact that the relationship with animals does not involve ‘ownership’ has to do with the management of the resources. Indeed, a ‘distant’ relationship, in which the people do not own the animal, gives them no right for excessive exploitation of the fauna. This would not just endanger the animals, but also threaten the survival of the indigenous people.¹⁶

According to Renshaw (1988), indirect possession depends instead on the attitude of the indigenous people towards consumable items (which include fruits, plants, and animals) rather than on ecological reasons. Among the Chaco indigenous peoples, equality is a moral value, which implies the obligation to share (in particular) consumable resources with the rest of the community. The idea of equality and the practice of semi-nomadism make it impossible for the individual to accumulate possessions, and this is a necessary survival strategy for the group in traditional hunter-gatherer societies with little agriculture. Since consumable items are not regarded as personal property, they are only indirectly possessed. By contrast, the indigenous concern for the preservation of natural resources is, according to Renshaw (1988: 344), “perhaps more of an ideal than a historical fact”. Indeed, he claims that individual hunter-gatherers tend to exploit all available resources in an environment which is seen as inexhaustible. However, at a collective level, the impossibility to accumulate resources (for both practical reasons and to maintain social harmony) has counterbalanced the rational, short-term, impulse of the individual to get the maximum of consumable goods out of the environment (Renshaw 1988).

Renshaw's compelling arguments do not exclude the suggestion that the need to protect natural resources can also play a role in the non-possessability of animals and plants. Particularly for animals, there is another factor, not considered by Renshaw, which at a societal level contributes to the long-term preservation of the environment: traditional religious beliefs.

In the Chamacoco culture, several species of animals have their own spirit master (see Cordeu 1989-1992; Blaser 2010: 214), often referred to by the animal species plus *bahlut* (m.sg.AF) which means 'chief, leader', but also 'big': e.g. *ilpiyot* (m.sg.AF) 'jaguar' → *ilpiyot bahlut* 'chief of the jaguars, big jaguar'; *inermítit* (m.sg.AF) 'turtle' → *inermítit bahlut* 'chief of the turtles, big turtle'. Chamacoco also has a general term which can refer to any spirit master: *yoniit* (3.m.sg.AF) 'spirit master; spirit, ghost'. Spirit masters protect animals and take care of them. They are regarded with respect by hunters, because they can be dangerous, and do not allow hunters to kill too many animals. If this or other rules for the preservation of the fauna are broken, the respective *yoniit* 'spirit master' will make the responsible people sick.

Spirit masters frequently occur in the culture of the Lowland South American peoples (Viveiros de Castro 1998, 2004), including other neighboring Chaco populations. For instance, among the Toba (Guaycuruan) each species has its animal spirit master (aka *dueño de los animales*, literally 'animals' owner') (Cordeu 1969-70). These are very similar to the Chamacoco spirit masters: in both cases, they are imagined as big representatives of the respective species. The Chiquitano (nowadays also called Monkóka) also have a spirit master who rears the animals, protects them and punishes those who kill more animals than they need for their families (Arrien 2008: 34). These functions are similar to the animal spirit masters of the Wichí, who also have spirit masters for plants and substances (Montani 2017: 57-61).

Apart from cultural influence by neighbors, the presence of animal spirit masters in the Chamacoco culture may have to do with the weakening of the linkage between humans and non-humans that occurred in the Chamacoco cosmovision. In comparison, for the Ayoreo cosmovision, I have found no reference to spirit masters. Indeed, when the single animal specimens are denied a spiritual essence common to humans, spirit masters, representing an animal species, typically serve to establish a connection with humans, with whom spirit masters share the same subjectivity or consciousness (Viveiros de Castro 1998: 471; 2004: 470-471).

In Zamucoan, there is only one animal which inflects for possessor: the louse. Indeed, in both Old Zamuco and Ayoreo, it takes pertensive prefixes. Pediculosis (infestation with lice) was frequent in traditional societies characterized by poor hygienic conditions, so that ‘louse’ can actually be ‘possessed’. Also in neighboring Chiquitano (aka Bésiro, unclassified), animals do not inflect for possessor, but here also *napáx* (GF.sg) ‘louse’ is an exception and takes pertensive prefixes.¹⁷ By contrast, in Chamacoco, *hnatsikita* (f.sg.AF) ‘louse’ does not inflect for possessor (Ciucci 2013: 13), this has possibly to do with the fact that many Chamacoco words have lost the possessive inflection, which is also no longer productive.

- (18) a. Old Zamuco ‘louse’ *y-unnar* (1sg.m.sg.PF), *a-nnar* (2sg.m.sg.PF), *unnar* (3.m.sg.PF),
ay-unnar (1/2pl.m.sg.PF), *nar* (GF.m.sg.PF)
- b. Ayoreo ‘louse’ *ñ-ujnari* (1sg.m.sg.AF), *ma-jnari* (2sg.m.sg.AF), *ujnari* (3.m.sg.AF),
jnari (GF.m.sg.AF)

Finally, in today’s Chaco indigenous societies, money, which is an impersonal and transient means of exchange, is considered a property which the owner is not obliged to share with their family and community, unlike consumable items (Renshaw 1988). For this reason, *iplata* (3.f.sg.PF/AF) ‘money’, a borrowing from South American Spanish *plata* ‘money’, has

possessive inflection in Ayoreo (Ciucci 2016: 360). The term for ‘money’ is uninflected for possessor in Chamacoco, since the mechanism is no longer productive. Among the items which cannot be directly possessed in Zamucoan, there are ‘sun’, ‘moon’, ‘earth’ and ‘jungle, forest’. This has pragmatic reasons, possibly intertwined with cultural reasons. The same items cannot be owned in a number of Tupí-Guaraní languages and in Waujá (Arawak) (Aikhenvald 2019: 21-22). Here one cannot identify specific cultural reasons for Zamucoan, but the fact that these items cannot be possessed has generic cultural motivations common in many traditional societies.

7 Comparative structures and egalitarian values

The Zamucoan people traditionally lived in small, egalitarian societies. In this section, I will explore a possible correlation between the expression of comparison and the egalitarian nature of the Old Zamuco and Ayoreo societies.

All Zamucoan languages have dedicated comparative constructions. In Old Zamuco, the index of comparison is the verb *ch-iozochêre* (3.REAL), or *no gai* (3). Both mean ‘to outdo, to surpass, to exceed’. The only difference is that *no gai* is a complex predicate consisting of the verb *no* (3) ‘to go’ and the adposition *gai* ‘over’, which follows the object.¹⁸ In the most simple comparative structure, the parameter of comparison involves dimension and it is implicitly expressed by the verb; the comparee and the standard are the transitive subject (A) and the object (O) (19).

(19) Old Zamuco

Z-uti-tie	ch-iozochere	au-ti-tie
1sg-field-m.sg.AF	3.REAL-exceed	1sg-field-m.sg.AF

COMPAREE INDEX-PARAMETER STANDARD

My field is bigger than yours. (Chomé 1958: 134)

However, when the parameter is specified, it appears both as head of the transitive subject (A), and as the object (O). The comparee is the possessor of A, and the standard of comparison the possessor of O, as in example (20). When expressed, the parameter can only be an abstract noun. In Old Zamuco, abstract nouns are often derived from past participle-like nouns, adjectives and verbs. For instance, *gonigatie* (3.m.sg.AF) ‘excellence’ is derived from the verb *gom* (3) ‘be worthy, be right, be good’ through the derivational suffix *-niga*. In other words, this complex construction requires the availability of a derivational mechanism.

(20) Old Zamuco

[Azote_Santa_Maria]	goniga-tie,	no		
Holy_virgin_Mary	3.excellence-m.sg.AF	3.exceed		
COMPAREE	PARAMETER	INDEX		
[angeles-oddoe nez ore]	goniga-tie	gai		
angel-m.pl.AF	all 3pl	3.excellence-m.sg.AF	exceed	
STANDARD	PARAMETER	INDEX		

The Holy Virgin Mary is more excellent than all angels. (lit. ‘the excellence of the Holy Virgin Mary is superior to the excellence of all angels’) (Ciucci forthcoming, a)

Chomé notes that there is another, more simple, although less elegant, way to express comparison in Old Zamuco, that is, by the juxtaposition of two clauses (21).

(21) Old Zamuco

- a. A-igueda-ré amâ; y-igueda-re dieda
 2sg-house-m.sg.AF little 1sg-house-m.sg.AF big.m/f.sg.PF

My house is little, your house is big, i.e. my house is bigger than yours.

- b. Da-raha amâ; uyu a-iraha=puz
 2sg-know little 1sg 1sg-know=AUG

You know little, I know much, i.e. I know more than you. (Chomé 1958: 134)

This is the strategy employed by languages which do not have proper comparative constructions, such as Warekena, an Arawak language of Brazil (Aikhenvald 2015: 232). On comparative constructions, see also chapter 1 and Mous (present volume). The fact that specific comparative constructions were not always used suggests that they were an innovation and that the starting point was a situation where the only option was juxtaposing two clauses, as in (21). Chamacoco does have comparative constructions, but they were borrowed from Spanish (22), so that it is unknown whether pre-contact Chamacoco had comparative constructions (Ciucci forthcoming, b).

- (22) P. **ma** ilaro? **je** S.
 P. more old.m/f.sg.PF than S.
 COMPAREE INDEX PARAMETER MARK STANDARD

P. is older than S.; cf. Spanish: *P. es **más** (INDEX) viejo **que** (MARK) S.*

As pointed out by Dixon (2008: 814), the lack of dedicated comparative constructions characterizes small tribes with an egalitarian social system, where there is little or no emphasis on competition. Such a situation fits Chaco societies, which place particular

emphasis on the value of equality. Indeed “equality here is not merely the absence of any kind of social stratification, but is a positively affirmed moral principle” (Renshaw 1988: 339). As Renshaw (1988: 338-339) points out, this can be noted in the “remarkable uniformity in the material conditions of life” of today’s Chaco indigenous communities, which is not observed among the Paraguayan population with comparable economic situation. As already noted (§6), the ethics of equality prevented the indigenous individual from accumulating material possessions and obliged them to share consumable items.

Equality can be observed in many aspects of Ayoreo society. The Ayoreo live in small local groups which can unite in case of war. Each group has a leader, the *dacasute* (GF.f.sg.AF/PF, see §8), who is someone who has killed a certain number of enemies and jaguars, but also has the appropriate mental and moral qualities to be a leader. In each local group, next to the proper leader, there is a number of men who have qualities and merits similar to those of the leader, and who are also called *dacasute*. Even though only one person can be the actual leader, almost all adult men reach the same social rank of *dacasutedie* (f.pl.AF) ‘chiefs’ (Fischermann 1988: §2.1.2).

The leader of a local group has much power in wartime, but limited authority during peacetime; he mostly has the same obligations and rights as the other men of the group. Decisions are taken by the men in meetings chaired by the leader, whose role is to sanction the dominant opinion (Fischermann 1988: §2.1.4). As I will show in §8, in Ayoreo society there is an equilibrium between men and women, and the latter substantially influence community decisions. Finally, once a decision is taken, according to Fischermann, there is no obligation to agree with the decisions and, “people who do not follow the decisions cannot be obliged to do this, nor can they be publicly criticized.” (my translation). Indeed, in Chaco societies, equality goes together with the autonomy of the individual (Renshaw 1988).

Also the education of Ayoreo children is anti-authoritarian (Fishermann 1988: §2.5.2); children, for instance, are never hit, because it is believed that this would result in the soul abandoning the body of the child. In general, the young people have no obligations until they marry (Pia 2016: 116).

The general equality and respect for the individual freedom could be related to the fact that neither in Old Zamuco nor in Ayoreo are there specific terms for ‘must’ ‘to have to’, ‘to oblige’, ‘obligation’, echoed by the lack of other verbs with deontic meaning such as ‘can’ or ‘may’. In Old Zamuco, the only exception could be the verb *chiroc* (3.REAL), which is also translated as ‘to oblige’. However, it is not clear whether the verb really implied an obligation. This was possibly the translation of a missionary who needed to express ‘to oblige’. Indeed, the verb *chiroc* (3.REAL) seems to properly mean ‘to command, to order’, like Ayoreo *chiroque* (3) ‘to command’ (but also ‘to send’), which does not necessarily include the obligation to obey. The corresponding Old Zamuco deverbal noun, *iroique* (3.m.sg.PF), is translated as ‘order’, not as ‘obligation’, and the same applies to Ayoreo *iroque* (3.m.sg.PF) ‘command’. The lack of a feature or lexeme is often hard to correlate with any cultural feature. For instance, many languages lack a verb meaning ‘must’ or ‘to have to’, but this does not imply that a culture lacks obligations or prohibitions. Indeed, the Ayoreo culture has obligations, although they may be fewer than in other societies.

At the same time, the Ayoreo refuse obligations which are felt as imposed by someone else, unless there is an actual need for them, as in wartime. Such a notion of individual freedom has contributed to the voluntary isolation of the Ayoreo from the 18th century until the second half of the 20th century. Indeed, the Ayoreo partly descend from people who spent some time in the Jesuit mission of *San Ignacio de Samucos* (abandoned in 1745), before going back into the forest, because they did not like the new lifestyle imposed by the Jesuits. In the oral memories of the Ayoreo, the Jesuits gave them orders, obliged them to work and

punished those who dared to disobey (Fischermann 1996). All of this is in stark contrast with traditional Ayoreo values.

8 The importance of women: mismatches between linguistic and social gender

The notion of equality in traditional Zamucoan society goes together with a search for gender balance, notwithstanding the gender-specific roles considered proper for each sex (see 3.2). Some morphological exceptions reflect this. Example (23) shows three Ayoreo feminine nouns which can refer to men.

- (23) a. *ero* (3.f.sg.PF/AF) ‘leader’ (man or woman)
 b. *quicujadia* (3.f.sg.AF), *quicujat* (3.f.sg.PF) ‘ancestor, forefather’ (man or woman)
 c. *dacasute* (GF.f.sg.PF/AF), *asute* (3.f.sg.PF/AF) ‘chief, leader’ (only men)

Ero ‘leader’ (23a) and *quicujadia* ‘ancestor’ (23b) refer to both men and women, while *dacasute* ‘chief, leader’ (23c) only refers to men. Indeed, in the traditional Ayoreo culture, the *dacasute* is the leader of a group (§7), a role reserved only for men (Pia 2014: 21). Traditionally, in order to be a leader, one had to show courage and kill; the type of victims who gave the most prestige to a future *dacasute* ‘chief, leader’ were jaguars or white men (Pia 2016: 4). Women could not become leaders because they had no military role.

The word *dacasute* ‘chief, leader’ (23c) has an interesting etymology. Its root is *asute*, which coincides with the form for third-person possessor (23c). The original meaning of *asute* is possibly ‘our mother’. Indeed, the word is similar to Old Zamuco *azote* ‘our mother’, and the old Chamacoco form *aset* ‘our mother’. In both cases, initial **as-* is a Proto-Zamucoan prefix for the first-person plural possessor (Ciucci & Bertinetto 2017). The prefix

**as-* is lost in Ayoreo, but it is fossilized in the root of this word for ‘leader’. Pia (2014: 20) also documents *dacasutei* (GF.m.sg.AF), but notes that it is only found in some local groups and rarely used.¹⁹

Quicujadia ‘ancestor’ (23b) is a key term in Ayoreo mythology, since, as mentioned above, it can refer to the first Ayoreo people who turned into the entities of the world (§3.2). In Ayoreo, the unmarked gender of nouns is usually the masculine, but the fact that *quicujadia* and the two terms expressing leadership shown in (23) are feminine, while also referring to men, may have to do with the traditionally important position of women in Ayoreo society.

Ayoreo society is characterized by rigid gender distinctions, with specific activities only allowed to either men or women, and this is reflected in many myths (see §3.2 and Table 3 in the Appendix). At the same time, the important role of women is clearly recognized. There is a striking historical testimony regarding a Zamucoan group of the early 18th century, related to the Old Zamuco-speaking people and to the present-day Ayoreo: “They honor women with the title of Ladies, and truly they (f) are, because they command their husbands, and by their (f) whim they (m) move from one place to another; they (f) never do their (f) housework, but they employ their husbands, even for the humblest chores.” (Fernández 1726, apud Combès 2009: 49; my translation).²⁰ Such claims are surely excessive, but the missionary who wrote them correctly grasped that the women’s position in that Zamucoan society was unusual, particularly for someone more familiar with the 18th-century Spanish culture.²¹

In Ayoreo society, both men and women enjoy great sexual freedom before marriage. One of the few restrictions is that women are allowed to woo men, but not vice-versa. In the family, the man has no dominant role, also because the complementary and gender-specific activities of both partners are considered equally important for survival (Fischermann 1988: §2.5.3). The Ayoreo are divided into seven clans, with clan exogamy being the main rule for

marriage. Clan membership is inherited from the father. A balance between genders, can, however, be seen in the fact that women maintain their clan membership after marriage, which is characterized by uxori-local residence: the married couple lives with the extended family of the wife (Fischermann 1988: §2.6.4).

The Ayoreo take decisions in meetings chaired by the *dacasute* ‘chief, leader’ (23c). Although women do not participate in these meetings, they still play an essential role in the decisions of the community, because issues are discussed at home before official community meetings, and “most men frankly admit that in home discussion, women have the last word and conclusively influence their position” (Fischermann 1988; §2.1.4, my translation). The importance of women also has to do with the fact that they establish the allocation of resources (Fischermann, p.c.). During fieldwork in Bolivia, Pier Marco Bertinetto and I had the occasion to see that the Ayoreo men were very respectful and even gave the impression of having a certain reverential fear while talking to women, including their own wives.

The Ayoreo women are allowed access to religious knowledge; they can be shamans, as shown in the gender switch of the word for ‘shaman’: *dajjnai/najjnai* (m.sg.AF) → *dajjne/najjne* (f.sg.PF/AF). Similar considerations applied in the past to Old Zamuco-speaking women; indeed, in Old Zamuco *naina* (m.sg.PF) ‘shaman’ has the feminine *naine* (f.sg.PF). By contrast, the Chamacoco women cannot be shamans and a large amount of religious secrets were traditionally reserved to initiated men. As a consequence, the Chamacoco term for ‘shaman’, *konsehet* (M.SG.AF), has no gender shift. Finally, also another component of religion, mythology, illustrates the high status of Ayoreo women: *Asojna* (see Table 3), one of the key figures in the Ayoreo religious beliefs, was a woman and a mighty shaman.

9 The Chamacoco secret register: a short note

The integration points of language and society analyzed so far concern the traditional culture, and even though Chamacoco often shows innovations, these took place long before contact with Western society. Nowadays, most aspects of the Chamacoco (Ebitoso) traditional culture have disappeared, and the language is the main factor in the Chamacoco identity. Here, I will briefly mention another integration point which only has to do with present-day Chamacoco society and is a direct result of the influence exerted by Spanish on the language: the emergence of a secret register.

An indigenous language spoken by a minority of people is useful as a secret language, and Chamacoco can be used in order not to be understood by the other Paraguayan people (who speak Spanish and/or Paraguayan Guaraní). However, Chamacoco has introduced a high number of borrowings from Spanish. This is problematic, because Spanish loans are potentially recognizable by the Spanish-speaking people, who could thus partly ‘crack’ the code. For this reason, Chamacoco has developed a secret register. This register consists in a number of strategies aimed at avoiding seemingly recognizable borrowings from Spanish (Ciucci forthcoming, c). They involve:

- (i) use of archaic words, which in the everyday language are usually replaced by Spanish borrowings;
- (ii) phonological manipulation of Spanish loanwords;
- (iii) extension to non-adapted Spanish borrowings of Chamacoco inflectional elements which are weakening elsewhere in the language;
- (iv) use of periphrases instead of Spanish lexicon.

Two chapters in this volume (Dixon, Mous) address a different kind of avoidance registers, used to deal with in-laws (on special speech styles, see also chapter 1). Unlike in the

languages discussed by Dixon and Mous, the Chamacoco secret register is not restricted to uses related to kinship or any other category, and it is a recent innovation as a consequence of prolonged and intense contact with Spanish. By contrast, the Ayoreo were contacted later than the Chamacoco, and their language has a much lower number of Spanish borrowings than Chamacoco. Spanish borrowings are, however, increasing in Ayoreo and, correspondingly, cases of linguistics purism in order to avoid Spanish lexicon are documented, at least in older generations (Ciucci and Pia 2019: 47-50). It is hard to say whether, in the early phases of contact, Chamacoco was also characterized by the avoidance of Spanish borrowings, because we do not have enough historical data on the language at an earlier stage of contact comparable with that of present-day Ayoreo.

10. Conclusions

In this chapter, I have dealt with the interaction of language and society in the Zamucoan languages (†Old Zamuco, Ayoreo and Chamacoco). Zamucoan has a peculiar system of nominal suffixation, which expresses, among other features, gender (§2.1). This grammatical category has exerted a remarkable influence on Ayoreo mythology: the metamorphosis of humans generated almost all non-human entities, and the grammatical gender of each entity became the social gender of the mythical figure who impersonated it (§3). While the Ayoreo and Old Zamuco speakers share the same cultural background, Chamacoco society has multiple innovations, owing to contact with neighboring populations. In the Chamacoco cosmovision, for instance, the association between humans and non-humans plays a reduced role, and this has had consequences for inflectional morphology (§4). Chamacoco animal terms have developed gender switch, and this, in turn, has affected some mythological stories (§4.1). A further point of integration between language and society is the presence of a

teknonymic suffix for the father in Ayoreo (§5). Such a suffix is not present in Chamacoco, but, despite little data, one can surmise that it was also found in Old Zamuco. A feature common to all three languages is the use of possessive classifiers for items which cannot directly be owned (§6). The inventory of classifiers can reflect some aspects of the society where the language is spoken (see chapter 1; Aikhenvald, present volume). Zamucoan possessive classifiers for animals and plants have to do with the distribution of consumable resources and the management of the environment providing them. There are hints of a possible lack of dedicated comparative constructions in the past (§7), and this correlates with small, egalitarian groups, which still today constitute Ayoreo society. Ayoreo women have high social status, as reflected by some mismatches between linguistic and natural gender (§8). Finally, progressive disruption of traditional societies in the contemporary world redefines the interaction between language and culture (as far as the former is preserved): the use of a secret register in Chamacoco (§9) is an example of how the language reflects and adapts to a new societal context.

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Appendix. An analysis of the Ayoreo mythological characters

Table 3: The grammatical, natural and social gender of the Ayoreo mythological characters.

Mythological figure and grammatical glosses	Meaning	Gender of the character	Source and other information on the story
<i>Abujei</i> (m.sg.AF)	type of fish (<i>Hoplerythrinus unitaeniatus</i>)	male	Pia (2015: 25-26). If the story is told, people will fight with each other.
<i>Acherangori</i> (m.sg.AF)	tempest	male	Pia (2014: 127-129).
<i>Ajacaratai</i> (m.sg.AF)	type of plant (<i>Jatropha grossidentata</i>)	male	Pia (2014: 74-76; 2016: 115-116). See <i>Chicōri</i> .
<i>Aramato</i> (f.sg.PF/AF)	big coleopteron	female	Pia (2018: 54-56).
<i>Aramui</i> (m.sg.AF)	sickle	male	Pia (2018: 18). He was a young man who was always bowed and cultivated the land.
<i>Asojna</i> (f.sg.PF/AF)	night hawk (<i>Caprimulgus parvulus</i>)	female	Pia (2014: 96-98; 2016: 46-47); see also Fischermann (1988). <i>Asojna</i> was the first female shaman. She is one of the most important figures of Ayoreo mythology. Her stories and formulas can be very powerful and dangerous.
<i>Asōre</i> (3.f.sg.PF/AF)	lance	female	Bórmida (2005, II: 112-113). No generic form for this word is documented in any Zamucoan language.
<i>Bujote</i> (f.sg.PF/AF)	type of bird (<i>Cacicus solitarius</i>)	female	Pia (field notes); Fischermann (1988, myth number 42). She was the wife of <i>Doridi</i> .
<i>Cadua</i> (f.sg.AF)	type of tree (<i>Amburana cearensis</i>)	female	Bórmida (2005, II: 125-126); Pia (field notes).
<i>Cani(r)ojnai</i> (m.sg.AF)	type of plant (<i>Jatropha grossidentata</i>)	male	Pia (2014: 74-76). Like <i>Chicōri</i> , he kills <i>Ajacaratai</i> in another version of the story.
<i>Carai</i> (m.sg.AF)	toco toucan	male	Pia (2016: 106). <i>Carai</i> was a honey hunter.

	(<i>Ramphastos toco</i>)		
<i>Caratai</i> (m.sg.AF)	jaguar	male	Pia (2015: 34). <i>Caratai</i> was a chief.
<i>Carujnanguejna</i> (f.sg.PF/AF)	violet wood, purpleheart (<i>Peltogyne confertiflora</i>)	female	(Pia 2016: 40-41). She was a woman with menstruation problems.
<i>Catague</i> (f.sg.PF/AF)	bristly starbur (<i>Acanthospermum hispidum</i>)	female	Pia (2018: 18). She was a solitary girl who had quarrels with the other girls and scared them with a needle.
<i>Chibiside</i> (m.sg.PF/AF)	type of plant (<i>Moya spinosa</i>)	female	Pia (field notes). The scientific name of the plant is in Fischermann (1988). She is the wife of <i>Chibisidi</i> .
<i>Chibisidi</i> (m.sg.AF)	type of plant (<i>Mandevilla angustiflora</i>)	male	Pia (field notes). He is the husband of <i>Chibiside</i> .
<i>Chicōri</i> (m.sg.AF)	tuber plant that holds water (<i>Jacaratia corumbensis</i>)	male	Pia (2014: 74-75; 2016: 115-116). <i>Chicōri</i> killed his brother <i>Ajacaratai</i> who had an adulterous relationship with his wife.
<i>Choyo</i> (f.sg.PF/AF)	blue-crowned trogon (<i>Trogon curucui</i>)	female	Pia (2016: 96). <i>Choyo</i> was the partner of <i>Doridi</i> . They turned into birds together.
<i>Chume</i> (f.sg.PF/AF)	type of thorny shrub	female	Fischermann (1988: §7.1).
<i>Chunguperedatei</i> (m.sg.AF)	jabiru (<i>Jabiru mycteria</i>)	male	Fischermann (1988: §3.2.2). He was a powerful chief and the owner of iron objects. Since the jabiru is mostly white, it is considered a white man, and this explains his association with iron objects. His myth is very taboo.
<i>Corangarāi</i> (m.sg.AF)	shovel	male	Pia (2018: 32). He was a man who liked to cultivate the land and had a good harvest, which caused the envy of the other people.
<i>Corodi</i> (m.sg.AF)	type of palm (<i>Acrocomia totai</i>)	male	Pia (2018: 51). He was a young man, tall and slim. This plant is also called <i>picadei</i> (m.sg.AF) in Ayoreo.
<i>Cucarane</i> (f.sg.PF/AF)	stone	female	Bórmida (2005, II: 117-118).

<i>Cuco</i> (f.sg.PF/AF)	type of tree (<i>Ceiba ventricosa</i> , <i>Ceiba speciosa</i>)	female	Pia (2014: 87-88; 2015: 19; 2018: 113-114). She was the wife of <i>Tobejnai</i> and had a child from him.
<i>Cuoi</i> (m.sg.AF)	type of tree (<i>Ceiba insignis</i>)	male	Pia (2018: 79-80). He was a tall man.
<i>Cucujna</i> (f.sg.PF/AF)	Bolivian tucu-tuco (<i>Ctenomys boliviensis</i>)	male	Fischermann (1988, myth number 22). In Old Zamuco the noun was masculine: <i>cucudda</i> (m.sg.PF), <i>cucuddatie</i> (m.sg.AF), “small animal, like a rabbit, whose teeth were used as a knife” (Ciucci forthcoming, a; translated from Spanish). ²²
<i>Cucujui</i> (m.sg.AF)	pigeon (<i>Patagioenas picazuro</i>)	male	Pia (2016: 42-43). As a man, <i>Cucujui</i> told prohibited stories and magic formulas which killed many Ayoreo, until he turned into a bird not to be killed. Nobody asked him any <i>sari</i> (or <i>sarode</i> , the Ayoreo magic formulas, see §3.2).
<i>Cuguebi</i> (DIM.m.sg.AF), from <i>cuguei</i> (m.sg.AF) ‘bean’	buff-throated woodcreeper (<i>Xiphorhynchus guttatus</i>)	male	Pia (2018: 31). According to Fischermann (1988), this bird is the <i>Pseudoleistes virescens</i> .
<i>Curude</i> (f.sg.PF/AF)	red stone used for makeup	female	Pia (2016: 93-94, 108-109). This red stone is used mostly by single women, but also by men, to apply as makeup in order to attract a partner. <i>Curude</i> was an attractive woman with wonderful makeup. Her <i>sari</i> is used to let people fall in love.
<i>Cusi</i> (m.sg.AF)	cassava, manioc (<i>Manihot esculenta</i>)	male	Pia (2016: 68-69; 2018: 58). It is <i>Manihot heterophylla</i> according to Fischermann (1988).
<i>Cuya</i> (f.sg.PF/AF)	type of plant (<i>Cynophalla retusa</i>)	female	Pia (2016: 71). <i>Cuya</i> was an evil female shaman.
<i>Dacatereato</i> (f.sg.PF/AF)	red rope used by men to tie up the hair	female	Pia (2016: 100). <i>Dacatereato</i> was a woman who used this very object as adornment and turned into it because she wore makeup after having married. For this reason, the object is now only used by men.

<i>Dequeyutiguei</i> (m.sg.AF)	smallpox, serious illness	male	Fischermann (1988, §7.1). He was a powerful Ayoreo leader.
<i>Dibe</i> (f.sg.PF/AF)	fox	female	Fischermann (1988: §3.2.2). She was the sister of <i>Putugutoi</i> (the jaguar).
<i>Dicacuei</i> (m.sg.PF/AF)	black-collared hawk (<i>Busarellus nigricollis</i>)	male	Pia (2018: 111). He was a man who burned parts of the forest to hunt.
<i>Diguiriquia</i> (f.sg.PF/AF)	bare-faced curassow (<i>Crax fasciolata</i>)	female	Pia (2016: 95-96). <i>Diguiriquia</i> was a woman who made wonderful adornments. She left no <i>sari</i> , but technical suggestions.
<i>Direjna</i> (f.sg.PF/AF)	big cricket (<i>Gryllotalpa gryllotalpa</i>)	female	Pia (2016: 21-22; 2018: 35); Idoyaga Molina (1998: 41). She was the grandmother of water birds and other animals. Among them is <i>Chunguperedatei</i> (the jabiru).
<i>Docoji</i> (GF.m.sg.AF)	bow	male	Bórmida (2005, I: 26).
<i>Doria</i> (f.sg.AF)	type of plant (<i>Bromelia balansae</i>)	female	Idoyaga Molina (1998: 67). She was a beautiful woman, but she had been cursed so that men did not fall in love with her.
<i>Doridi</i> (m.sg.AF)	crested oropendola (<i>Psarocolius decumanus</i>)	male	Pia (2016: 96; field notes); Fischermann (1988, myth number 42). In one version, <i>Doridi</i> was the husband of <i>Bujote</i> , in another the partner of <i>Choyo</i> . In both cases, they turned into birds together.
<i>Ducayoi</i> (GF.m.sg.AF)	headband worn by the Ayoreo men	male	Pia (2016: 110). The Ayoreo chiefs wear a headband of jaguar skin, and <i>Ducayoi</i> was a leader. The form recorded by Pia is <i>docayoi</i> or <i>dacayoi</i> . Higham et al. (2000) and Bertinetto (p.c.) document <i>ducayoi</i> . The difference depends on the vowel of the generic form prefix <i>dVc-</i> , for which some variability was described (Ciucci 2016).
<i>Durujnai</i> (m.sg.AF)	type of palm (<i>Trithrinax schizophylla</i>)	male	Pia (2014: 59). <i>Durujnai</i> was a boy who did activities traditionally reserved for women. For this reason, he did not grow up and turned into a plant. This story was very likely

			inspired by the fact that most plant nouns are feminine, but this noun is masculine.
<i>Echoi</i> (m.sg.AF)	salt	male	Idoyaga Molina (1998: 41-42).
<i>Erejnai</i> (m.sg.AF)	climbing plant with violet flowers (<i>Fridericia pubescens</i>)	male	Bórmida (2005, I: 34); Pia (2018: 3, 26). He was a shaman who became evil, because women did not like him. He looked for women and he hugged them with much strength.
<i>Gajño</i> (f.sg.PF/AF)	lake	female	Pia (2014: 92).
<i>Gase</i> (GF.f.sg.PF/AF)	stick with a hook, pitchfork for collecting the plant of caraguata	female	Pia (2018: 52-55, 74). She was an evil female shaman.
<i>Goyide</i> (f.sg.PF/AF)	Venezuelan troupial (<i>Icterus icterus</i>)	female	Pia (2016: 97-98). <i>Goyide</i> was a beautiful woman who turned into a bird, because too many men fell in love with her, and she did not want to be sexually immoral. Her <i>sari</i> gives the power to let husbands fall in love again with their wives.
<i>Gueaye</i> (f.sg.PF/AF)	drop of rain	female	Pia (2018: 61). She was a woman who liked to bathe in the river.
<i>Guebi</i> (DIM.m.sg.AF) from <i>guei</i> (m.sg.AF) 'rain', lit. 'small rain'	a sudden and short downpour	male	Pia (2018: 83-97); Idoyaga Molina (1998: 40-41). He was the son of the rain, a non-Ayoreo boy fallen from the sky. The gender of the character depends on the fact that its name is the diminutive of 'rain'. No transformation occurs in the story.
<i>Guede</i> (m.sg.PF/AF)	sun	male	Pia (2015: 5). The inflection of this word is irregular.
<i>Guedoside</i> (m.sg.AF)	moon	male	Pia (2015: 5); Fischermann (1988: §3.2.2). He was a big leader, and the son of the sun. The inflection of this word is irregular.
<i>Guetōrai</i> (m.sg.AF)	storm, tempest	male	Pia (2018: 69). He was an irritable man.
<i>Ijmosé</i> (f.sg.PF/AF)	type of plant (<i>Spathicarpa hastifolia</i>)	female	Pia (2018: 50). She was a woman who was able to collect plants, but was unpopular, because she only wanted to share her plants with her relatives.

<i>Imichacua</i> (f.sg.AF)	Ayoreo game	female	Pia (2018: 82).
<i>Jesabia</i> (f.sg.AF)	spider	female	Bórmida (2005, I: 55-56).
<i>Jiriria</i> (or <i>Iriria</i>) (f.sg.AF)	brushland tinamou (<i>Nothoprocta cinerascens</i>)	female	Pia (2016: 46). <i>Iriria</i> or <i>Jiriria</i> was a powerful female shaman.
<i>Jmajugunori</i> (m.sg.AF)	grey-bellied hawk (<i>Accipiter poliogaster</i>)	male	Pia (2018: 100-102). There are different versions of his story.
<i>Jmiacacai</i> (m.sg.AF)	white-tailed hawk (<i>Buteo albicaudatus</i>)	male	Pia (2016: 69-70; 2018: 106-108). He was a leader who had two wives.
<i>Jnumi</i> (m.sg.AF)	earth	male	Pia (2014: 116); Idoyaga Molina (1998: 48); Wilbert & Simoneau (1989: 27-30).
<i>Jubi</i> (m.sg.AF)	fly	male	Bórmida (2005, I: 61-62)
<i>Judui</i> (m.sg.AF)	Amazonian motmot (<i>Momotus momota</i>)	male	Pia (2018: 65). He was a young man who was able to find spring water.
<i>Juticai</i> (m.sg.AF)	deerfly	male	Pia (2016: 112); Fischermann (1988, myth number 54). <i>Juticai</i> was both a leader and an evil shaman.
<i>Narujna</i> (f.sg.PF/AF)	type of cactus (<i>Cereus stenogosus</i>)	female	Pia (2016: 59-60).
<i>Ojnai</i> (3.m.sg.AF)	needle	male	Pia (2018: 115).
<i>Ojnate</i> (f.sg.PF/AF)	plant with thorns	female	Pia (2015: 34-35).
<i>Pamoi</i> (GF.m.sg.AF)	belt used by elderly people to sit with	male	Bórmida (2005, II: 100-101). Telling this myth is very dangerous. There are also different versions concerning the origin of this object, whose production and use is not allowed to all Ayoreo people.
<i>Parangue</i> (GF.f.sg.PF/AF)	pestle used for grinding	female	Bórmida (2005, I: 92-93). <i>Parangue</i> was the wife of <i>Pugutadi</i> (see below).
<i>Petarugai</i> (m.sg.AF)	night butterfly, moth	male	Pia (2018: 22-23). He was envied, because he was a great hunter (a typical male activity).

<i>Pibotai</i> (GF.m.sg.AF)	drinking tube	male	Pia (2018: 60). He was a young man who invented the drinking tube. At the end of the story, he decided to turn into a drinking tube.
<i>Picadei</i> (m.sg.AF)	type of palm (<i>Acrocomia totai</i>)	male	Pia (2018: 118-119). He was a tall and thin young man.
<i>Piogoto</i> (f.sg.PF/AF)	broad-winged hawk (<i>Buteo platypterus</i>)	female	Pia (2018: 108-109). She was a woman who caused a fire in the forest.
<i>Pitijinaquei</i> (GF.m.sg.AF)	joy	male	Bórmida (2005, I: 36).
<i>Poji</i> (m.sg.PF/AF)	black tegu (<i>Tupinambis teguixin</i>)	male	Pia (2014: 113-114; 2016: 43; 2018: 20-22); Ciucci & Pia (2019). He was a powerful shaman. It is the red tegu (<i>Salvator rufescens</i>) in the southern part of the Chaco area where the Ayoreo live.
<i>Porai</i> (m.sg.AF)	centipede (<i>Scolopendra cingulata</i>)	male	Pia (2018: 6). He was a boy who was too light and weak to play sport with the other children.
<i>Potajnarua</i> (f.sg.AF)	type of leaf cactus (<i>Pereskia sacharosa</i>)	female	Pia (2018: 119). She was a girl who used to make wooden needles.
<i>Potaquero</i> (f.sg.PF/AF)	rufous nightjar (<i>Caprimulgus rufus</i>)	female	Pia (2014: 98). She fell in love with <i>Potatai</i> .
<i>Potatai</i> (m.sg.AF)	scissor-tailed nightjar (<i>Hydropsalis torquata</i>)	male	Pia (2018: 20-22). He was a good shaman who helped <i>Poji</i> to become a shaman. He is considered the husband of <i>Asojna</i> (Pia 2014: 58) or simply her helper (Pia 2014: 96).
<i>Pugutadi</i> (GF.m.sg.AF)	mortar used for milling	male	Bórmida (2005, I: 92-93). <i>Pugutadi</i> was the husband of <i>Parangue</i> (see above).
<i>Queneguete</i> (f.sg.PF/AF)	spider	female	Pia (2015: 6). She was a woman who weaved and made better skirts and fans than the other women, who hated her for that. In Fischermann (1988: §3.2.2), she is the wife of <i>Chunguperedatei</i> . She produced woven objects characteristic of Western culture.

<i>Quiraquirai</i> (m.sg.AF)	southern crested caracara (<i>Caracara plancus</i>)	male	Pia (2014: 71-72). He was a big shaman.
<i>Sidejnai</i> (m.sg.AF)	(<i>Nicotiana rustica</i>)	male	Pia (2014: 61); Fischermann (1988, myth number 26); Idoyaga Molina (1998: 41).
<i>Simijnai</i> (m.sg.PF/AF)	spring water	male	Pia (2018: 65-66). He was a man who liked to bathe in pools.
<i>Sorei / Sori</i> (m.sg.AF)	harpy eagle (<i>Harpia harpyja</i>)	male	Pia (2018: 102-104). He was a powerful but evil leader, feared by his people.
<i>Sumajningai</i> (m.sg.AF)	courage	male	Pia (2014: 79; 2016: 89); Idoyaga Molina (1998: 46-48). He is represented as a man who lives in the sky and gives courage to leaders. He did not undergo any process of transformation.
<i>Suaria</i> (f.sg.AF)	parrot	female	Bórmida (2005, I: 57).
<i>Tibide</i> (f.sg.PF/AF)	red stone	female	Bórmida (2005, II: 145-146).
<i>Tiegaito</i> (f.sg.PF/AF)	Blue-throated piping guan (<i>Pipile cumanensis</i>)	female	Pia (2018: 70). She was a woman who specialized in looking for water. The scientific name comes from Rocha <i>et al.</i> (2012: 34).
<i>Tirite</i> (f.sg.PF/AF)	blue-tufted starthroat (<i>Heliomaster furcifer</i>)	female	Pia (2018: 118). She was a woman who used a needle to weave every day.
<i>Tiroi</i> (m.sg.PF/AF)	savanna hawk (<i>Buteogallus meridionalis</i>)	male	Pia (2018: 111). He was a young man and a good honey hunter.
<i>Ti(r)oti</i> (m.sg.AF)	feather ornament of shamans and military leaders	male	Pia (2018: 113). He was a handsome boy, who invented the feather ornament named after him. No information on metamorphosis is reported.
<i>Tobejnai</i> (m.sg.AF)	hook-billed kite (<i>Chondrohierax uncinatus</i>)	male	Pia (2018: 113-114). He was <i>Cuco's</i> husband.
<i>Tobi</i> (m.sg.AF)	sharp-shinned hawk	male	Pia (2018: 109). He is described as a man who was small but good at killing

	(<i>Accipiter striatus</i>)		the enemy, because he was strong and fast.
<i>Toje</i> (f.sg.PF/AF)	southern screamer (<i>Chauna torquata</i>)	female	Pia (2016: 25; 2018: 63). She was a woman who did not want to share her belongings with the other women.
<i>Usere</i> (f.sg.PF/AF)	type of plant (<i>Dioscorea alata</i>)	female	Pia (2015: 27). <i>Usere</i> was a woman who made skirts. She decided to turn into a plant after having being criticized by other women who did not appreciate her skirts. <i>Usere</i> has left no <i>sari</i> .
<i>Yajogue</i> (f.sg.PF/AF)	anteater (<i>Myrmecophaga tridactyla</i>)	female	Fischermann (1988, myth number 22).
<i>Yame</i> (f.sg.PF/AF) ²³	type of monkey (<i>Aotus trivirgatus</i>)	female	Pia (field notes). She was a beautiful woman, envied by the other women.
<i>Yame puye</i> (f.sg.PF/AF), lit. 'taboo monkey'	<i>yame puye</i> (<i>Aotus azarae</i>)	female	Pia (2016: 78). She was a female shaman who turned into a monkey after a dispute with another woman. The adjective <i>puye</i> , feminine of <i>puyac</i> (m.sg.PF) 'holy, taboo', is considered part of the character's name.
<i>Yiquiqui</i> (m.sg.PF/AF)	solitary eagle (<i>Harpyhaliaetus solitarius</i>)	male	Pia (2018: 105-106). He was a singer. For Fischermann (1988), this bird is <i>Spizaetus ornatus</i> .
<i>Yojnai</i> (m.sg.AF)	plant of the bromeliads (<i>Aechmea bromeliifolia</i>)	male	Pia (2018: 62-63). He was a hunter. He turned into a plant because he did not want to share water with his group. For Fischermann (1988), the plant is <i>Aechmea distichanta</i> .

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² Data are reported in the orthography of each language (for a detailed discussion, see Ciucci 2016). In the Ayoreo myths, the name of human characters always coincide with common nouns for non-humans (§3), so that it can often be challenging to disambiguate between the two: I will use the initial capital letter to refer to the proper noun of the mythological figure, and initial lowercase to indicate the common noun. Even though in this chapter I often use the present tense to refer to the traditional Ayoreo and Chamacoco culture, the way of life of both populations underwent dramatic changes, particularly in the last decades, and many of their cultural features are disappearing or have been lost. Linguistic data for Old Zamuco come from Chomé (1958) and Ciucci (forthcoming, a). Data for Chamacoco come from my fieldwork, while for Ayoreo I used data from fieldwork by Pier Marco Bertinetto and me, as well as lexicographical sources such as Barrios et al. (1995), Higham et al. (2000), Morarie (2011), and an anonymous dictionary by evangelical missionaries (SIM 1967).

³ There can be some degree of variation, mostly depending on the informant, concerning whether some entities, particularly objects, were originally people or not. See for instance the comparison of data by different informants done by Bórmida (2005, I: 44-46). But here one has to keep in mind the above-mentioned limits in the analysis of Ayoreo mythology and the fact that not all informants have the same knowledge of the stories.

⁴ *Jnani bajade* ‘the first men’ and *cheque bajedie* ‘the first women’ are adjectival phrases inflected in ARGUMENT FORM; as seen in §2.1, in adjectival phrases the first element is always

in singular PREDICATIVE FORM, while the final element is in the number and form required by referent and context.

⁵ As pointed out by Bórmida (2005 II: 13-14), the word *quicujaidia* (3.f.sg.AF), *quicujaidie* (3.f.pl.AF) is a compound. It is an exception, because while in Ayoreo the unmarked gender is masculine, ‘ancestor’ is a feminine noun which is also used for men. This will be discussed in §8.

⁶ There are only a few ancestors who did not leave any ritual formula; see Table 3 in the Appendix.

⁷ This is an unprecedented work for the quantity of the materials collected. It is the outcome of an investigation which began in 1984 and which lasted over thirty years. The first four volumes have more than 400 pages and only cover part of the letter A. The fact that the author suddenly passed away in 2019, has put an abrupt end to this work. Gabriella Erica Pia has left over 10,000 pages of field notes containing, among many other things, a huge amount of otherwise undocumented myths and ritual formulas.

⁸ For the other factors which have played a role in the creation of the mythological characters associated with each entity, see Bórmida (2005).

⁹ I use the adjective ‘arbitrary’, because the exact principles of gender assignment in Ayoreo have not been identified so far (§3), and remain a topic for further research.

¹⁰ Along with cultural changes, naming practices are also changing. For instance, my Ayoreo informants in Colonia Peralta told me that they no longer use teknonyms.

¹¹ Most stories in Wilbert and Simoneau (1987) were collected by the Argentinian anthropologist Edgardo Cordeu, and some of them were later published, in Spanish, in Cordeu (1989-1992).

¹² See Ciucci and Bertinetto (2015: 50-51) for a similar development (*ai > e*) in the Ayoreo verb *-ise* ‘to find, to meet, to reach’.

¹³ Maria Paz was an ‘illegitimate’ firstborn child who was supposed to be killed. In order to avoid this, her mother escaped to a Catholic mission. Other Ayoreo of her group reached the mission, asking for the child, whom they wanted to kill. The child was saved by missionaries. For her story, see Paz (1966).

¹⁴ The form itself is *nup*. Final [e] is a vowel often added to words ending with consonant in order to recreate the preferred syllable structure CV. In the available sources on the language, it is not possible to find the meaning of the other proper names listed by Tomichá.

¹⁵ Only Old Zamuco *ohotae* and Chamacoco *ihyōrta* are in the feminine, since no masculine form is attested.

¹⁶ One of my Chamacoco informants pointed out to me that hunting requires a particular knowledge in order not to kill animals without compromising the reproduction of the local fauna. He compared the indigenous management of natural resources, which is sustainable, to the attitude of the Western people, who kill animals without any concern for their preservation. He found it contradictory that the Western world also manifests itself with the presence of ecologists, who tell indigenous people not to hunt in their traditional territory, because some species are endangered. This made him angry, because hunting is still necessary for the economic survival of the community.

¹⁷ This is the form of the Lomeriano dialect of Chiquitano. In the Ignaciano dialect, ‘louse’ is *oiñapáx* (♂.GF.sg) / *ñapáx* (♀.GF.sg), with a difference according to male and female speech. Like Zamucoan and most Chaco languages, Chiquitano also has a form for unspecified possessor (GF) (Ciucci and Macoñó 2018: 49). In Chiquitano there is also another animal which can take possessive inflection: the horse. Something similar occurs in Dakota (Siouan), in which animals cannot be possessed, with the exception of the horse (Aikhenvald 2019: 22).

¹⁸ Alternatively, one could interpret this not as a complex predicate, but just as a verb followed by the adposition. This would just increase the complexity of the comparative construction.

¹⁹ An Old Zamuco term for ‘leader’, *date-tie* (m.sg.AF), is masculine, but still comes from ‘mother’, *date-tae* (f.sg.AF). In all Zamucoan languages the root for ‘mother’, *date*, was also converted into the adjective for ‘big’, which as an adjective could take masculine and feminine suffixes. In Old Zamuco the masculine forms of ‘big’ were used to refer to the ‘leader’.

²⁰ Original version: “Honran a las mujeres con el título de señoras, y verdaderamente lo son, porque ellas mandan a sus maridos, y por su capricho se mudan de un lugar a otro; jamás ponen mano en las haciendas domésticas, sino que se sirven de sus maridos, aun para los ministerios más humildes.”

²¹ It was also unusual from the point of view of the Chiquitano, the dominant ethnic group of the *Missions of Chiquitos*, whose traditional society was dominated by men.

²² Original version: “animalito, como conejo, cuyos dientes les servian de cuchillo.”

²³ As seen in §4.1, Ayoreo has no gender switch for animal terms. However, in Fischermann (1998, myth number 22) there is an exception, because in one version of the story of *Yajogue* ‘anteater’ (above) her husband is a monkey called *Yamei*. *Yamei* (m.sg.AF) is the masculine of *yame* (f.sg.AF/PF). This monkey is always feminine in all other sources available, including all other citations by Fischermann. Pia (p.c.), who tried to check this piece of information, was not able to find the masculine form *yamei*. If *yamei* is correct, it could be an unusual local variation of *yame*. This is, however, an exception which confirms the rule. Indeed, if the grammatical gender of the noun changes, the social gender of the mythological character also changes.