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NEGATION IN THE LANGUAGES OF THE ANDES FROM AN AREAL-TYPOLOGICAL PERSPECTIVE

TESIS PARA OPTAR AL GRADO DE MAGÍSTER EN LINGÜÍSTICA CON MENCIÓN EN LENGUA INGLESA

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To Andres and great-aunt Silvia

To my mom and sister

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LIST OF ABBREVIATIONS [1]

1: first person
2: second person
3: third person
∅: Zero
ACC: accusative
ACT: active
AN: animate
APPL: applicative
APPR: apprehensional
ASRT: assertive
ATTEN: attenuative
AUG: augmentative
AUX: auxiliary
CAUS: causative
CLF: classifier
COMIT: comitative
CMPL: completive
CONJC: conjectural
CONT: continuous
COP: copula
DAT: dative
DECL: declarative
DES: desiderative
DIREV: direct evidential
DO: direct object
DIR: directional
DIST: distal
ELAT: elative
ERG: ergative
EVID: evidential
EXCL: exclamative
EXIST: existential
FOC: focus
FUT: future
GNR: generic
GEN: genitive
HABIT: habitual
HORT: hortative
IMMFUT: immediate future
IMP: imperative
IMPF: imperfect
IPFV: imperfective
INACT: inactive
INGR: inceptive
INCH: inchoative
INCOMP: incompletive, noncompletive
IND: indicative
INFR: inferential
INF: infinitive
INTS: intensive

[1] The interlinear morphemic glossing and abbreviations were done following the Leipzig Glossing Rules (Comrie, Haspelmath, & Bickel, 2008) and the Interlinear morphemic glossing guide by Lehmann (2004). The examples provided through the text were glossed by me when the glosses were not provided by the authors of the source text, or adapted to the conventions used here when the glosses were provided in the sources.

INT: interrogative
IRR: irrealis
LIG: ligature
NEG: negative
NR: nominalizer
N: non-
NFUT: non-future
NPST: non-past
NVOL: non-volitional, involuntary
OBJ: object
OBLG: obligative
PST: past
PRF: perfect
PFV: perfect
PL: plural
POSS: possessive
PRS: present
PRIV: privative
PROG: progressive
PROH: prohibitive
PROX: proximal
RECPST: recent/immediate past
REFL: reflexive
REL: relative
RLS: realis
REMPST: remote past
REP: repetitive
RPRT: reportative
RES: resultative
SENS: sensory
SPECL: speculative
SBJ: subject
TOP: topic
VEN: venitive
VBZ: verbalizer

ABSTRACT

This work aims to describe and compare negation in the languages of the Andes from an areal-typological perspective. The main objective is to identify the features shared in the domain of negation between the languages of the Andes, to provide evidence for the characterization of negation as an areal feature of the Andean languages. The features considered in this study are type of negative markers, order of negative markers and verb, structure of negative constructions, and types of prohibitives. The sample includes 18 Andean languages. From the consulted sources for each language, the values from each feature considered were identified, put into a database, and compared. Besides that, the sample was compared to a sample of South American languages from Chaco, Patagonia, and Amazonia and a global sample from the World Atlas of Language Structures. The data shows that most Andean languages have clear similarities but there are also clear differences that could be explained by sub-areal divergence, individual diachronic developments and inter-areal contact. Beyond that, the data does not show a strong differentiation between Andes and adjacent linguistic areas. Furthermore, the computational analysis shows that Andean languages are grouped in different clusters in which they are close to other non-Andean languages. This study concludes that negation cannot be considered as an areal feature in the Andean languages in the terms originally proposed since clear differences between these languages and insufficient differentiation from adjacent areas are found. However, a new proposal in which negation could be considered an areal feature in central Andean languages and possibly southern Andean languages separately has more support from the analysis of the data from this study.

Keywords: Negation, Andean languages, areal typology.

CHAPTER 1:

INTRODUCTION

Negation is a function that has been stated to be present in all world languages documented so far and is considered a universal in human language (Horn, 2001). Despite its apparent simplicity, the expression of negation in the world languages is complex and have close relations to other domains. Negation has important implications in all levels of human languages from formal to pragmatic and cognitive. It is a domain that has been studied from a wide variety of perspectives, and from a typological perspective it has seen a notorious increase both in interest and in the number of published works. Negation have also received some attention in areal studies, however in the case of the Andes have not received much attention and only as part of general studies, that includes many other linguistic domains, such as Torero (2002). Apart from that, there are no systematic studies dealing with negation in the Andean languages, and certainly no studies of negation in the languages of the Andes from an areal-typological perspective.

The aim of this study is to describe and compare the expression of negation in the languages of the Andes from an areal-typological perspective and test whether negation is an areal feature of the Andean languages. This study also presents a comparison between both the languages of the Andes to each other and between these languages and languages from surrounding areas, as well as the comparison to a global sample of languages from the World Atlas of Language Structures. This comparison is firstly done through the comparison of the individual values for each feature. Secondly by the computational analysis calculating the Hamming distance and creating typological distance matrixes. These distance matrixes are represented by represented by

agglomerative clustering techniques, heatmaps and 2D representations, that allow to visualize the grouping of the features according to their typological distance. From the analysis of the agglomerative clustering, it can be tested whether the distribution of features in the Andean languages and the comparative sample corresponds to the proposed linguistic areas.

This work studies negation from a typological perspective with its focus on standard negation (defined in section 2.3.1.). The chosen features are the types of negative strategies or negative markers, the order or position of the negative markers in relation to the main verb and the structure of the negative constructions, all of these in standard negation. An additional feature is the type of prohibitive constructions, which even though are not SN constructions are considered in their relation to standard negation. Regarding prohibitive constructions, the interest is in whether the negative marker(s) used in standard negation are also used in Prohibitives. Apart from the focus on standard negation, these features were chosen since they are well studied features with proposed typologies, and they were used in the World Atlas of Language Structures which was used as a comparative global sample.

1.1. General Objective

Describe the lexical and grammatical marking of negation in the languages of the Andes from an areal-typological perspective, identifying shared features between these languages and comparing them to a sample of languages from surrounding areas as well as to a global sample from the World Atlas of Language Structures, to contribute to the knowledge about these languages and to provide evidence to the characterization of negation as an areal feature in languages of the Andes.

1.2. Specific objectives

1. Identify the values assumed by the selected features in the languages of the Andes.
2. Compare, from an areal-typological perspective, the marking of negation features in the languages of the Andes.
3. Determine possible convergence negation features to contribute to the characterization of areal and local language contact between languages of the Andes.
4. Compare the languages of the Andes to languages of surrounding areas: Chaco, Patagonia, and Amazonia, and a global sample from WALS aiming to provide evidence to differentiate, in the domain of negation, the Andean area from surrounding areas considering global trends.

1.3. Hypothesis

The hypothesis is that the languages of the Andes should show similarities on the values assumed by the features in the domain of negation as a result of areal-scale language contact. The similarities between Andean languages, if found, and the differences with languages from surrounding areas: namely, Chaco, Patagonia and Amazonia would provide evidence to differentiate the languages of the Andes from languages in surrounding areas of South America and contribute to the characterization of negation as an areal feature in the Andean area.

1.4. Main results

The main results show that while the Andean languages show clear similarities, there are also differences and at least two main groups can be distinguished. These groups roughly correspond to central and southern Andean languages respectively. Apart from the differences between Andean languages, some languages show similarities to languages outside the area and moreover the central Andean languages tends to follow global tendencies while southern Andes tends to follow South American tendencies.

1.5. Organization

This thesis is organized as follows. In chapter 2 the theoretical framework over which this work is based is presented including the areal typological perspective, the areal divisions proposed for South America and the typology of negation. In chapter 3 the methodology followed in this study is explained. In chapter 4 the data is presented describing and analyzing the selected features in the languages of the sample of Andean languages and the comparative sample of South American languages. In chapter 5 the results of the study are discussed. In chapter 6 the main conclusions are presented.

CHAPTER 2:

THEORETICAL FRAMEWORK

This section presents the theoretical framework over which this work is based. In the first section the areal typological perspective is explained. In section two, areal divisions of South America, the discussion and proposal or linguistic areas and relevant issues is presented with a focus on the Andean languages. In section three, typology of negation is described.

2.1. Areal typological perspective

2.1.1. Linguistic typology

Linguistic typology (henceforth LT) is a subfield of linguistics which aim is the systematic study of cross-linguistic variation of linguistic structures. LT studies language structures, its cross-linguistic variation, and the limits of such variation from an empirically based observation of the languages through the study of big samples of languages intended to be representative of global linguistic diversity (Haspelmath, Dryer, Gil, and Comrie, 2005). LT classifies languages according to the types of linguistic features they have on different linguistic domains. The modern subfield is traditionally said to begin with Greenberg's studies on linguistic universals, however the study and classification of languages into types long predates Greenberg.

Linguistic typology also aims to provide explanations of the current diversity of the world languages. Nichols (1992: 2) have proposed to treat LT as a population science along with population biology or population genetics that 'analyze variation within and

between populations of organisms and use the results to describe evolution' and to consider language as a population rather than an abstract object or a psychological object. For Nichols (1992: 2) viewing typology as a population science means "shifting typology away from defining 'possible human language' and instead pursuing generalizations about the world languages" and its objective is the description of principles governing the distribution of structural features among the world's languages.

2.1.2. Linguistic areas and areal linguistics

In contrast to the Macro scope of Linguistic typology, areal linguistics studies languages from a more micro level scope. It aims to study how and why structural features diffuse between languages which have no genetic affiliation but share the same geographic space or have geographic proximity, because of language contact (Koptjevskaja-Tamm, 2012). For Thomason (2001: 99) a linguistic area is 'a geographic region containing a group of three or more languages sharing some structural features as a result of language contact rather than as a result of accident or inheritance from a common ancestor'.

For Aikhenvald and Dixon (2006) a linguistic area must have a significant number of common features and they must be reasonably distinct to determine the existence of a linguistic area. They also state that it is important that the languages form part of different language families or at least different sub-groups within a family. Besides that, it is pertinent to remark that what is relevant to determine a linguistic area is not entirely the geographical contiguity of the languages in a specific territory, but the contact networks between the speakers on that territory. Language contact does not occur only when there is geographic contiguity, but also by means of trade routes, migration, or other relations between different groups.

In the definition by Thomason there are six key points that define a linguistic area. (1) It is a Geographical region, which is more complex that what could seem at first glance. Even though geographic contiguity can be important, it is not the most relevant factor but the communicative networks, affinities, and social ties in the geographical region. (2) It must be three or more languages involved, because if only two languages are involved it is just a particular instance of contact and does not define an area. (3) there must be shared structural features between the languages of the area. (4) the shared structural features must be the result of language contact between the languages of the area. (5) the shared structural features should not be explained just by accident or because they are just common worldwide. (6) The structural features must not be shared between the languages because of inheritance from a common ancestor.

The notion of linguistic areas has been criticized for theoretical and methodological problems, Campbell (2006, 2017) in particular, analyses the most relevant ones. For Campbell what is important is the individual historical events of diffusion that led to linguistic convergence rather than the attempt to impose a geographical order to the languages. Apart from that he highlights the difficulties involved in determining linguistic areas such as the definition, criteria, and boundaries of linguistic areas. Campbell suggests abandoning the efforts of establishing linguistic areas and focus on the processes of borrowing and diffusion of linguistic features, and explain the history of these processes by answering 'what happened?' (Campbell, 2006: 21-22). While the limitations of the notion of linguistic areas are clear, the idea of abandoning all efforts on establishing linguistic areas does not seem to be a solution. The main contribution of these criticism of linguistic areas is the idea of changing the focus to the description -and explanation- of the distribution of features in the languages and the possible contact scenarios and diachronic developments that led to that distribution as in an areal-typological perspective (Dahl, 2001: 1456).

2.1.3. Areal typology

Despite their differences in main objectives, scopes and focus of study, linguistic typology and areal linguistics have shown close ties. While areal linguistics is interested in the similarities between geographically contiguous languages and the identification of linguistic areas, linguistic typology's interest is in the classification of languages based on grammatical and phonological features. In recent decades, linguistic typology has shown a growing interest in explaining how and why linguistic features are distributed unevenly in the world languages and explaining such distributions considering language contact and diffusion. On the other hand, areal linguistics has become more interested in finding areal distribution patterns of different linguistic features (Nichols, 1992; Dahl, 2001; Koptjevskaja-Tamm, 2012).

From the confluence of principles and methods from linguistic typology and areal linguistics has emerged the field of areal typology. Dahl (2001: 1456) defines Areal typology as 'the study of patterns in the areal distribution of typologically relevant features of languages' rather than the characteristics of individual areas. The aim of areal typology is the study of areal patterns even if they cannot be described in terms of linguistic areas in the traditional sense. According to Dahl (2001: 1456) areal typology 'is both descriptive and explanatory; that is, it looks both at the patterns themselves and the processes that give rise to them. In other words, areal typology has both a synchronic and a diachronic side'.

According to Koptjevskaja-Tamm (2012: 10) the areal-typological characterization of a specific geographical region should include:

(1) a systematic description of certain linguistic domains in as much languages as possible to account for the similarities and differences between the languages in a geographic area as well as the geographical distribution of such features.

(2) an evaluation of that description in a wider typological framework.

(3) explanations for the observed similarities between the studied languages not only at the linguistic level, but also social-political, historical, geographical, and anthropological levels. In the same line, this approach has a strong interest in interdisciplinarity and receives contributions from various disciplines.

In this work only the first two characteristics proposed by Koptjevkaja-Tamm are included, since the explanation of the similarities observed between the languages exceeds the limits of the scope of this work. Despite leaving the explanation of the observed similarities out of the scope of this research, some plausible explanations will be proposed when possible.

2.2. South American areal divisions

2.2.1. Andes

The Andes is a proposed linguistic area on the western side of South America around to the Andes mountains. Even though it has been recognized as a linguistic area in previous studies, there is not a complete agreement on the actual geographical extension and the languages included in the area. Adelaar with Muysken (2004) conceives the Andes in very wide terms including the whole length of the mountain range from Venezuela in the north, to Tierra del Fuego in the south, comprising both sides of the Andes. This includes over 52 languages divided in several 'Spheres': the Chibchan sphere, Inca sphere, Araucanian sphere, and includes the languages of Tierra del Fuego and the languages of the eastern slopes of the Andes. From a historical and archaeological perspective, Lumbreras, proposes a division of the Andes in extreme north, northern, central, southern and extreme south. Based on his survey of structural features, Muysken (2008: 31) concludes that 'there is still very little evidence that can be helpful for recognizing and delimiting linguistic typological areas, let alone, an Andean linguistic area that would encompass the entire region'.

On another note, Torero (2002) considers the Andean area as the territory from the Colombian southwest to the north of the Austral Andes. While the criteria followed by Adelaar with Muysken is geographical, the criteria for Torero are linguistic. For Torero what defines the Andean area are the shared linguistic features instead of just the geographic location. According to Torero, a significant part of the languages in the area shares a series of lexical, phonetic and morphosyntactic features such as a decimal numeral system, a nasal central-palatal consonant and a determiner-adjective-determined noun distribution, and several other features shared between Andean sub-areas. Torero built a database including nine languages/small families: Aru (Aymaran), Kunza, Cholón, Huarpe, Quechuan, Uruquilla (Uro-chipayan), Mochica, Puquina and Mapuche and considering 40 phonological and morphosyntactic features according to which he

estimates ‘typological community indexes’ (*indices de comunidad tipológica*) between the different languages. The typological community index represents the degree of similarity between two or more languages based on the percentage of similar features.

According to these features, Torero claims that the Andean area can be divided into two different sub-areas; (1) a nuclear Andean area including Quechuan and Aymaran languages, which show a typological community index of 90% and (2) an Altiplanic sub-area including Puquina, Uruquilla, Kunza, and Huarpe. These languages show a typological community index of 76.5% between Uruquilla and Kunza, 72.2%, between Uruquilla and Huarpe, 63.9% between Uruquilla and Puquina, 77.1% between Kunza and Huarpe, 60% between Kunza and Puquina, and 63.2% between Puquina and Huarpe. Additionally, Torero considers that three languages are not part of a sub-area but could have been part of a non-recognizable area in the past: Mochica, Cholón and Mapudungun. Each of these languages show less than 60% of typological community index with the other languages except for Mapudungun and Cholón with 67.5%, Mapudungun and Puquina with 61.5%, and Mapudungun with Huarpe with 68.4%.

As seen above, several subdivisions of the Andes have been proposed. For the purposes of this study the most relevant subdivision to be considered is the central/southern Andes division. The southern Andes includes the languages of what Adelaar with Muysken (2004) call the ‘Araucanian sphere’, with the addition of Kunza. This sub-area corresponds to the territory Lumbreras (1981) calls ‘Andes of the extreme south’. The southern Andes as an Andean sub-area includes the territories from south-central Chile and Argentina where Allentiac, Millcayac, Kunza, Mapudungun and other unknown or undocumented languages were (or are still) spoken. According to Diaz-Fernandez (2014) Millcayac, Allentiac and Mapudungun would be part of the same typological area and proposes to extend the study to Kunza. These languages, while related to the rest of the Andes, would conform a periphery in the Andes where they diverge from the rest of the area and converge between themselves.

According to Adelaar with Muysken (2004: 4) the history of the Andean area 'is characterized by an alternation between periods of greater communication and integration of different peoples and languages, and periods of fragmentation and individual development'. These periods would have favored linguistic convergence and diversity, respectively. Adelaar with Muysken suggest that during its history, the Andean languages have interacted with each other within 'cultural spheres', zones that at different points in time have functioned as units, and within these spheres of interaction the Andean languages have influenced each other.

It is relevant to notice the fact that the Andean area, much like the rest of south America, surely had a bigger diversity of languages in the past. Today it is only possible to study the surviving languages and the languages that could be documented before disappearing (Torero, 2002; Urban, 2019). Many other languages are only known because they were mentioned in colonial texts but were never documented and possibly some more, which number is unknown, disappeared without leaving any trace. This represents a significant limitation for any areal-typological study since only the surviving languages, or the ones that were documented before disappearing, can be considered. Another difficulty is the reconstruction of the linguistic and cultural contact relations between these languages in ancient times.

2.2.1.1. The languages of the Andes

In this section a brief introduction to the Andean languages considered in the sample will be presented, including general information such as locations, number of speakers, level of vitality, phylogenetic and contact relations to other languages, etc. Other languages that are known to have existed in the Andes in the past, but for which there is scarce data such as Kakán, Tallán, Hibito, Sechura, to name some, were not included in this study.

2.2.1.1.1. Quechuan

Quechua, also known as Quichua or Runa Simi, is a language family spoken around the Andes and some Amazonian valleys from Colombia and Ecuador in the north, across Peru and Bolivia and to Argentina and Chile in the south. The Quechuan homeland has been a matter of discussion for a long time but now it is widely accepted that Quechuan originates in Central Peru (Torero, 1970: 248). It is in this region where Quechuan languages show the most diversity. The beginning of the expansion of Quechuan, long associated to the Inca empire, it is now known to predate it, however the Inca empire also played a relevant role in its expansion with their policy of *Mitimaes* or forced migrations within the empire. A relevant characteristic of Quechua is its long history of close contact with Aymaran. Both families are thought to have been in contact for thousands of years and both show striking similarities.

The Quechuan family is divided in a big number of languages and dialects. A traditional and still widely used classification of Quechuan proposed by Parker (1963) and Torero (1964), divides the family in Quechua I (QI) and Quechua II (QII), which are sub-divided in QII A, Q IIB and QIIC. Quechua I includes various endangered and deeply fragmented languages and dialects that are spoken in the central area of Peru, while QII dialects have spread from the central area to the rest of the territory where it is spoken. In geographical terms, another division was proposed by Landerman (1991) who divides the Quechuan family in Northern Quechua, Northern Peruvian Quechua, Central Quechua, and Southern Quechua.

The Quechuan languages included in the sample of this work are the following. Ancash Quechua spoken in central Peru and belonging to the QI branch and central Quechua. Pacaraos Quechua, belonging to another branch of Quechua I or central Quechua and spoken in central Peru. Cajamarca Quechua belonging to QIIA and spoken in Northern Peru. Yauyos Quechua spoken in Central Peru and which affiliation is not clear and has

been put into Quechua I and II and according to Shimelman (2017: 5) represents a sort of 'missing link' between both. Ayacucho Quechua spoken in southern Peru and belonging to QIIB and southern Quechuan. Ecuadorian Quechua spoken in the Ecuadorian Andes and some Amazonian regions and belonging to QIIB and northern Quechua. Santiago del Estero Quechua spoken in northern Argentina and belonging to QIIC and southern Quechua.

After the Spanish conquest, Quechua was still widely used. A standardized form of Quechua known as 'General Language' was recognized by the colonial administration and even many Spanish colonists learned the language which was used to communicate with the natives and to evangelize indigenous peoples. Many speakers of other languages learned Quechua and it ended displacing other native languages. Because of this, since the colonial period, Quechua was spoken in new territories where it was not previously spoken. During the XVIII century after a rebellion against the colonial rule, Quechua lost its recognition within the colonial system and it started to decline. In spite of its decline, the languages of the Quechuan family have seen a revival since the XX century, and they have more speakers than any other indigenous languages of South America.

2.2.1.1.2. Aymaran

The Aymaran family, also known as Aru or Jaqui, is spoken from central Peru to Bolivia and northern Chile. The family is divided in two branches, the first branch includes the Aymara language spoken in the Bolivian-Peruvian *altiplano* plateau and northern Chile and the second includes the Jaqaru and Cauqui languages spoken central Peru. The Aymaran languages have notorious dissimilarities, while Aymara is spoken by thousands of people in three countries, Jaqaru and Cauqui are spoken by a few communities in central Peru (Adelaar with Muysken, 2004).

It is believed that the Aymaran homeland is located in central Peru, south of the Quechuan Homeland (Adelaar & Muysken, 2004: 263) and the current distribution of Aymara is the result of a rapid expansion southwards. In the process of Aymaran expansion, other languages such as Uru-chipayan, Puquina and other now extinct languages were displaced. As previously stated, Aymaran and Quechuan share a striking number of phonological, grammatical, and lexical similarities attributed to intense language contact from the times of their respective proto languages, which have their homelands very close to each other. This similarities between both have even led to the proposal, that Quechua and Aymaran had a common origin. However, this hypothesis has mostly been rejected and the hypothesis of convergence is the most accepted.

2.2.1.1.3. Uro-chipayan

The Uro-chipayan family, also known as Uruquilla, includes the Chipaya and Uchumataqu or Uro languages spoken in southern Peru and western Bolivia. These languages are mainly spoken around the Titicaca and Poopo lakes and nearby rivers in the Bolivian *altiplano*. The Uchumataqu or Uru language is spoken along the Western Titicaca lake and along the Desaguadero river between the Titicaca and Poopo lakes (Hannss, 2008), while Chipaya is spoken mainly in the Lauca river and specially in the Santa Ana de Chipaya Town near the Chilean-Bolivian Border.

Historically the Uro-chipayan peoples have been dominated by Quechua or Aymaran peoples, not to mention Spanish colonists, and considered inferior to them for their fishing, hunting, and gathering economy, which led to strong discrimination against their languages and cultures. Under the historical relation of domination by other peoples, their languages have been highly influenced by Quechuan, Aymaran and Spanish (Hannss, 2008: 8). Nowadays, the Uro-Chipayan populations have been greatly assimilated by neighboring Quechua and Aymara populations and their languages displaced and, in some areas, completely extinct.

2.2.1.1.4. Mochica

The Mochica language, also known as Yunga, Chimú, among other names, is an isolated language formerly spoken in the northern coast of Peru and nearby interior regions. Mochica is currently extinct and was spoken until around the XIX century (Eloranta-Barrera, 2020: 6). During the colonial period, the language was still widely spoken, and its extinctions came much later. The language was documented in colonial and post-colonial times and some documents have survived to this day. Mochica was likely the language spoken by the Chimú and Moche cultures, some of the main pre-Inca cultures of Peru (Hovdhaugen, 2004: 6). According to Torero (2002: 299) Mochica shows many radically differences from other Andean languages such as Aymaran and Quechuan.

2.2.1.1.5. Puquina

The Puquina language was spoken from southern Peru to northern Chile and in Bolivia around the Titicaca lake. The language went extinct around the XVIII century leaving scarce documentation. At the time of the Spanish conquest, Puquina had already been displaced by Aymara and Quechuan in several regions, though it was still widely spoken (Adelaar with Muysken, 2004) which is a sign of its importance in the region. During the colonial period Puquina, along with Quechuan and Aymaran, was one of the languages considered as '*lenguas generales'*.

Puquina is considered an isolated language since no genealogical relation has been proved. However, some associations, mainly to the Arawakan languages have been proposed (Adelaar and van de Kerke, 2009). In contrast to the historical importance of Puquina, and the people who spoke it, the remaining documentation about the language is very poor. The main source in which most work on Puquina is based is a religious text written during the XVII century, and the rest are just inscriptions in the language (Adelaar and van de Kerke, Puquina, 2009).

2.2.1.1.6. Cholón

Cholón was a language spoken in northern Peru, in the Upper Huallaga Valley, an area of transition between the Andes and the Amazonia region. The Cholón People were probably an active intermediary in the trade relations between the Andes and Amazonia (Torero, 2002: 160). The language is currently extinct, and it was spoken until the beginning of the XX century. Cholón was part of the proposed Hibito-Cholón family along with extinct Hibito and possibly other undocumented languages. According to Torero (2002: 161) Cholón was in contact with Quechua, particularly some QI and QIIB and with Amazonian Panoan languages. Some authors do not consider Cholón as an Andean languages. Van Gijn (2014: 113) considers Cholón as belonging to the foothill-fringe area, and van Gijn and Muysken (2020: 158) as belonging to the Upper amazon both considered as an intermediate region between the Andes and Amazonia.

2.2.1.1.7. Kunza

The Kunza or Atacameño language was spoken in the mountainous regions of Northern Chile near the borders of Bolivia and Argentina. The Kunza language survived long after the Spanish conquest but finally disappeared at some point at the end of the XIX or beginning of the XX century (Adelaar with Muysken, 2004: 375). The only remaining data available about Kunza are numerous texts documented during the time of its demise such as San Roman (1890), von Buchwald (1923), Mostny (1954) among several others.

However, most of the available data about Kunza is about its lexicon and there is very limited data about its grammar which is not enough to obtain a full picture of the language. From the little data available, Adelaar with Muysken (2004: 380) state that Kunza ‘presents a mixture of prefixation and suffixation. Personal reference affixes were prefixed to both verb and noun. Tense, mood, nominalization, and negation with verbs, as well as nominal case were indicated by means of suffixes. The morphology does not

seem to be very elaborate. Perhaps this can be attributed to the state of decay in which the language found itself when it was recorded'.

2.2.1.1.8. Huarpean

The Huarpes were sedentary peoples who inhabited the Southern Andes in central-western Argentina. The Huarpean languages Millcayac and Allentiac were spoken in todays' Mendoza and San Juan Provinces, respectively (Canals, 1944). The Millcayac and Allentiac languages nowadays have no speakers left. The Huarpes occupied the territories in the southern border of the Inca empire where they had contact with Quechuan. Huarpes were also in contact with Mapudungun and other languages of the region (Michieli, 1990). However, because of their geographical location, Allentiac had a stronger contact with central Andean languages while Millcayac with Southern Andean languages such as Mapudungun.

After the Spanish conquest and during colonial times many Huarpes were forcibly relocated by the colonists to the central region of Chile as workforce in the 'Encomienda' system and the rest of the Huarpes ended up mixing with the Hispanic population and Speaking Spanish. Soon after, the harsh conditions to which they were put under the colonists' rule, the mixing of with the Hispanic population and the fast acculturation marked the end of the Huarpes as a distinct ethnic group and the loss of the Millcayac and Allentiac languages by the XVIII century (Michieli, 1990: 10). Nowadays, some descendants claim their Huarpean ethnic and cultural identity however the language is irredeemably lost. The only remaining data available about Millcayac and Allentiac are the grammars, dictionaries and religious texts written by the Jesuit priest Luis de Valdivia (1607a, 1607b) to evangelize the Huarpes in their own languages.

2.2.1.1.9. Mapudungun

Mapudungun or Mapuche is the language of the Mapuche people and is spoken in the central and southern regions of Chile and Argentina. The Origin of the Mapuche people is not completely certain, but it has been proposed that it has an Amazonian origin. The phylogenetic classification of Mapudungun has been object of debate and there is no definitive affiliation, some consider it to be an unclassified language and others group it together with Huilliche and part of the proposed 'Araucanian Family'. Mapudungun has also been linked to Amazonian languages, particularly Arawakan languages (Díaz-Fernández, 2011). Mapuche people had been in contact with central Andean languages such as Quechuan, Aymaran and Puquina not only from the times of the Inca empire, but also from ancient pre-incaic times. It has been argued that Mapudungun shows certain similarities, to Quechuan and Aymaran languages (Pache, 2014) and important cultural similarities between Mapuches and other Andean cultures have been noted (Moulian, Catrileo, and Landeo, 2015).

Before the Spanish conquest, the Mapuche people inhabited the lands from the fourth region in the north to the Chiloe Island in the south and to the Argentinian plains in the East. The Mapuche territory limited to the north with the Inca empire and stopped its expansion southwards until the arrival of the Spanish conquerors when the situation of the indigenous languages changed abruptly. The Mapuche people were one of the last South American indigenous groups to be conquered by Spanish conquerors or the modern states formed by the colonists after their independence from Spain. The Mapuches were only conquered in the XIX century and since then, the language has been declining both in Chile and Argentina, however Mapudungun is still spoken.

2.2.2. Chaco

The Chaco is an area located east of the Andes between south-east Bolivia, northern Argentina, and western Paraguay (Adelaar with Muysken, 2004: 488). In the Chaco there are at least 29 languages belonging to the Tupi-Guaranian (branch of Tupian), Matacoan, Guaycuruan, Lule-Vilelan, Zamucoan and Mascoyan language families. The Chaco is considered a cultural and linguistic area since the contact between the different peoples for centuries and until the present, have resulted in convergence of cultural and linguistic features (Comrie, Golluscio, González, and Vidal, 2010).

Campbell (2013: 278) discuss the consideration of Chaco as a linguistic area stating that 'some observations of potentially diffused linguistic traits involving Chaco languages have been made from time to time, though a Chaco linguistic area has never officially been established'. However, Campbell recognize that there are some features that suggest the possibility of a linguistic area such as SVO word order, gender system, genitive classifiers, rich set of demonstratives, active-stative verb alignment, lack of verbal tense and nominal tense and directional verbal affixes. For Campbell there are some other features that are surely diffused in the area but are also common in South America, so they do not provide evidence of an area.

2.2.3. Patagonia

The Patagonia includes most of the southernmost part of South America until Tierra del Fuego. Clairis (1997: 422) divides the original inhabitants of Patagonia in two groups; In the west the group of 'sea nomads' and in the east in the Argentinian plains the group of 'pedestrian' nomads. The estimate of the number of languages spoken in this area vary from at least seven according to Clairis (1997: 423) to nine according to Adelaar with Muysken (2004: 550). The languages spoken by the 'sea nomads' are Yahgan and Kawesqar while the ones spoken by the 'pedestrian nomads' are Selk'nam, Haush, Tehuelche, Teushen and Gününa küne. Most of these languages are currently extinct and the surviving ones are critically endangered and have less than a dozen speakers. Beyond

the loss of most of the languages, most of the languages were, with some exceptions, poorly documented before disappearing.

2.2.4. Amazonia

Amazonia is a region extending from the Andes to the Atlantic and from the Caribbean Sea to the Chaco along the Amazon river basin. According to Dixon and Aikhenvald (1999: 1) 'The Amazon basin is the least known and least understood linguistic region in the world'. Amazonian languages tend to show strange properties that constitute exceptions to proposed typological universals or to have the richest examples of categories that are uncommon elsewhere. In Amazonia there are at least 300 languages grouped in at least 35 genetic units from which around 20 are isolated or unclassified languages, and 15 linguistic families. Some distinct characteristics of Amazonia are the non-contiguous distributions of the major language families, most notably Arawakan, Cariban, Tupí and Macro-Jê, generalized multilingualism, shared cultural practices, long-distance trade networks, migrations over large distances, along with complex types of relations between different groups (Epps and Michael, 2017).

Amazonia is considered a linguistic region rather than a linguistic area in strict rigor, and within its wide extension several linguistic areas have been proposed. The existence of these linguistic areas within Amazonia are the result of contact relations between neighboring peoples in small geographical regions. However, there is clear evidence that the Amazonia was connected by large-scale social, ritual and trade networks of a wide geographical scope, which raise the possibility that Amazonia may show linguistic areality on a similarly large scale, considering the fact that many cultural features have diffused to large areas of Amazonia (Epps and Michael, 2017: 950). Even though the scale of the pre-Columbian networks is impossible to know, there is evidence that trade networks spanned thousands of kilometers and reached even beyond the Amazonia, into the Andes or Chaco.

2.2.5. Other areal divisions of South America

Regarding South American linguistic areas, Muysken (2008: 23) mentions a traditional areal division of South America between the Andes and Amazonia among the specialists based mainly of geographical and cultural considerations and assuming the existence of two corresponding linguistic types. The proposal of division of South America into areas is still a matter of discussion and some other proposed linguistic areas such as Chaco (Comrie, Golluscio, González, and Vidal, 2010), Colombia-Central America (Constenla, 1991), Patagonia, or smaller areas within Amazonia such as the Guaporé-Mamoré (Crevels and van der Voort, 2008), the Vaupés (Aikhenvald, 2002) or the Upper Xingú (Seki, 1999).

As seen in the case of the proposed areas within Amazonia, the traditional linguistic areas presented above have been questioned and some new proposals have emerged. Some of them has to do with intermediate linguistic areas or inter-areal contact. Studies such as Dixon and Aikhenvald (1999), van Gijn (2014), Valenzuela (2015) among others shows that there is no sharp boundary between the Andes and Amazonia in terms of linguistic features. They argue that the transition between Andes and Amazonia is gradual and complex consistent with the history of contact between the ethnic groups in the area. Van Gijn (2014) for instance show that the languages of the upper or western amazon, that he calls the 'foothill-fringe area' does not conform neither to the Andean nor to the Amazonian profile in terms of the features considered of importance in both areas.

Pearce, Beresford-Jones and Heggarty (2020) study of the Andean-Amazonian divide from a multidisciplinary perspective, discuss archaeological, genetic, anthropological, and linguistic data. They conclude that the Andean-Amazonian divide exists after all and it 'is manifest in two ways: in different characteristics (physiological or cultural) of the populations of the Andes or of Amazonia, and in the far lower degree of interaction between these two populations than is apparent internally to either' (Pearce, Beresford-

Jones, and Heggarty, 2020: 333). They also conclude that this divide does not date from the times of the first settlement of the continent, but it developed in more recent times. Within the same volume, van Gijn and Muysken (2020) suggest that the real divide between the languages of the Andes and Amazonia lies not along the eastern slopes of the Andes itself, but rather further to the east, within Amazonia itself. They also suggest that the languages from the eastern side of the Andes, in western Amazonia, are more structurally similar to their Andean neighbors than to the more easterly Amazonian languages. In the same volume Zariquiey (2020) proposes a 'Southern Andes-Amazonia' linguistic convergence area between the Altiplanic, that suggest wider contacts between languages from both sides.

Areal divisions on a macro-scale have been proposed too. One of the earliest such proposals by Payne (1990: 5) argued in favor of an east/west division of the continent. More recently Krasnoukhova (2012) and Birchall (2014) studying the noun phrase structure and verbal argument marking respectively found that their statistical tests show that an east-west split of South America is more significant than previously proposed areal distinctions such as the classic Andean-Amazonian division. Birchall's conclusions point to a division of South America into western (WSA) and eastern (ESA) macro-regions. WSA including Northern Andes, Central Andes, Western Amazonia, and Southern Cone and ESA including Northern Amazonia, Southern Amazonia, and Chaco-Planalto.

FIGURE 1. MAP OF DIVISIONS OF SOUTH AMERICA (BIRCHALL, 2014)

The relevant point here is that the definition of South American linguistic areas is complex and there are different competing proposals, moreover, the discussion is far from over. New proposals are being made as the progress in the description of the languages and the study of its relations to each other progress. Now the task for researchers is to provide empirically based data to support or reject proposed areal divisions or propose new ones.

2.3. Typology of negation

Negation is a function that has been stated to be present in all world languages documented so far, arguably one of the functions that can be considered as universal in human language (Horn, 2001; Miestamo, 2005a). In very general terms, negation can be defined as an operator that changes the truth value of a proposition to its opposite from affirmative to negative. Negation and affirmation are the two poles of the grammatical category of polarity, that is, polarity is the way in which grammar encodes affirmative or negative meaning. While affirmation express the validity, truth, existence or actuality of an assertion, negation expresses its falsity, invalidity, nonexistence, or non-actuality.

Despite the apparently simple nature of negation as an operator which changes the truth value of a proposition, negation in natural languages is considerably more complex, as seen in Horn (2001), Miestamo (2005a), and Hengeveld and Mackenzie (2018). In Hengeveld and Mackenzie's (2018. 19) words, "negation is one of the most complex phenomena in human language". The actual coding of negation in the world languages is as varied as complex and has close relations to diverse structural, semantic, and pragmatic levels. Across languages, negation can appear in a variety of forms, having different scopes and having complex relations with a variety of other functional domains. Regarding its scope, Hengeveld and Mackenzie (2018) from the perspective of the Functional Discourse Grammar shows how negation can go from the highest to the lowest levels of language or from whole sentences to any of its constituents.

Negation has been widely studied and there is a massive amount of bibliography about it from a diversity of perspectives and covering a variety of aspects of negation. Some examples of this are Horn (2001) for semantic, pragmatic, and philosophical aspects, Haegeman (1995) or Zanuttini (1997) for syntactic aspects and Jespersen (1917) and Mosegaard and Visconti (2014) for diachronic aspects of negation. From a typological perspective some good examples are Dryer (2005, 2013), Miestamo (2005a; 2007), van

der Auwera and Krasnoukhova (2020), among others. This work studies negation from a typological perspective with its focus on standard negation.

2.3.1. Standard negation

Standard negation (henceforth SN) is defined as the most basic strategy a language has for negating declarative verbal main clauses and which is the most prototypical negation in the language. The concept was first proposed by Payne (1985: 198), who defined it as 'that type of negation that can apply to the most minimal and basic sentences. Such sentences are characteristically main clauses and consist of a single predicate with as few noun phrases and adverbial modifiers as possible'. Miestamo (2005a: 42) defines standard negation as 'a construction whose function is to modify a verbal declarative main clause expressing a proposition *p* in such a way that the modified clause expresses the proposition with the opposite truth value to *p*, i.e. ~p, or the proposition used as the closest equivalent to ~p in case the clause expressing ~p cannot be formed in the language'.

It is relevant to note that in some languages standard negation can be expressed by more than one type of construction or a single construction can include more than one negative element such as French. In some languages standard negation is marked differently according to TAME categories such as Tariana that has a different negative marking strategy for future or have different markers for realis or irrealis such as Wichí. In some languages different negative markers are used according to person, number and even gender. Negation is certainly a complex domain and it is closely related to other domains, however the complex relation between negation and other domains will not be further discussed here.

The notion of standard negation, as opposed to non-standard negation, is particularly relevant since there is a great variation across languages in the way standard and non-standard negation are expressed. Many languages use different marking strategies for the

negation of clauses in contexts different from declaratives. The term non-standard negation refers to the negative constructions beyond standard negation. This includes emphatic, imperative, existential, subordinate, interrogative, ascriptive, locational, derivational, privative, phrasal and expletive negation and negative indefinites and polar answers (van der Auwera and Krasnoukhova, 2020: 1-2).

The most common contexts in which negation use marking strategies different from standard negation are negative imperatives, negative existential and non-verbal constructions. In Kahrel (1996), out of 40 languages, 17 of them use a different negative marker in negative imperatives vs non-imperative clauses, 9 use a different negative marker in existential vs verbal clauses and 8 use a different marking strategy in verbal vs non-verbal clauses. In a study about the different marking of prohibitives (negative imperatives) vs declarative negatives van der Auwera and Lejeune (2013) found that there is a strong tendency for prohibitives to use a different coding strategy from declarative negation. In many languages though, the same negative marker used in standard negation can be used in all the other types of negative constructions, one example of this is Spanish that use the particle *no* in all these contexts.

2.3.2. Types of marking strategies

Regarding the marking strategies, or types of negative markers, that is, the formal means used in the languages to mark the negation of clauses, several typologies have been proposed. The typology followed in this work is Dryers' (2005) typology found in the World Atlas of language structures. According to Dryer there are six possible types of 'negative morphemes', or negative marking strategies to express sentential negation, and thus standard negation: (1) affixes, autonomous words that can be (2) negative particles, (3) negative auxiliary verbs, (4) unclear if particles or auxiliary verbs, (5) variation between negative word and affix, and (6) double negation (or bipartite negation). Dryer does not distinguish the type of elements in double negation, they can be both, affixes,

both particles or more than one type. Following Dryer, all strategies for expressing negation involve negative morphemes, that is, it is not possible to express negation without a morpheme and there are no instances of negation expressed by change in word order or intonation.

1. Affixes: the expression of negation by means of the attachment of an affix to the verb that can be a prefix, suffix, or circumfix such as in example (1) from Kolyma Yukaghir (Yukaghir; Siberia). The frequency of occurrence of expression of standard negation by means of affixes in the world languages is estimated in 33% by Dryer and 40% by Miestamo in their respective samples.

(1) Kolyma Yukaghir

Met	*numö-ge*	*el-jaqa-te-je*
1SG	house-LOC	NEG-achieve-FUT-INTR.1SG
'I will not reach the house.'		(Dryer, 2005: 454)

2. Particles: The expression of negation by means of uninflected negative words such as Spanish, English or Musgu (Chadic, Afro-Asiatic; Cameroon)

(2) Musgu

à	sədə̂	cécébè	pày
3SG.M	know	jackal	NEG
'He didn't see the jackal.'		(Dryer, 2005: 454)	

3. Negative auxiliary verbs: Expression of negation by means of a negative word that inflects as a verb, typically must accompany another verb such as Finnish (Uralic; Circum-Baltic).

(3) Finnish

e-n	*syö-nyt*	*omena-a*
NEG-1SG	eat-PTCP	apple-part
'I didn't eat an apple.'		(Dryer, 2005: 454)

4. Negative word, unclear if particle or auxiliary verb: the expression by means of a negative word that cannot easily be classified when in the language verbs occur with little or no inflectional morphology or if the inflectional morphology that does occur on verbs may not be semantically appropriate for a negative word even if that negative word is a verb. For example, Maori (Polynesian, New Zealand).

(4) Maori

kaahore	*taatou*	*e*	*haere*	*ana*	*aapoopoo*
NEG	1.PL.incl	t/a	move	t/a	tomorrow

'We are not going tomorrow.' (Dryer, 2005: 454)

5. Variation between negative word and affix: expression of negation by means of more than one type of negative construction, one in which the negative is a separate word, and one in which it is an affix. For example, Rama (Chibchan; Nicaragua) has two different negative constructions, one with a negative particle and the other with a negative suffix.

(5) Rama

a. *nkiikna-lut* *uut* *aa* *kain-i*
man-PL dory NEG make-TNS
'The men don't make a dory.' (Dryer, 2005: 454)

b. *i-sik-taama*
3-arrive-NEG
'He did not arrive.' (Dryer, 2005: 454)

6. Double negation: Double negation (or bipartite negation) is a kind of negative marking in which negation is expressed by means of two different elements which makes the negation when appearing together but cannot by themselves individually make negation. Examples of this are languages such as French (Indo-European, Romance; Western Europe).

(6) French

Je	*ne*	*vois*	*pas*	*la*	*lune*.
1SG	NEG	see.1SG	NEG	the	moon

'I do not see the moon.' (Dryer, 2005: 454)

In his global sample of 1011 languages, Dryer (2005, 2013a) finds that in 339 languages negation is marked by means of affixes, in 477 by means of particles, in 45 by means of auxiliary verbs, in 65 languages the marking is by means of negative words, but it is unclear whether they are particles of auxiliary verbs, in 19 languages there is variation between negative words and affixes, and in 66 languages negation is marked by means of double negation.

2.3.3. Types of order of negative marker and verb

Regarding the order of standard negation marker o markers in the clause in relation to the verb and between them, some observations have been made. For example Jespersen (1917) claim that there is a general tendency for negative to occur early in the clause before the verb, this claim later became known as the Neg-first principle. Later, more studies based on samples of languages of variable size have been done such as Dryer (1988), Dahl (1979) and Miestamo (2005a) confirm the tendency of negative to precede the verb. Miestamo also finds that free negators tend to precede the verb while in bounded negators it is more common to be postposed. Another tendency noted by Dryer and Dahl is that negative particles tend to be preposed to the verb regardless of the basic word order, but negative auxiliaries are sensitive to word order.

Dryer (2013b) proposes several types of clausal negative constructions according to the position of negative marker(s) in relation to the lexical verb:

Type 1: Preverbal negation (NEG V), negation is marked by means of a negative word which precedes the verb, not necessarily immediately, such as in Kutenai (Isolated; western North America).

(7) Kutenai

ʔat=u	*qa*	*ʔiknuquk-ni*.
HABIT=1SUBJ	NEG	smoke(tobacco)-IND
‘I don't smoke.’	(Dryer, 2013b)	

Type 2: Postverbal negation (V NEG), negation is marked by means of a negative word after the verb, not necessarily immediately after it, as in Kresh (Central Sudanic, Nilo-Saharan; Sudan).

(8) Kresh

Kôkó ãmbá gõkó ˊdĩ.
Koko he.hit Goko NEG
'Koko did not hit Goko.' (Dryer, 2013b)

Type 3: Negative prefixation ([NEG-V]), negation is marked by means of a negative prefix on the verb, such as in Pilagá (Guaicuruan; Chaco).

(9) Pilagá

sa-n-čo'ot-a *haga'* *yawo-'.*
NEG-3SUBJ-tell-SG.OBJ CLSFR woman-PAUC
'He did not tell about the women.' (Dryer, 2013b)

Type 4: Negative suffixation ([NEG-V]), negation is marked by means of a negative suffix on the verb, such as in Rao (Lower Sepik-Ramu; Papua New Guinea).

(10) Rao

gu *mə-ndə*.
1SG eat-NEG
'I am not eating.' (Dryer, 2013b)

Type 5: Negative tone, languages that express negation by means of a distinctive tone, such as in Mano (Eastern Mande, Niger-Congo; Western Central Africa).

(11) Mano

a. n̄ yídò.
1SG know
'I know.'

b. n̂ yídò.
1SG.NEG know
'I don't know.' (Dryer, 2013b)

Type 6: Mixed types: languages that have more than one type of order from the previous ones, such as in Maasai (Nilotic, Nilo-Saharan; Eastern Africa). Dryer presents seven different types of mixed types. However, I grouped them into one since they are not very common in the world languages and the different types of mixed types are not relevant for this work.

(12) Maasai

a. *eltú a-rany*.
NEG 1SG-sing
'I did not sing.'

b. *m-a-rany*.
NEG-1SG-sing
'I do not sing.' (Dryer, 2013b)

Type 7: Optional single negation: languages in which it is possible to have clauses without a negative morpheme. That is, negative constructions can be negated by a negative morpheme or by another non-negative morpheme such as irrealis or contrastive morphemes as in Wyandot (Iroquoian; Canada). The negative sense is not due to the morphemes but due to the pragmatic context.

(13) Wyandot

a. *tąʔą te-hù-t-rihúʔt-ę.*
NEG IRR.MASC.SG.PAT-semirefl-listen-STAT
'He did not mind.' (Dryer, 2013b)

b. *te-wati-ʔtǫhts-ahs dě yu-hšatę-ʔ.*
IRR-NONMASC.PL.AGT-hatch-HAB ART F.IND.SG.PAT-ride-STAT
'Horses don't hatch.' (Dryer, 2013b)

Type 8: Obligatory double negation: languages in which negation is marked by means of two simultaneous negative morphemes. Negative morphemes in obligatory double negation order may appear in at least 15 different order combinations. An example of this can be found in Izi (Igboid, Niger-Congo; western Central Africa).

(14) Izi

nwó!ké té è-pfú-du í!yá.
man NEG 3SG-speak-NEG 3SG
'The man is not speaking it.' (Dryer, 2013b)

Type 9: Optional double negation: languages in which negation can be marked by means of more than one negative morpheme but it is also possible to be coded by means of a single morpheme. Same as obligatory double negation, negative morphemes may appear in at least 22 different order combinations. An example of this can be found in Biloxi (Siouan; Mississippi).

(15) Biloxi

a. *k-i-de* *ni*.
NEG-2SG-go NEG
You did not go.'

b. *I-de* *ni*.
2SG-go NEG
'You did not go.' (Dryer, 2013b)

Type 10: Optional triple negation, languages that have the possibility of triple negation and have single or double obligatory negation. An example of this can be found in Gunbalang (Gunwinygic; Australia).

(16) Gunbalang

a. *ngayi* *ngarra-kirta-ng*.
1SG 1SG.NEG-go-PAST.NEG
'I didn't go.' (Dryer, 2013b)

b. *ngayi* *ngunta* *korro-kenta* *ngarra-kirta-ng*.
1SG NEG LOC.to-there 1SG.NEG-go-PST.NEG
'I didn't go down there.' (Dryer, 2013b)

In his global sample of 1325 languages, Dryer (2013) find that in 525 languages negation occurs in preverbal position, in 171 negation occurs in postverbal position, in 162 languages negation is prefixed to the verb, in 202 suffixed, in only one language there is negative tone, in 63 languages there are mixed types, in only one there is optional single negation, in 114 obligatory double negation, in 80 optional double negation and in 6 optional triple negation.

2.3.4. Types of structure of SN constructions

As previously stated, the relation between affirmative and negative is not as simple as changing the truth value of a proposition, as in many languages other differences can be found between affirmatives and negatives. According to Miestamo (2005a; 2005b), there are two different basic structures of negative constructions regarding the structural differences between affirmatives and negatives. He proposes a distinction between symmetric and asymmetric negation. In a symmetric negative construction, the structure is the same as in its affirmative counterpart except for the presence of the negative marker(s). On the other side, in asymmetrical structures, there are further changes apart from the addition of the negative marker(s).

According to Miestamo (2005b) affirmative and negative structures can be symmetric or asymmetric in two different ways. In constructional (a)symmetry, the (a)symmetry is between the affirmative and negative constructions. In paradigmatic (a)symmetry, the (a)symmetry is between the paradigms that the affirmative and negative constructions form. Because of the availability of data, only constructional symmetry will be considered in this work. The reason for this is that since paradigmatic (a)symmetry will not be possible to confirm since it requires more data, and this study considers languages for which the data is not enough, particularly the case of extinct languages.

Miestamo (2005c) proposes three subtypes of asymmetric negative constructions according to the nature of the asymmetry. The main subtypes are (1) subtype A/Fin, (2) A/NonReal, and (3) A/Cat. In subtype A/Fin the asymmetry is related to the finiteness of verbal elements. Typically, the negative construction adds a new finite element (finite verb) to the clause, and the lexical verb becomes nonfinite and/or subordinate to the added finite element. An example of this is Hixkaryana (Carib; Brazil) in which a (non-negative) copula functions as the finite element of the negative clause, and the negative marker is a deverbalizing suffix on the lexical verb.

(17) Hixkaryana

a. *kɨ-amryekɨ-no*
1.SUBJ-hunt-RECPST
'I went hunting.'

b. *amryekɨ-hɨra w-ah-ko*
hunt-NEG 1.SUBJ-be-RECPST
'I did not go hunting.' (Miestamo, 2005c: 462)

In subtype A/NonReal the asymmetry is related to the marking of reality status of events and the negative clause is obligatorily marked by a non-realized category, such as in Imbabura Quechua (Quechuan, Andes) (17) in which apart from the negative particle *mana*, requires the marker *-chu* that also appears in a non-realized context, specifically in polar questions (17c).

(18) Imbabura Quechua

a. *juzi iskay kaballu-ta chari-n*
José two horse-ACC have-3
'José has two horses.' (Miestamo, 2005c: 462)

b. *ñuka wawki mana jatun wasi-ta chari-n-chu*
my brother NEG big house-ACC have-3-NEG/INT
'My brother does not have a big house.' (Miestamo, 2005c: 462)

c. *kan-paj wawki jatun wasi-ta chari-n-chu*
you-POSS brother big house-ACC have-3-NEG/INT
'Does your brother have a big house?' (Miestamo, 2005c: 462)

In subtype A/Cat the asymmetry is related to changes in the marking of grammatical categories (such as tense, aspect, mood, person, number, etc.) under negation such as Karok (Hokan; California) in which the affirmative and the negative use different person-number affixes.

(19) Karok (Miestamo, 2005c: 462)

a. *kun-iykár-at*
3PL>3SG-kill-PST
'They killed [him/her].'

b. *pu-wiykar-áp-at*
NEG-kill-3PL>3SG-PST
'They did not kill [him/her].' (Miestamo, 2005c: 462)

In his global sample of 297 languages, Miestamo (2005b) finds that in 114 languages the negative construction is always constructionally and pragmatically symmetric, in 53 languages the negative constructions are always asymmetric, and in 130 languages both symmetric and asymmetric constructions are found.

2.3.5. Types of prohibitive constructions

As we have seen, beyond standard negation, there are other kinds of clausal negative constructions that can have a different negative construction. One of the most common ones are prohibitive constructions. Prohibitives are the negative imperatives used specifically for second person singular. Henceforth the term 'imperative' will be used specifically to refer to second person singular imperatives, excluding other types of commands such as hortatives, jussives or indirect imperatives. The interest in prohibitive negation here is by its relation to standard negation, particularly considering whether the negative marker(s) used in SN constructions are also used in prohibitives.

In many languages prohibitive constructions use the same negative marker found in SN constructions, however, many others use a different negative marker. Kahrel (1996) and van der Auwera and Lejeune (2005; 2013) show that there is a strong tendency for prohibitives to use a different marking strategy from declarative negation. According to van der Auwera (2011) a plausible explanation for this tendency is that prohibitive constructions are used in a completely different kind of speech act than declaratives. Van der Auwera and Lejeune (2005) distinguishes four types of prohibitive structures: (1) The prohibitive uses the verbal construction of the second singular imperative and a sentential negative strategy found in declaratives (indicative), (2) the prohibitive uses the verbal construction of the second singular imperative and a sentential negative strategy not found in declaratives, (3) the prohibitive uses a verbal construction other than the second singular imperative and a sentential negative strategy found in declaratives, and (4) the

prohibitive uses a verbal construction other than the second singular imperative and a sentential negative strategy not found in declaratives.

Type 1: The prohibitive uses the verbal construction of the second singular imperative and a sentential negative strategy found in declaratives, that is, in SN constructions. This type of constructions is found in languages such as Turkish (Altaic; Turkey).

(20) Turkish

a. *Okul-a* *git-me!*
school-DAT go.IMP.2SG-NEG
'Don't go to school!' (van der Auwera and Lejeune, 2005: 290)

b. *Okul-a* *git-m-iyor-sun.*
school-DAT go-NEG-cont-IND.PRS.2SG
'You are not going to school' (van der Auwera and Lejeune, 2005: 290)

Type 2: The prohibitive uses the verbal construction of the second singular imperative and a sentential negative strategy not found in (indicative) declaratives, such as in Vietnamese (Austroasiatic; Vietnam).

(21) Vietnamese

a. *Chó* *uông* *ruou!*
NEG drink alcoholic
'Do not drink alcohol!' (van der Auwera and Lejeune, 2005: 290)

b. *Uông* *ruou!*
Drink alcoholic
'Drink alcohol!' (van der Auwera and Lejeune, 2005: 290)

c. *Không* *uông* *ruou.*
NEG drink alcoholic
'I/you/he are not drinking alcohol.' (van der Auwera and Lejeune, 2005: 290)

Type 3: The prohibitive uses a verbal construction other than the second singular imperative and a sentential negative strategy found in (indicative) declaratives such as in Spanish (Indo-European; Europe, South America).

(22) Spanish

a. *Pedro no canta.*
Pedro NEG sing.IND.PRS.3SG
'Pedro does not sing.' (van der Auwera and Lejeune, 2005: 290)

b. *No cantes!*
NEG sing.SBJV.PRS.2SG
'Don't sing!'

c. *Canta!*
sing.IMP.2SG
'Sing!' (van der Auwera and Lejeune, 2005: 290)

Type 4: The prohibitive uses a verbal construction other than the second singular imperative and a sentential negative strategy not found in (indicative) declaratives such as in Zulu (Niger-Congo; South Africa).

(23) Zulu

a. *Shay-a inja!*
hit-IMP.2SG dog
'Hit the dog!' (van der Auwera and Lejeune, 2005: 290)

b. *Mus-a uku-shay-a inga!*
NEG.IMP.AUX-2SG INF-hit-INF dog
'Do not hit the dog!' (van der Auwera and Lejeune, 2005: 290)

c. A-wu-shay-I inja.
NEG.IND.PRS-2SG-hit-NEG.IND.PRS dog
'You do not hit the dog.' (van der Auwera and Lejeune, 2005: 290)

In a sample of 496 languages, van der Auwera and Lejeune (2005) find that type I corresponds to 113 languages (29%) of the sample, type II corresponds to 182 (37%), type III corresponds to 55 (11%) and type IV corresponds to 145 (29%). If we classify the languages only based on whether they use the same or a different negative marker that declarative negation, the results show that 168 languages use the same negative in prohibitives and declaratives, while 328 use different negative markers.

Since the focus here is on standard negation and prohibitives are considered only in its relation to SN, for the purposes of this work, the types of prohibitives presented above will be grouped according to their relation to SN. That is, types 1 and 3, and 2 and 4 will be grouped together. Types 1 and 3 are the ones that use the same negative marker in declarative and prohibitive constructions and will be subsequently grouped under the label 'same as SN'. Types 2 and 4 are the ones that use a different negative marker in prohibitive and declarative constructions and will be labeled as 'different from SN'.

In the languages of the Andes, the only description of negation with an areal scope is the one by Alfredo Torero (2002) in his book '*Los Idiomas de los Andes. Lingüística e historia'* (The languages of the Andes. Linguistics and history). Torero's work includes a comparison of the types of clausal negative markers and their order in relation to the verb, and in some specific languages he also provides further details about other types of negative constructions. However torero's work only presents is not focuses on negation and presents a very general description of the domain as part of a list with many other domains. Some other studies have studied negation in a particular language family (Pineda-Bernuy, 2014) or a particular language (Olate, Zúñiga, & Becerra, 2020). In most cases negation has been studied as part of general descriptive works of the languages and were not focused on negation.

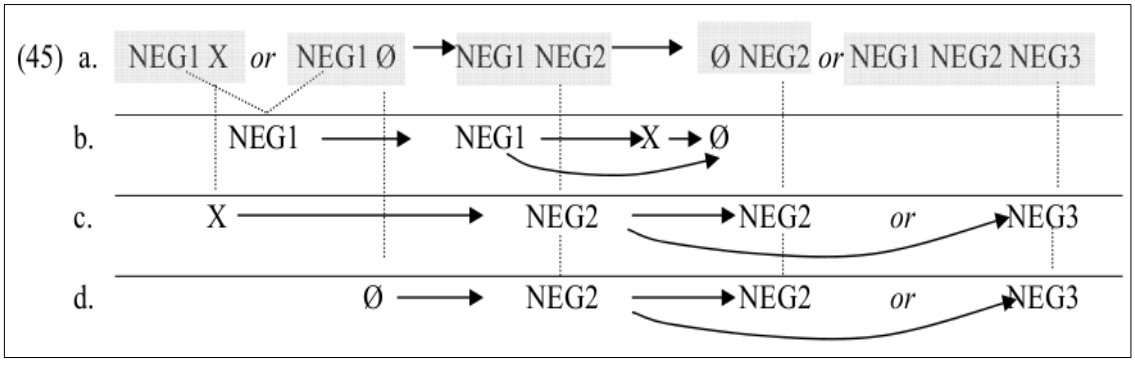
2.4. Diachronic change in negation

It is relevant to consider the diachronic developments when data is available since in some cases it helps to explain the current distributions of features, its evolution, and the differences within linguistic families. The diachronic change in the domain of negation has been widely studied. From classic studies such as Jespersen (1917) to more modern ones such as van der Auwera (2011), Willis, Lucas and Breitbarth (2013) and Mosegaard and Visconti (2014) to mention some. It is clear, from these studies, that negation is a domain in which diachronic change is common in the world languages. Beyond the description of diachronic changes in particular languages or languages families, some generalizations have been claimed and some specific processes of change have been proposed. The most well-known are the Jespersen Cycle and the Croft Cycle. It is important to notice in this respect that the diachronic data is limited for the languages of the sample. For some languages there is not data available and for other while there is data, it has also serious limitations.

2.4.1. Jespersen Cycle(s)

The Jespersen Cycle is a process of diachronic change of a cyclic nature in which the negative operators of clausal negation evolve in a development characterized by a series of stages in which a single original negative marker is strengthened by another one, and then ends up replacing the original one (van der Auwera, 2009). In simple, during this process, typically, a single clausal negative marker (NEG1) is joined by a second one (NEG2), thus expressing a single negation by means of two elements (NEG1 + NEG2), and then the original disappears leaving the new negative marker as the single negative operator. Typically, the process includes intermediate stages in which one of the negative markers is optional for example emphatic negatives or one of the negative markers starts as an asymmetry (X) in the negative construction with a non-negative meaning and is then re-analyzed as negative. Figure 2 represents some possible stages of the development in the Jespersen Cycles.

Figure 2: Evolution of negative markers in Jespersen cycle(s) (van der Auwera, 2009: 24)



The process of change of the Jespersen Cycle is usually described with the classic French example. However, this is not the only possible pattern, and several studies such as van der Auwera (2009) have identified several other possible patterns of Jespersen Cycles in which languages can even develop triple negation.

CHAPTER 3:

METHODOLOGY

3.1.Study design

The study follows a descriptive design aimed at describing the marking of negation in the languages of the Andes. It is also comparative since the purpose is to compare the marking of negation firstly among Andean languages, secondly compare Andean languages to the South American languages of a comparative sample and finally to a global sample from the World atlas of linguistic structures. The description and comparison are based on data from bibliographical sources.

The study is done first on a micro level describing and comparing the features in the languages of the Andes and then on a macro level comparing the Andean languages to a sample of South American languages and a Global sample. This was done following Koptjevskaja-Tamm (2012: 10) who states that an areal-typological study, as seen in section 2.1.3. Areal typology, should include (1) a systematic description of the linguistic domain to account for the similarities and differences between the languages in a geographic area and the geographical distribution of such features, (2) an evaluation of that description in a wider typological framework, and (3) explanations for the observed similarities between the studied languages. As previously stated, in this work only the first two will be done.

The relevance of the comparison to a sample of languages from surrounding areas and a global sample is that apart from confirming that the languages of a particular area share features, it is necessary to confirm that the same features are not shared in the same way outside the area. Similarly, it is necessary to confirm that the shared features are not shared just by chance or because they are just common in the world languages. That is, in order to provide evidence to consider a feature as an areal feature it is necessary to first prove that the languages are reasonably similar in the expression of a feature. Secondly it is necessary to prove that the feature is reasonably distinct from surrounding areas and it is not shared in the area just because it is common within the continent. And finally, it is necessary to prove that the shared feature is not just common among the world languages.

3.2. Sources of data

The sources of data were reference grammars, grammatical sketches, dictionaries, articles about negation in the languages of the sample and texts in the languages. In the case of Millcayac and Allentiac languages the only available source are the texts written by Valdivia (1607b, 1607b) which were transcribed, analyzed, and glossed using the software 'Fieldworks Language Explorer' (FLEX). In the case of Kunza, the language could not be analyzed in the same way as Millcayac and Allentiac for reasons of time and various available sources were used instead. The examples taken from the sources were glossed in the cases they were not previously glossed or adapted when necessary. The examples taken from sources written in Spanish that are presented here were translated to English. It is necessary to mention that there is a wide variation in the availability and accessibility of the sources and there are several limitations. For some languages plenty of sources including high quality reference grammars or articles about negation in the languages can be found while for others the only sources were old texts written in the languages or grammatical sketches. A particular limitation in this respect is found in the languages that are currently extinct. There are also some cases in which not all the necessary data could be found in the sources available.

The sources were revised and analyzed to get the data relevant for the description of the considered features of negation in the languages of the samples. After that, a description of the domain was done considering the considered features and other features if relevant. The languages were then classified according to the values of each feature presented below. Then each value was assigned a numerical value and then stored in a database for their posterior analysis.

3.3. Sample of languages

The sample includes 18 languages from the Andean area. The languages of the sample were selected according to the following criteria: (1) Andean languages considered by Torero (2002), (2) all the isolated languages and two languages for each family found in the Andes, except for the Quechuan family, and (3) at least one Quechuan language from each division of the family proposed by Adelaar with Muysken (2004), that is: (a) Quechua I, (b) Quechua IIA, (c) Quechua IIB, and (d) Quechua IIC. Furthermore, the selection of the Quechuan languages was complemented with the divisions of the Quechuan family proposed by Pineda-Bernuy (2014). This study is relevant as a complement for the selection of the sample since it accounts for the existence of distinct negation patterns among the languages of the Quechuan family related to different expansion areas with a core and peripheries. The selection of Quechuan languages was carried out trying to include languages that represent the diversity within the Quechuan family. The languages of the sample, with their respective affiliation, locations and used sources are listed in Table 1.

TABLE 1: SAMPLE OF ANDEAN LANGUAGES.

Language	Language Family	Location	Main Sources
Ancash Quechua	Quechuan (QI)	Peru	Parker (1976)
Yauyos Quechua	Quechuan	Peru	Shimelman (2017)

Cajamarca Quechua	Quechuan (QIIA)	Peru	Quezada (1976)
Ecuadorian Quechua	Quechuan (QIIB)	Ecuador	Pineda-Bernuy (2014); Carpentier (1982)
Pacaraos Quechua	Quechuan (QI)	Peru	Adelaar (1982; 1987)
Santiago del Estero Quechua	Quechuan (QIIC)	Argentina	Alderetes (2001); Nardi (2002)
Ayacucho Quechua	Quechuan (QIIB)	Peru	Parker (1969)
Aymara	Aymaran	Bolivia, Peru, Chile	Coler (2014); Briggs (1976); Hardman, Vasquez and Yapita (2001)
Jaqaru	Aymaran	Peru	Hardman (2000)
Chipaya	Uro-Chipayan	Bolivia	Cerrón-Palomino (2006)
Uchumataqu (Uru)	Uro-Chipayan	Bolivia	Hannss (2008)
Cholón	Hibito-Cholón	Peru	Alexander-Bakkerus (2005); Torero (2002)
Mochica	Unclassified	Peru	Torero (2002), Hovdhaugen (2004) and Carrera (1644 [1880])
Puquina	Unclassified	Peru, Bolivia	Adelaar y van de Kerke (2009)
Kunza	Unclassified	Chile	San Roman (1890), von Buchwald (1923), Mostny (1954), Torero (2002) and Adelaar (2004)
Allentiac	Huarpean	Argentina	Valdivia (1607a)
Millcayac	Huarpean	Argentina	Valdivia, (1607b)
Mapudungun	Isolated	Chile, Argentina	Olate, Zuñiga and Becerra (2020); Smeets (2007)

3.4. Comparison to surrounding areas

After the description and comparison of the languages of the sample a comparison with other South American languages from three adjacent linguistic areas was conducted. This comparison will be done to test whether the possible similarities of the Andean languages in the domain of negation correspond to an areal phenomenon. If the languages of the sample are reasonable similar between them, some evidence can be provided to propose an areal distribution of the features. However, a criterion to determine the areal distribution is the differentiation between the languages of the sample and languages from the rest of South America. If the languages of the sample are reasonably similar and they are also reasonably distinct from the comparative sample, it would provide strong evidence to support an areal distribution of the features. If the languages of the sample and the comparative sample are not reasonably different then there would be less evidence to support an areal distribution of the features. This comparative analysis will be useful evaluate whether the languages of the Andes share similar features in an areal level and additionally if they are sufficiently distinct from surrounding South American areas.

The languages of the comparative sample were analyzed and described in the same way as the languages of the sample in order to provide a description and classification of these languages that allows to compare the data with the Andean languages. The languages in the comparative sample were chosen according to the following criteria. For the languages from Chaco and Patagonia: (a) languages which are representative from their respective families. In the case of Patagonia, since there are a few languages left, all the languages with enough data were included. (b) one language from the main language families of the area. In the case of Lule-Vilela family both languages were included since their phylogenetic relation has not been completely proven and Lule was originally from Andes and migrated to the Chaco in colonial times (Viegas, 2001). And (c) languages for which there is with enough data for the considered features in the available sources.

In the case of Amazonia[2], the sample is bigger due to the wider geographic extension and the considerable number of languages and genetic diversity in the region. The criteria for the selection of languages from this region were: (a) two languages for each of the six bigger language families present in the region, (b) six languages from six small language families, (c) eight isolated or unclassified languages, and (d) languages near and far, in terms of geographic location and known contact, from the Andes and also including the criteria for the selection of the general comparative sample. The languages of the comparative sample with their respective genetic affiliation, location and main data sources are listed in Table 2 below.

TABLE 2: LANGUAGES OF THE COMPARATIVE SAMPLE

Area	Family	Language	Location	Sources
Patagonia	Isolated	Kawesqar	-	Aguilera (2001); Clairis (1985)
	Chonan	Tehuelche	-	Fernández-Garay (1998); Fernández-Garay and Hernández (2006)
	Chonan	Selk'nam	-	Rojas-Berscia (2014)
	Isolated	Yaghan	-	Outes (1927)
Chaco	Matacoan	Wichí	-	Nercesian (2011); Terraza (2009)
	Guaicuruan	Pilagá	-	Vidal (2002)
	Lule-Vilelan	Lule	-	Lafone (1894); Maccioni (2008 [1732])
	Lule-Vilelan	Vilela	-	Lozano (1970); Golluscio (2015)
	Zamucoan	Ayoreo	-	Bertinetto (2009)
	Tupi-Guaranian	Tapieté	-	Gonzalez (2005)
Amazonia	Arawakan	Tariana	Far	Aikhenvald (2003, 2014)

[2] The selection of the Amazonian languages for the sample, and the criteria used for the selection, was done with suggestions by Roberto Zariquiey (PUCP), a Linguist expert in Amazonian languages whom I thank for his help.

	Arawakan	Yanesha	Near	Duff-tripp (1997)
	Tupian	Kokama	Near	Vallejos (2010)
	Tupian	Gavião	Far	Moore (1984)
	Cariban	Tiriyó	Far	Meira (1999)
	Cariban	Kalapalo	Near	Basso (2012)
	Tucanoan	Tucano	Far	West (1980)
	Tucanoan	Secoya	Near	Levinson (1990)
	Macro-Jêan	Karajá	Far	Ribeiro (2012)
	Macro-Jêan	Apinayé	Far	de Oliveira (2005)
	Panoan	Kashibo-Kakataibo	Near	Zariquiey (2018)
	Panoan	Matsés	Far	Fleck (2003)
	Kawapanan	Shiwilu	Near	van Schie (2018)
	Tacanan	Cavineña	Near	Guillaume (2004, 2008)
	Yanomamian	Sanuma	Far	Borgman (1990)
	Jivaroan	Aguaruna	Near	Overall (2007)
	Nadahup	Hup	Far	Epps (2008)
	Arawan	Kulina	Far	Dienst (2014)
	Nambikwaran	Sabané	Far	Araujo (2004)
	Bora-Huitoto	Bora	Near	Thiesen and Weber (2012)
	Isolated	Urarina	Near	Olavsky (2006)
	Isolated	Trumai	Far	Guirardello (1999)
	Unclassified	Mosetén	Near	Sakel (2004)
	Isolated	Yurakaré	Near	van Gijn (2006)
	Unclassified	Kwaza	Far	van der Voort (2008)
	Unclassified	Kakua	Far	Bolaños (2016)
	Isolated	Movima	Near	Haude (2006)
	Unclassified	Puinavé	Far	Girón (2008)

It is important to notice some issues in the selection of the comparative sample. One of them is that genetic affiliation of the languages of the sample that are unclassified not necessarily are isolated languages and they could be classified as part of some linguistic family in the future. Similarly, languages that are classified as part of a family could have its affiliation updated in the future and be classified of part of another one. Certainly, the affiliation of many languages is still under discussion and many changes could happen as the research on genetic relations among the languages progress.

The data from the Andean languages was also compared to a Global sample of languages found in the World Atlas of Language Structures (WALS). In this case though, the comparison will not have the computational component. In this case only the relative frequency of each of the values in each feature in the Andean languages will be compared in general terms to the frequency global sample.

3.5. Features

The linguistic features considered for the analysis were chosen according to the following criteria: (a) features that have a sufficiently developed and clear typology to allow comparison of languages. (b) features of which there is possible to find enough data in the reference grammars of the languages. And (c) features considered in the world atlas of language structures, which allows to compare the sample to a wider worldwide sample. According to these criteria, the features, and their respective values, considered for this study are listed in Table 3 below.

TABLE 3: FEATURES AND VALUES

Features	**Values**
(1) Standard negation marking strategies	(1) Affix
	(2) Particle
	(3) Negative auxiliary verb
	(4) Negative word (unclear if particle or verb)
	(5) Variation between negative word and affix
	(6) Double negation
(2) Order of negative marker and verb	(1) Pre-verbal
	(2) Post-verbal
	(3) Prefix
	(4) Suffix
	(5) Tone
	(6) Mixed types (more than one type of order)
	(7) Optional single negation
	(8) Double negation (discontinuous)
	(9) Optional double negation
	(10) Optional triple negation
(3) Structure of negative constructions	(1) Symmetric
	(2) Asymmetric
(4) Types of prohibitives	(1) The prohibitive uses the same negative markers used in declaratives. (types 1 and 3 in van der Auwera and Lejeune, 2005)
	(2) The prohibitive uses negative marker(s) different from the one(s) used in declaratives (types 2 and 4 in van der Auwera and Lejeune, 2005)

3.6. Procedure and data analysis

All the languages were individually described and analyzed according to the selected features with the respective examples. A description at the language family level was also provided when relevant. Then, from the description of each language, the languages were classified according to the values previously presented. After that, the computational analysis[3] was done in two stages. The first stage was the assignment of numerical representation for the considered features and each of its values assigning each of them a number. These numerical values were organized in a CSV type database where every row represents the values of the features of a particular language. The association value/number follows two fundamental principles that simplify the following computational work. Firstly, each possible value of a linguistic feature is associated to an arbitrary number. In this way there is no type of numerical gradualness. Secondly, in its design the features are centered in the languages, this means that each language can only take one numeric value for each feature.

The second stage consisted of the computational analysis of the database which was done using the Python software. From the database, each language is represented by a typological vector that assigns numerical values to the different linguistic features in order. From this data the Hamming distance was calculated. The Hamming distance works as follows; given two languages, L1 and L2 the hamming distance is defined as the proportion of different features in relation to the total of features that are common between L1 and L2. From this definition, it must be noted that Hamming allows us to compare languages that does not have the typological vector with the same size. This is useful when we do not have data for all the features. This is an advantage in relation to other distances such as cosine distance which require the comparison of typological vector defined over the same set of linguistic features.

[3] For the computational analysis of the data I had the help of Javier Vera (PUCV), a computational linguist working on the study of Native languages of South America with computational methods.

The comparison of distances between pairs of languages allows to build a matrix of distances. In this matrix, rows and columns represent languages and each entry indicate the distance between each pair of languages. With this matrix it is possible to identify groups of languages with similar typological vectors through agglomerative clustering. This procedure successively groups the languages in groups or clusters of incremental size, starting in size 1 and then growing when adding closer languages. In practical term this type of clustering rearranges the rows and columns of the matrix of distances in a way that the languages that are similar are grouped together.

The hamming distance can be graphically represented through a two-dimensional projection and heatmaps. The 2D projection is done with K-means clustering method and groups the languages that are similar with respect to their features in clusters. These two-dimensional representations allow to test if languages, based on these data, are grouped accordingly to the linguistic areas to which they belong or whether they do it differently. The hamming distance can also be represented by heatmaps, that are graphic representations that indicate with colors the different clusters of languages. Showing with clearer colors the clusters of languages more similar to each other while showing with darker colors the least similar languages. The different clusters can also be displayed with dendrograms that suggest the appropriate number of clusters in which the languages are grouped.

Additionally, the geographic distribution of the values of each feature assumed by the languages was represented with geographical maps. These maps were done using the 'geopandas' package that allows the geo-referenced location in the continent of each language from the samples. For this the respective Glottolog code (glottocode) and geographic coordinates for each language taken from glottolog.com were put into the database.

CHAPTER 4:

ANALYSIS OF NEGATION IN THE LANGUAGES OF THE ANDES

The only description of negation in the languages of the Andes with an areal scope is the one by Torero (2002) in his book '*Los Idiomas de los Andes. lingüística e historia*' (The languages of the Andes. Linguistics and History). Torero describes, in very general terms and as part of a list of many other domains, negation at the clausal level in the languages of its sample. According to Torero, in the languages of the Andes, negation in the verbal phrase is expressed in three different ways; (a) by preposed particles, in Quechuan, Aru (Aymaran), Puquina and Mochica, (b) by suffixes in Cholón, Kunza, Huarpean, Mapudungun and (c) with redundant suffixes along with the preposed particles, in Quechuan, Aru and Mochica, that were listed in (a).

Torero's review only considers the strategies of marking of sentential negation, its position in the clause and sometimes other features such as negative imperatives or other kinds of negative constructions. However, his description of the domain is very general and features such as the structure of negative constructions or the type of prohibitive constructions are not considered. Some other studies have studied negation in a particular language family (Pineda-Bernuy, 2014) for Quechuan or a particular language (Olate, Zúñiga, and Becerra, 2020) for Mapudungun.

4.1. Quechuan family

The expression of negation across the Quechuan family requires special attention since it includes a big number of languages and shows considerable variation, as seen in Pineda-Bernuy (2014) and van der Auwera and Vossen (2016). In general terms, at least three different patterns can be found in the marking strategies for standard negation in the Quechuan languages. As we will see, some of the languages have a particle before the verb and require an 'irrealis' suffix attached to the verb which is used in interrogative and also negative constructions (24), others use only a particle (25a), and others only a suffix (26). It is relevant to notice the fact that there is not only a single pattern in each of the languages and several of them show more than one of such patterns simultaneously, usually the difference between them is related to emphasis or speakers' attitudes toward the utterance which are optional such as (25b).

(24) Cajamarca Quechua

Mana *muna-ni-chu*
NEG want-1SG-INT/NEG
'I don't want.' (Quezada, 1976: 139)

(25) Santiago del Estero Quechua

a. *mana* *muna-ni*
NEG want-1SG
'I don't want'

b. *mana* *muna-ni-chu*
NEG want-1.SG-INT/NEG
'(I told you) I don't want!' (Nardi, 2002: 138)

(26) Ancash Quechua

Tushuy-ta *pweedi-i-tsu*
dance-ACC can-1-NEG
'I can't dance.' (Parker, 1976: 165)

In this regard Pineda-Bernuy proposes some explanations for this variation. It has been stated in that Quechuan has been through the Jespersen Cycle (Pineda-Bernuy, 2014; van der Auwera and Vossen, 2016). The author states that the synchronic differences in the negative constructions along the Quechuan family are so because the different Quechuan languages would be in different developmental stages of the Quechuan Jespersen cycle.

Apart from that, it is possible that as the languages are in a transition, more than one pattern from different diachronic stages would be co-existing in the synchronic stage of the language, so the classification of the languages is not absolutely clear-cut.

According to Pineda-Bernuy (2014: 112) there are several possible scenarios for the development of current negation patterns in the Quechuan languages, the most probable one is described as follows. Initially the languages had *mana* as the single negative marker as in (25a), then the irrealis (non-factual) suffix *-chu* (or equivalent, such as Pacaraos' *-su)*, is added to the construction to give emphasis as in (25b) and then it becomes an obligatory element in negative, constructions as in (24). In this stage the suffix *-chu* has negative and interrogative meaning and is used in polar interrogative and negative constructions (Pineda-Bernuy, 2014). Then, in some of the languages, such as Ancash Quechua (26), the suffix *-tsu* (*-chu*) becomes purely negative and the particle *mana* becomes optional leaving *-tsu* (*-chu*) as the only negative marker required for expressing standard negation. In these group, the suffix become only negative in meaning and the polar interrogative function is expressed by another suffix as in (30). It is relevant to mention that the oldest sources of data about the Quechuan language family available are colonial texts from the 16th century. In the texts from this period according to Pineda-Bernuy (2014: 199), single negation with *mana* must have been the main marker of standard negation in central Quechua in the 16th century.

Regarding the diachronic process, Pineda-Bernuy considers the following scenario of development of the patterns of standard negation in the Quechua family as the most plausible.

Stage 1: This stage represents hypothetical negation strategies before the beginning of the cycle. The particle *mana* is composed by the negative *ma* and the irrealis *-na* is added for emphasis.

Stage 2: The particle *mana* is the only negative operator and does not require *-chu* except for focus of negation, emphasis, and future as in (25). The evidential suffixes such as *-m(i)* are also used in *mana* optionally. These constructions are found in 16th century sources, peripheral Quechuan and sometimes in some other of the languages as non-standard constructions, and also in subordinate clauses along the whole family.

Stage 3: The negative constructions obligatorily include the particle *mana* and the irrealis suffix *-chu* as in (24). This is currently the most common pattern along the family, *-m(i)* is optionally added for emphasis.

Stage 4: The standard negative construction includes the particle *mana*, *-chu* on the verb and now also *-m(i)* on the particle *mana* to convert the utterance into a negative assertion. This kind of construction is found in Ayacucho Quechua. This stage is considered the bridge to the next one in which instead of adding more elements, the standard negative construction drops *mana*(*-m*).

Stage 5: The negative construction uses only the suffix -chu (or *-tsu*/*-su*) as in (26), and constructions with *mana-m(i)* and *-chu* becomes the emphatic negative form.

The development of the Quechuan Jespersen cycle can be represented as follows.

Ma > mana > mana (*-chu*) *> mana …-chu >* (*mana-m*) *…-chu > -chu*.

This proposal of synchronic development can explain both the synchronic variation between the languages of the family and the synchronic co-existence of more than one pattern of standard negation in some of the languages. The synchronic co-existence of more than one of the patterns is explained as transitional stages.

According to Pineda-Bernuy the role of contact between Quechuan and Aymaran in the formation of the current negation patterns in both families remains to be addressed.

Also, the directionality of the influence in this respect is a relevant question. The possible contact with Mochica and some languages from the eastern slopes of the Andes, particularly Arawakan, is also an open field of inquiry.

For the description and classification of the SN construction patterns in the Quechuan languages with a '*mana* + *-chu*' pattern, some assumptions were made. Firstly, I will consider, when corresponding, that negation is expressed by means of a preverbal particle *mana*. Secondly, in the case of the 'irrealis' or 'negative/interrogative' suffix *-chu* that is obligatory, I will consider it as not properly negative but an obligatory element in SN constructions, that is, a type of constructional asymmetry in the negative construction of the subtype A/NonReal. The reasons to do so are explained below.

(1) The irrealis suffix *-chu* is used in negative, polar interrogative (yes-no questions) as in (27), and in some languages also disjunctive constructions, so in the current state of these languages, it is not just negative.

(27) Cuzco Quechua
¿Juan llank'a-rqa-n-chu?
John work-PST-3-INT
'Did John work?' (Pineda-Bernuy, 2014: 86)

(2) The suffix *-chu* without the particle *mana* (or *ama*) does not have a negative meaning, while *mana* without *-chu* still have a negative meaning, for instance in subordinate clauses (28), negative indefinites (29), and the types of adverbial phrases like 'without + Verb'.

(28) Yauyos Quechua
Mana qatra-cha-ku-na-n-paq *mandil-cha-n-ta*
NEG dirty-FACT-REFL-NMLZ-3-PURP apron-DIM-3-ACC
wata-cha-ku-n
tie-DIM-REFL-3
'She's tying on her apron, so she doesn't get dirty.' (Shimelman, 2017: 291)

(29) Yauyos Quechua

a. *imapis*
'Something/ anything'

b. *mana imapis*
'Nothing' (Shimelman, 2017: 46)

(3) The only languages in which *-chu* (or *-tsu/-su*) are properly negative, and can occur without *mana*, are some central languages (Quechua I), such as Ancash, Junin-Huanca Quechua or Huaraz Quechua in which negative and polar interrogative functions are realized by means of different suffixes (*-tsu* and *-ku)* as in (30a) and (30b). In these cases, the suffix *-tsu* (*-chu*) is exclusively negative (Pineda-Bernuy, 2014: 103).

(30) Huaraz Quechua

a. *¿Juan urya-rqa-n-ku?*
John work-PST-3-INT
'Did John work?' (Pineda-Bernuy, 2014: 87)

b. *Juan urya-rqa-n-tsu*.
John work-PST-3-NEG
'John didn't work.' (Pineda-Bernuy, 2014: 87)

It is also relevant to consider that since the Quechuan languages are in different stages of the Jespersen cycle, this analysis can vary between languages and in some of them the language could be in a stage in which both *mana* and *-chu* are properly negative and polar interrogation use other strategy. In any case, since the languages are thought to be in a transition process and sometimes more than one pattern co-exist in the language, the classification is usually difficult and the criteria for it will be explained and discussed in each case. In some of the Quechuan languages evidential suffixes such as *-m(i)* are also used in negative constructions to emphasize negation, however not in all the languages they are obligatory, in the ones in which they are obligatory they are also considered as an asymmetry in the negative construction. The different patterns for each language are described below.

4.1.1. Cajamarca Quechua (QIIA)

In Cajamarca Quechua standard negation is expressed by means of the particle *mana* in preverbal position, usually at the beginning of the clause (Quezada, 1976: 139), as seen in (31). Additionally, apart from the negative particle *mana*, the negative construction requires the co-occurrence of the suffix *-chu*, used both in interrogatives and negatives, so the structure of the negative construction is asymmetric as seen comparing (31) and (32). The suffix *-chu* is attached to the verb but in other types of constructions it can be attached to different elements according to which is the focus of negation such as nouns or pronouns (Quezada, 1976). According to Quezada (1976), the particle *mana* usually includes the suffixes, *-m(i)*, *-sh(i)*, or *-tr(i)* but they are not obligatory. Prohibitive constructions use the prohibitive particle *ama* with the suffix *-chu*, different from the negative particle *mana* used in declaratives, as seen in (33).

(31) *Jwan-chu* *mana* *upya-n-chu*
Juan-NEG NEG drink-3SG-INT/NEG
'Juan don't drink' (Quezada, 1976: 139)

(32) *tiyuy-qa* *upya-n* *achka* *kañasu-ta*
uncle-GEN.1 drink-3SG much cañazo-ACC
'My uncle drinks too much cañazo' (Quezada, 1976: 71)

(33) *ama* *ri-y-chu*
PROH go-IMP-INT/NEG
'Don't go!' (Quezada, 1976: 73)

In summary the language has the following values: Marking by means of a Particle, preverbal order, asymmetric structure and the prohibitive uses a negative marker different from declaratives.

4.1.2. Yauyos Quechua

In Yauyos Quechua standard negation is expressed by means of the particle *mana* appearing in preverbal position (34). additionally, negative constructions require the suffix *-chu* attached to the verb (Shimelman, 2017: 289) so the structure of the negative

construction is asymmetric since the negative construction requires, apart from the negative particle, the co-occurrence of the suffix *-chu* as seen comparing (35) and (36). The suffix *-chu* can have negative, interrogative, and disjunctive meaning, but has a negative meaning only when it co-occurs with the negative particles *mana*, *ama*, and *ni* or the suffix *-pis* (Shimelman, 2017: 289), while *mana* has a negative meaning only, and is used in most types of negative constructions, such as in subordinate clauses (Shimelman, 2017: 256) or negative indefinites (Shimelman, 2017: 46). Some evidential suffixes like *-m(i), -sh(i)* and *-tr(i)* can be attached to mana to indicate focus as in (34-35). Negation can be emphasized with the addition of the suffix *-ya*, however the evidential suffixes and the suffix *-ya* are not an obligatory element in the negative construction. In subordinate clauses negation is indicated with the negative particle *mana* alone without *-chu*. Prohibitive constructions use the particle *ama* and the suffix *-chu* (37), a marking strategy different from the one used in declarative negative constructions (34).

(34) *mana-m* *ñuqa-qa* *Viñaq-ta* *riqsi-:-chu*
NEG-DIREV 1SG-TOP Viñac-ACC know-1-INT/NEG
'I don't know Viñac' (Shimelman, 2017: 37)

(35) *mana-m* *kay-ta-qa* *diha-y-ta* *muna-:-chu*
NEG-DIREV DEM.P-ACC-TOP leave-INF-ACC want-1-INT/NEG
'I don't want to leave this' (Shimelman, 2017: 49)

(36) *iskribi-y-ta* *muna-ni*
write-INF-ACC want-1
'I want to write' (Shimelman, 2017: 110)

(37) *¡Ama* *qawa-y-chu!*
PROH look-IMP-INT/NEG
'Don't look!' (Shimelman, 2017: 290)

In summary the language has the following values: Marking by means of a Particle, preverbal order, asymmetric structure and the prohibitive uses a negative marker different from declaratives.

4.1.3. Ayacucho Quechua (QIIB)

In Ayacucho Quechua standard negation is expressed by means of the negative particle *mana* in preverbal position (38). Additionally, the negative construction requires the suffix *-ču* (*-chu*) attached to the verb (Parker, 1969: 82) so the structure of the negative construction is asymmetric as seen comparing (38) and (39). Standard negation also requires the presence of suffix *-m(i)* with *mana* (*mana-m*) obligatorily, unlike most Quechuan languages in which it is frequent but optional (Pineda-Bernuy, 2014: 99; Parker, 1969: 82).

According to Pineda-Bernuy (2014: 99, 102), in the case of Southern and some central and northern Quechuan languages, such as Ayacucho, the use of *-m(i)* following *mana* is not used with evidential function. Instead, the use of *-m(i)* has a 'validational' function, which is more related to the conviction of the speaker about their own statement, thus giving emphasis to the negation of the statement. According to the examples in Parker (1969), prohibitive constructions use the negative particle *ama* with the suffix *-ču* (*-chu*) (40), different from the marking strategy used in SN constructions (38).

(38) *mana-m* *ri-nqa-ču*
NEG-DIREV go-FUT.3-INT/NEG
'He won't go' (Parker, 1969: 82)

(39) *las nuybi-ta-m* *hamu-nqa*
nine-ACC-DIREV come-FUT.3
'He will come at nine' (Parker, 1969: 43)

(40) *ama-ya* *tima-y-ña-ču*
NEG-¿? speak-IMP-DISC-INT/NEG
'Don't speak anymore!' (Parker, 1969: 85)

In summary the language has the following values: Marking by means of a Particle, preverbal order, asymmetric structure and the prohibitive uses a negative marker different from declaratives.

4.1.4. Pacaraos Quechua (QI)

In Pacaraos Quechua standard negation is expressed by means of the negative particle *mana* in preverbal position (41) (Adelaar, 1987: 90). In addition to the particle *mana*, negative constructions require the co-occurrence of the suffix *-s(u),* used both in negatives and interrogatives so the structure of negative constructions is asymmetric as seen comparing (42) and (43). According to Adelaar (1987: 90), the suffix *-s(u)* sometimes can be omitted, especially when the predicate is followed by the suffix *-pa*. Negative clauses usually also require the suffixes *-m(i), -tr(i),* or *-sh(i)* indicating personal knowledge, reported or inferential evidentiality respectively (Adelaar, 1987: 91) to follow *mana* with an emphatic function. When these suffixes are used, they change their position from being attached to the verb in affirmatives to being attached to the particle *mana* in negatives. Prohibitive constructions use the prohibitive particle *ama* with the suffix *-su* on the verb (44), different from the strategy used in SN constructions (42).

(41) *mana-sh* *mamay-pa* *musya-rqa-su*
NEG-INFR mother-¿? know-PST.3-INT/NEG
'My mother didn't know either' (Adelaar, 1987: 91)

(42) *mana-m* *puñu-rqu-y-su*
NEG-DIREV sleep-PST-1SG-INT/NEG
'I didn't sleep' (Adelaar, 1987: 55)

(43) *traki-i-ta* *puñu-ka-rqu-y*
foot-1-ACC sleep-NVOL-PST-1
'My foot went numb (fell asleep)' (Adelaar, 1987: 48)

(44) *Ama* *rrabya-si-ma-y-su*
PROH annoy-CAUS-BEN-IMP-INT/NEG
'Don't annoy me!' (1982: 59)

In summary the language has the following values: Marking by means of a Particle, preverbal order, asymmetric structure and the prohibitive uses a negative marker different from declaratives.

4.1.5. Ecuadorian Quechua (QIIB)

Ecuadorian Quechua shows different patterns for marking standard negation, some varieties use only the preverbal particle *mana* while other use *mana* but requires the suffix *-chu*, the second pattern is the most widespread within most Quechuan languages. In order to represent the diversity within the Quechuan family, the description of Ecuadorian Quechua will focus on the first group such as Ecuadorian Quechua from Napo. However, the actual diversity within Ecuadorian Quechua will be considered. In the selected varieties of Ecuadorian Quechua standard negation in expressed by means of the preverbal particle *mana* (50) (Carpentier, 1982: 460; Pineda-Bernuy, 2014: 93).

The structure of the negative construction is symmetric since apart from the negative particle *mana* there are no differences between affirmative (45) and negative (46). Prohibitive constructions use the negative particle *ama* and the suffix *-chu* (47), a marking strategy different from the one used in SN constructions. In other Ecuadorian Quechua varieties, standard negation is expressed by the particle *na* instead of *mana* with the suffix *-chu* (Carpentier, 1982: 321) like the pattern found in most Quechuan languages. In all the sample of Quechuan languages, the use of *na* is seen only in varieties of this language.

(45) *Pedro* *kayna* *shamu-rka.*
Pedro yesterday come-PST
'Pedro came yesterday.' (Pineda-Bernuy, 2014: 93)

(46) *Pedro* *kayna* *mana* *shamu-rka.*
Pedro yesterday NEG come-PST
'Pedro didn't come yesterday.' (Pineda-Bernuy, 2014: 93)

(47) *Ama* *hichu-wa-y-chu.*
PROH abandon-1.OBJ-IMP-INT/NEG
'Don't abandon me!' (Mercier 1979: 178, in Pineda-Bernuy, 2014: 96)

In summary the language has the following values: Marking by means of a Particle, preverbal order, symmetric structure and the prohibitive uses a negative marker different from declaratives.

4.1.6. Santiago del Estero Quechua (QIIC)

In Santiago del Estero Quechua standard negation is expressed by means of the negative particle *mana* (48), that can be shortened to *maa*. The particle *mana* appears in preverbal position, either at the beginning of the clause or directly before the verb (Alderetes, 2001: 206; Nardi**,** 2002: 130). SN constructions do not require the occurrence of the suffix *-chu*, and this can optionally be attached to the verb to form an emphatic negation and the suffix *-m(i)* can also be added to form a more emphatic negation (Alderetes, 2001: 206). *-chu* can also change its position in order to indicate focus of the negation, and it can appear on elements different from the verb (Alderetes, 2001: 206).

Negative constructions have a symmetric structure since beyond the negative particle *mana* there are no further difference between the structure of affirmative (49) and negatives (48). Since the occurrence of *-chu* and *-m(i)* are optional and used as emphatic negation they are not consider as asymmetries. Prohibitive clauses use the negative particle *ama* with the suffix *-chu* (50), different from the strategy used in SN constructions (Alderetes, 2001: 186).

(48) *warme-qa* *mana* *amo-ra*
woman-TOP NEG come-PST
'The women didn't come' (Nardi, 2002: 130)

(49) *qare-qa* *amo-ra*
man-TOP come-PST
'The man came' (Nardi, 2002: 130)

(50) *ama* *ri-y-chu*
PROH go-IMP-INT/NEG
'Don't go!' (Nardi, 2002: 111)

In summary the language has the following values: Marking by means of a Particle, preverbal order, symmetric structure and the prohibitive uses a negative marker different from declaratives.

4.1.7. Ancash Quechua (QI)

In Ancash Quechua standard negation is expressed by means of affixation, attaching the suffix *-tsu* on the verb (51) (Parker, 1976: 77). The structure of negative constructions in Ancash Quechua is symmetric since there are no differences between negatives (52) and affirmatives (53) beyond the presence of the negative marker *-tsu*. According to Cerrón-Palomino (2003: 296) and Pineda-Bernuy (2016) Ancash Quechua can optionally use a construction including both the suffix *-tsu* and the particle *mana* as an emphatic negative construction.

Ancash Quechua, like Cajatambo and Junin-Huanca Quechua that also only require *-chu* (or *-tsu/-su*) for SN constructions (Pineda-Bernuy, 2014: 103), and in contrast to most Quechuan languages that use *-chu* for both interrogation and negation, has two different suffixes, *-tsu* for negation and *-ku* for polar interrogation (Cerrón-Palomino, 2003; Pineda-Bernuy). The particle *mana* can be used in other types of constructions to negate other constituents apart from the verb such as subordinate clauses, in this case *-tsu* cannot be used and only *mana* is preferred (Parker, 1976: 148). This constructions with the particle *mana* can be considered as a trace from previous stages of the diachronic development in languages that has reached a more "advanced" stage in the Quechuan Jespersen Cycle. In prohibitive constructions, Ancash Quechua uses the prohibitive particle *ama* with the suffix *-tsu* on the verb (54), different from the negative strategy used in declaratives where only *-tsu* is used.

(51) *hamu-n-raq-tsu*
come-3-yet-NEG
'He/she does not come yet' (Parker, 1976: 77)

(52) *Tushuy-ta* *pweedi-:-tsu*
dance-ACC can-1-NEG
'I can't dance' (Parker, 1976: 165)

(53) *Tushuy-ta* *muna-:*
dance-ACC want-1
'I want to dance' (Parker, 1976: 164)

(54) *¡Ama* *shuya-ma-y-tsu!*
PROH wait-1.OBJ-IMP.2SG-NEG
'Don't wait for me!' (Parker, 1976: 28)

4.1.8. Summary of Quechuan languages

A summary of the values in the Quechuan languages is shown in Table 4. As seen in the table there are clear differences between the Quechuan languages and three groups can be identified. The only similarity shared by all of them is the use of different negative markers in SN constructions and prohibitives. Regarding the differences, in the first group we have languages with preverbal particles and asymmetric structure. In the second group we find languages with preverbal particles and symmetric structure. And finally, a third group with suffixation and symmetric structure. As seen in 4.1. These differences reflect the diachronic developments of the languages as part of the Quechuan Jespersen cycle.

TABLE 4: SUMMARY OF THE VALUES IN THE QUECHUAN LANGUAGES

Language	Type of negative marker	Order of negative marker and verb	Structure of SN constructions	Type of prohibitive
Yauyos Quechua	Particle	Preverbal	Asymmetric	Different from SN
Pacaraos Quechua (QI)	Particle	Preverbal	Asymmetric	Different from SN
Cajamarca Quechua (QIIA)	Particle	Preverbal	Asymmetric	Different from SN
Ayacucho Quechua (QIIB)	Particle	Preverbal	Asymmetric	Different from SN
Ecuadorian Quechua (QIIC)	Particle	Preverbal	Symmetric	Different from SN
Santiago del Estero Quechua (QIIC)	Particle	Preverbal	Symmetric	Different from SN
Ancash Quechua (QI)	Affix	Suffix	Symmetric	Different from SN

4.2. Aymaran family

4.2.1. Aymara

In Aymara standard negation is expressed by means of the preverbal particle *jani* (55). Negative constructions also require the co-occurrence the suffix *-ti* attached to the verb (Hardman, Vasquez and Yapita, 2001: 185; Briggs, 1976: 76; Coler, 2014: 646), so the structure of negative constructions is asymmetric as seen comparing (55) and (56). Like Quechuan *-chu*, the suffix *-ti* is used both in negative and polar interrogative constructions and is attached to the verb. Another difference with the affirmative is that the suffix *-w(a)* that appears on the verb in affirmatives is attached to the particle *jani* in negatives and sometimes also in other constituents, since the suffix *-w(a)* can only appear once in the sentence (Hardman, Vasquez and Yapita, 2001: 280; Coler 2014: 646). According to Hardman, Vasquez and Yapita (2001: 301) and Coler (2014: 384), along with *jani* and *-ti*, negative constructions frequently include the incompletive suffix *-k(a)* (or *-$_c$ka*) as in (55), however this is not obligatory in negative clauses, so it is not considered as an asymmetry in the construction. The particle *jani* can appear in the reduced forms *ni* (Briggs, 1976: 76) or *jan* (Coler, 2014).

Prohibitive constructions use the same negative particle *jani*, or its reduced form *jan*, and the suffix *-ti* used in SN constructions (57) (Cerrón-Palomino, 2000: 241; Coler, 2014: 542).

(55) *Jani-w* *jicha-x* *sirwis-Ø* *um-k-t-ti.*
NEG-DECL now-TOP beer-ACC drink-NCOMP-1sim- INT/NEG
'I am not drinking beer now' (Coler, 2014: 648)

(56) *Ch'uq-Ø* *manq'a-s-t-xa*
potato-ACC eat-PROG-1sim-TOP
'I am eating a/the potato/s' (Coler, 2014: 598)

(57) *Jan* *jacha-m-ti.*
NEG cry-IMP.2SG-INT/NEG
'Don't cry!' (Coler, 2014: 649)

In summary, Aymara has the following values: Marking by means of a Particle, preverbal order, asymmetric structure and the prohibitive uses the same negative marker as declaratives.

4.2.2. Jaqaru

In Jaqaru standard negation is expressed by means of the particle *isha* in preverbal position (58). The negative particle *isha* is obligatorily accompanied by the suffix *-txi* (58), that has interrogative/negative meaning, on the verb and the suffix *-w(a),* with a personal knowledge meaning, on the negative particle (Hardman, 2000: 106). Similar to Aymara's *-ti* and most Quechuan *-chu*, the suffix *-txi* is used in negative and polar interrogative constructions. The suffix *-w(a)* is also like Quechuan *-m(i)* and Aymara's *-w(a)* in meaning, functions, and position. The structure of the negative constructions is asymmetric since apart from the particle *jani*, negation requires the occurrence of the suffix *-txi* and the suffix *-w(a)* as seen comparing (59) and (60).

In prohibitive constructions, Jaqaru uses the prohibitive particle *jani* (61) which is different from the negative particle *isha* used in SN constructions (58) (Hardman, 2000: 65). It is interesting to point out the correspondence of the prohibitive particle *jani* with the negative particle used in Aymara both in SN constructions and in prohibitives. According to Cerrón-Palomino (2000: 265) Aymara would have lost the distinction and kept only *jani* for both contexts.

(58) *isha-w* *ill-w-uta-txi*
NEG-DIREV see-CMPL-2>1-INT/NEG
'You didn't see me' (Hardman, 2000: 106)

(59) *isha-w* *ill-w-ima-txi*
NEG-DIREV see-CMPL-1>2-INT/NEG
'I didn't see you.' (Hardman, 2000: 106)

(60) *ill-w-ima-wa*
see-DIREV-1>2-CMPL
'I saw you.' (Hardman, 2000: 102)

(61) *Jan* *ill-uta-txi*
PROH See-2>1-INT/NEG
'Don't look at me!' (Hardman, 2000: 65)

In summary Jaqaru has the following values: Marking by means of a Particle, preverbal order, asymmetric structure and the prohibitive uses a negative marker different from declaratives.

4.2.3. Summary of Aymaran languages

In summary both languages are quite similar, both mark negation by means of preverbal particles and gave asymmetric SN constructions. However, Jaqaru uses different negative particles for SN constructions and prohibitives while Aymara uses the same for both. Regarding the differences between Aymara and Jaqaru, Cerrón-Palomino (2000: 265) suggests that Aymara would have lost the distinction between negative declarative and negative imperative, that can still be found in Jaqaru. As a result, Aymara uses only *jan(i)* for negative declarative and imperative, however the author does not provide more details. In regard of the reconstruction of Proto-Aymaran, Cerrón-Palomino's (2000: 265) proposal is that negation consisted of the negative-interrogative suffix *-ti* but does not mention the pre-verbal particles. He also states that Aymara had the distinction between standard negation and prohibitive like Jaqaru, but lost it leaving only the current pattern observed in modern Aymara.

4.3. Uro-Chipayan family

4.3.1. Chipaya

In Chipaya standard negation is expressed by means of the negative particle *ana* (62). The negative particle *ana* occurs in preverbal position (62) usually at the beginning of the clause (Cerrón-Palomino, 2006: 241). According to Cerrón-Palomino it usually precedes the whole clause but can also appear before a specific constituent in which negation focuses. The structure of negative constructions in Chipaya is symmetric since apart from the addition of the negative particle *ana*, there are no further structural differences between negatives (62) and affirmatives (63). Prohibitive constructions use the same negative particle *ana* (64), the same used in SN constructions.

(62) *ana* *we-t-kiz* *kintu* *maz-ch-am-tra*
NEG 1.SG-GEN.1-DAT tale tell-PST.PF-2-DECL
'You didn't tell me the tale' (Cerrón-Palomino, 2006: 237)

(63) *maa-taqa-ki* *we-t-kiz* *t'anta* *thaa-chi-n-tra*
lady-¿?-TOP 1SG-GEN.1-DAT bread give-PST.PF-3.F-DECL
'The lady gave me bread' (Cerrón-Palomino, 2006: 237)

(64) *ana* *lik-z-n-a!*
NEG drink-INF-TRR-IMP
'Don't drink!' (Cerrón-Palomino, 2006: 245)

In summary the language has the following values: Marking by means of a particle, preverbal order, symmetric structure and the prohibitive uses the same negative marker used in declaratives.

4.3.2. Uchumataqu

In Uchumataqu, also known as Uru, standard negation is expressed by the particle *ana* (65) (Hannss, 2008: 262). According to Muysken (2000: 108) the negative particle is *hana*. This difference could be explained if both sources are from different dialects of the language. The particle *ana/hana* appear in preverbal position (65), it almost always precedes the verb in the negated clause, but it can also appear in clause initial position.

Negative constructions in Uchumataqu have a symmetric structure since there is not structural difference between negatives (66) and affirmatives (67) beyond the addition of the negative *ana/hana*. The negator *ana/hana* usually appears alone but sometimes can have optionally attached clausal or personal clitics such as *=pini*, used for emphasis, *=čay*, declarative used as certainty, and person marking clitics such as *=l* (65), *=m*, or *=sin*.

Apart from SN constructions, the particle *ana/hana* is also used in a wide range of negative functions such as negation of noun, verbal, and adjectival phrases, apparently this could include prohibitive constructions. However, there are no prohibitives constructions found on any of the sources. Moreover, according to Hannss (2008: 240) which is the main source of data for this language, the notion of prohibitive cannot be verified for Uchumataqu. Because of the lack of data on prohibitive constructions it is left unclassified.

(65) *tomxe-ki* *ana=l* *t(a)xa-čay* *wir-ki*
today-TOP NEG-1 sleep-DECL 1SG-TOP
'Today, I did not sleep.' (Hannss, 2008: 267)

(66) *ana* *liks* *pek-u-čay*
NEG drink want-1SG-DEC
'I do not want to drink.' (Hannss, 2008: 287)

(67) *kasari-s* *pek-u-čay*
marry-AN want-1.SG-DEC
'I want to marry'. (Hannss, 2008: 287)

In summary the language has the following values: Marking by means of a Particle, preverbal order, symmetric structure, and no data was found about prohibitive constructions.

4.4. Hibito-Cholon family

4.4.1. Cholón

Cholón has a wide variety of negative elements that are unusual in the Andes (Alexander-Bakkerus, 2005: 319). In Cholón standard negation is expressed by means of suffixation on the verb. According to Torero (2002: 187) the form of the negative suffix is *-p* and its different variations are *-pa* used for present tense (68), *-pe* for future (72) and *-pitzo* for past (70). According to Alexander-Bakkerus (2005: 323-324) the form of the suffix is *-p(e)*, and there is a variation in the past tense. The structure of negative constructions is symmetric since there are no further differences beyond the addition of the negative elements in the clause. Regarding the structure of the negative constructions, it must be noted that in the past tense, the negative suffix *-p(e)* takes the form *-pit*^{s} and require the nominalizer *-(ŋ)o* instead of the incompletive suffix *-aŋ* required in all the other tenses. Since the difference is between different tenses, I consider this as a paradigmatic asymmetry. Since only the constructional (a)symmetry is considered in this study I continue to consider the negative construction as symmetric, as can be seen comparing the pairs of affirmative and negative examples below.

Prohibitive constructions use the prohibitive suffixes *-čin*, *-mu* (74) or *-nik* (75), different from the strategies used in SN constructions. It is not clear what is the difference between these suffixes or whether they appear in different contexts.

(68) *a-l-o-p-aŋ*
1.SG.A-3.SG.OBJ-do-NEG-INCOMP
'I do not do/make it' (Alexander-Bakkerus, 2005: 323)

(69) *a-l-o-pe-kt-aŋ*
1.SG.A-3.SG.OBJ-do-NEG-FUT-INCOMP
'I shall not do it' (Alexander-Bakkerus, 2005: 323)

(70) *a-sina-y-pit*^{s}*-o*
1SG-3SG.OBJ.hear-PST-NEG-FN2
'I did not hear' (Alexander-Bakkerus, 2005: 323)

(71) *a-l-o-aŋ*
1SG-3SG.OBJ-make-INCOMP
'I make it' (Alexander-Bakkerus, 2005: 209)

(72) *ø-l^{y}a-kt-aŋ*
3SG.SUBJ-go-FUT-INCOMP
'he/she/it will go' (Alexander-Bakkerus, 2005: 195)

(73) *a-n-iy*
1SG-come-PST
'I came' (Alexander-Bakkerus, 2005: 222)

(74) *l-o-w-mu*
3SG.obj-do-SE-PROH
Do not do it!' (Alexander-Bakkerus, 2005: 321)

(75) *mi-l-o-k-nik*
2SG-3SG.OBJ-do-IMP-PROH
'Do not do it!' (Alexander-Bakkerus, 2005: 321)

In summary the language has the following values: Marking by means of affixes, suffixation, symmetric structure and the prohibitive uses negative markers different from declaratives.

4.5. Huarpean Family

4.5.1. Millcayac

In Millcayac standard negation is expressed by means of affixation attaching the suffix *-na* to the verb (76). Apart from the negative *-na*, negative constructions require the occurrence of the suffix *-eye/-e*, described by Valdivia (1607b) as imperfect past, so the structure of the negative constructions is asymmetric as seen comparing (76) and (77). Apparently, according to the examples found in Valdivia's texts, the use of *-eye* or *-e* depends on the tense. The suffix *-eye* is used in past and present tenses while *-e* is used in the future. Prohibitive constructions use the same suffix *-na* and require the suffix *-e/-eye* (78) used in SN constructions. Additionally, beyond the presence of *-na* and the

imperfective suffix *-eye/-e*, the prohibitive construction uses the suffix *-tema,* that is possibly prohibitive, instead of the second person imperative suffixes *-pen*, *-xek*, *-xke* used in imperatives.

(76) *chekem* *poyup* *alte-na-e-pai-na*
from.now.on sin do-NEG-PST.IPFV-FUT-1SG
'From now on I will not commit sins' (Valdivia, 1607b: 21 [44])

(77) *Padre* *xama* *ke-che-pa-teke* *ku-ch* *poyup* *tamari*
priest word 1SG.OBJ-give-FUT-3SG 1SG.GEN sin CAUS
alte-pa-na
do-FUT-1SG
'I will do what the priest will tell me' (Valdivia, 1607b: 24[47])

(78) *horokhoiwe* *xama* *ma-tke* *ñochum-ye* *xapi-na-e-tema*
fifth word say-3SG man-ACC kill-NEG-PST.IPFV-PROH
'The fifth word says, do not kill (a man)!' (Valdivia, 1607b: 12[35])

4.5.2. Allentiac

In Allentiac standard negation is expressed by means of the particle *naha* or *na* (79). This particle occurs in preverbal position. However, in most of the analyzed texts this particle appears in its reduced form *na*. The structure of the negative constructions is symmetric since it does not show further differences between negatives (79) and affirmatives (80) than the occurrence of *naha/na*. Prohibitive constructions in Allentiac use the prohibitive *-uche/-teche/-tenche* (81, 82), different from the strategy used in SN constructions. It is not clear whether the suffix is actually *-che* and it changes its form according to the verb, the phonological context or something else. In any case it is very similar to Kunza's prohibitive suffix *-cha*, and arguably to Quechuan *-chu*.

(79) *Hay* *poyup* *na* *elp-a-nen*
from.now.on sin NEG do-v.t.-1.SG.IND
'From now on I won't do sins' (Valdivia, 1607a: 20 [124])

(80) *Padre xang ke-che-p-ma-na ku-ch poyup-ta*
Priest word 1.OBJ-GEN-3-say-3SG.IND 1-GEN sin-ACC
mari netke let-pma-nen.
CAUS truth do-FUT-1.IND
'I will really do the penitence the priest will give me' (Valdivia, 1607a: 20 [124])

(81) *Horokoyam xam ma-na paypa aspay-eche.*
Fifth word say-3 ¿? Kill-PROH
'The fifth word (commandment) says you shall not kill' (Valdivia, 1607a: 4 [93])

(82) *Yemnikleu-yam xam ma-na killway-etche.*
Seven-NMLZ word say-3 steal-PROH
'The seventh word says you shall not steal! (Valdivia, 1607a: 4 [94])

4.5.3 Summary of Huarpean languages

As we have seen both Huarpean languages show striking differences, showing different values in all the features considered. Allentiac express standard negation by means of a negative particle in preverbal order, has a symmetric structure and use a negative marker in prohibitive constructions different from the marker used declaratives. On the other hand, Millcayac expresses negation by means of a suffix after the verb, has an asymmetric structure and use the same negative marker in prohibitive and declarative constructions. These differences are more remarkable considering they belong to the same language family. The attested differences and possible explanations will be further discussed in chapter 6.

4.6. Unclassified and Isolated languages

4.6.1. Mochica (Unclassified)

The data for Mochica was taken from several sources, mainly Torero (2002), Hovdhaugen (2004) and Carrera (1880 [1644]) and complemented with data from several other sources (Middendorf, 1892; Harrington, 1945; Chero, Peralta, and Chero, 2012; Eloranta-Barrera, 2020). However, despite the quality of the documentation about Mochica, the data about negation is particularly scarce so not all the necessary data about negation in Mochica could be found.

Based on these sources, I will consider that standard negation is expressed by means of the particle *ænta* (written as *önta* in Torero) as in (83-84). This particle occurs in preverbal position, usually but not necessarily in a clause initial position (Hovdhaugen, 2004: 58; Torero, 2002: 359). Apart from *ænta*, negative constructions possibly require the presence of *-(e)zta/(e)zta*, however it is not clear from the data available. It is not clear whether *-(e)zta/(e)zta* is a is a particle, a clitic, or a suffix and whether it is an obligatory element in negative clauses together with *ænta* or if it is optional and adds emphasis to the negative *ænta.* The meaning of *-(e)zta/(e)zta* is not completely clear, it is described by Hovdhaugen (2004: 58) as an emphatic particle and by Torero (2002: 359) as a suffix meaning "not even" (*ni siquiera*). I consider that the data found in the consulted sources is not enough to determine whether the structure of negative constructions is symmetric or asymmetric and will thus be left unclassified. Some examples of negative-affirmative contrast are provided below.

In prohibitive constructions, according to Hovdhaugen (2004: 58) Mochica uses the negative particle *amoz,* and according to Torero (2002: 332) the prohibitive particle is *amo* followed by the second person singular marker *-z.* In each case, prohibitives (90) use a negative marking strategy different from SN constructions.

(83) *ænta-zta* *iñ-ta-pa*
NEG-NEG.EMPH 1.GEN-come-¿?
'My dear son has not come' (Carrera, 1644: 61)

(84) *ænta=iñ* *eng* *ezta-çie*
NEG=1SG want NEG.EMPH-DEM.ANA
'I don't want' (Carrera, 1644: 78)

(85) *met=eiñ*
bring=1SG
'I bring' (Carrera 1644: 95)

(86) *moiñ* *fe* *met*
1SG COP bring
'I bring' (Carrera, 1644: 95)

(87) *ænta-f* *læm-apæc-o* *ezta*
NEG-COP die-PRS.PART-ADJR EMPH
'It is not at all dying' (Hovdhaugen, 2004: 51)

(88) confessar=eiñ loc
confess=1SG to.be
'I am confessing' (Carrera, 1644: 147)

(89) ænta-f ezta çopæt-o
NEG-COP EMPH.NEG there-ADJR
'He is not at all there' (Hovdhaugen, 2004: 59)

(90) *mo-sso.næng* *amo-z* *ton*
this-wife PROH-2SG hit
'Do not beat her (this wife)! (Hovdhaugen, 2004: 54)

In summary the language has the following values: Marking by means of a particle, preverbal order, constructional structure is left unclassified and prohibitives uses a negative marker different from declaratives.

4.6.2. Puquina (Unclassified)

In Puquina standard negation is expressed by means of the particle *appa* or *apa* (91). This particle appears in preverbal position (Adelaar and van de Kerke, 2009: 141). Even though the sources of data about negation in Puquina are limited, the examples found show no difference in the structure of negative (91) and affirmative (92) constructions beyond the negative particle *appa* so the structure of negative clauses in Puquina is symmetric.

Prohibitive constructions use the prohibitive particle *ama* (93), different from the strategy used in SN constructions. It is interesting to notice the similarity with the prohibitive *ama* in Quechuan languages and *amo* in Mochica. According to Adelaar and van de Kerke (2009: 141), this particle comes from Quechua. However, in the case that the similarity can be explained by contact-induced borrowing, the directionality of the borrowing cannot be so easily determined.

(91) *apa* *pampacha-qui-en-s-p-anch*
NEG forgive-FUT-PL-INV-2.SG-DECL
'(He) won't forgive you' (Adelaar and van de Kerke, 2009: 138)

(92) *pampacha-n-s-que-nch*
forgive-PL-INV-1SG-DECL
'(He) forgives us' (Adelaar and van de Kerke, 2009: 134)

(93) *ama* *scalli-ta*
PROH fear-2.IMP
'Don't fear!' (Adelaar and van de Kerke, 2009: 135)

In summary the language has the following values: Marking by means of a Particle, preverbal order, symmetric structure and the prohibitive uses a negative marker different from declaratives.

4.6.3. Kunza (Unclassified)

In the case of Kunza the data is critically scarce since the language is extinct and the remaining documentation is very limited. Most of the data about negation comes from San Roman (1890), Buchwald (1922), Mostny (1954), Torero (2002) and Adelaar with Muysken (2004). It must be noted that the data on negation is particularly limited and not completely reliable, so the description and classification here presented is limited by the available sources.

According to San Roman (1890: 18) standard negation is expressed by means of the suffix *-haus/-hans* (95, 96) and analyzing the examples, the occurrence of *-hans* or *-haus* seems to be determined by the verb. Buchwald (1922: 6) only mentions the existence of *-hans*. Since there is a limited number of examples and in limited contexts is not possible to be completely sure about the expression of negation in different contexts other that obligative with interpretation of future which are the only cases found on San Roman text. The structure of negative clauses in Kunza is symmetric, since according to the data available no differences between the structure of affirmatives (94) and negatives (95) can be found.

According to Torero (2002: 500) and Adelaar (2004: 384), prohibitive constructions used the negative suffix *-cha* (97), different from *-hans/-haus* used in SN constructions as stated by San Roman. According to Mostny (1954: 142-143) the prohibitive suffix is *-chu* or possibly *-cha* saying that the alternation of one or the other could be related to the position in the clause and the occurrence of other suffixes after it. This shows clear similarities to Quechuan *-chu*, and in the case of *-cha*, the similarity to Allentiac's *-che* is also noticeable.

(94) *acca q'-ol-c*
1SG 1SG-eat-OBLG
'I have to eat' (San Román, 1890: 91)

(95) *acca* *q'-ol-c-haus*
1SG 1SG-eat-OBLG-NEG
'I don't have to eat' (San Román, 1890: 92)

(96) *acca* *q'-yócon-s-hans*
1SG 1SG-hablar-OBLG-NEG
'I don't have to speak' (San Roman, 1890: 92)

(97) *cum* *deja-cha-calo*
1.OBJ.PL leave-PROH-IMP.2SG
'Don't let us (fall)' (Adelaar with Muysken, 2004: 384)

In summary the language has the following values: Marking by means of a n affix, suffixation, symmetric structure and the prohibitive uses a negative marker different from declaratives.

4.6.4. Mapudungun (Isolated)

In Mapudungun standard negation is expressed by means of affixation, attaching the suffix *-la* to the verb (98) (Smeets, 2007; Olate, Zuñiga and Becerra, 2020). The structure of the negative constructions is symmetric since the negative construction (99) does not show structural differences with affirmative (100) beyond the presence of the negative *-la*. Prohibitive constructions use the negative imperative suffix *-ki* (101) that can also be used in other negative imperatives beyond the second person singular negative imperatives. This strategy is different from the one used in declaratives that use *-la.* Olate, Zuñiga and Becerra (2020) and Smeets (2007) Notes that sometimes it is possible the addition of the negative suffix *-nu* to the prohibitive construction, however, according to Smeets (2007: 243) it is not frequent.

(98) *umaw-tu-la-n*
sleep-VR-NEG-IND.1SG
'I did not sleep' (Smeets, 2007: 347)

(99) *Feyti trewa wangku-la-y.*
DET dog bark-NEG-IND [3SG]
'That dog did not bark' (Olate, Zuñiga and Becerra, 2020)

(100) *Feyti trewa wangku-y.*
DET dog bark-IND[3SG]
'That dog barked' (Olate, Zuñiga and Becerra, 2020)

(101) *wirar-ki-l-nge*
shout-PROH-COND-IMP.2SG
'Don't shout!' (Smeets, 2007: 185)

In summary the language has the following values: Marking by means of a n affix, suffixation, symmetric structure and the prohibitive uses a negative marker different from declaratives.

4.7. Summary of the Andean languages

The summary of the values in the Andean languages from the sample presented in this chapter can be seen in Table 5 below.

TABLE 5: SUMMARY OF FEATURES IN THE ANDEAN LANGUAGES

Language	Type of negative marker	Order of negative marker and verb	Structure of SN constructions	Type of prohibitive
Yauyos Quechua	Particle	Preverbal	Asymmetric	Different from SN
Pacaraos Quechua	Particle	Preverbal	Asymmetric	Different from SN
Cajamarca Quechua	Particle	Preverbal	Asymmetric	Different from SN
Ayacucho Quechua	Particle	Preverbal	Asymmetric	Different from SN
Ecuadorian Quechua	Particle	Preverbal	Symmetric	Different from SN

Santiago del Estero Quechua	Particle	Preverbal	Symmetric	Different from SN
Ancash Quechua	Affix	Suffix	Symmetric	Different from SN
Aymara	Particle	Preverbal	Asymmetric	Same of SN
Jaqaru	Particle	Preverbal	Asymmetric	Different from SN
Chipaya	Particle	Preverbal	Symmetric	Same of SN
Uchumataqu	Particle	Preverbal	Symmetric	No data
Cholón	Affix	Suffix	Symmetric	Different from SN
Mochica	Particle	Preverbal	Insufficient data	Different from SN
Puquina	Particle	Preverbal	Symmetric	Different from SN
Kunza	Affix	Suffix	Symmetric	Different from SN
Millcayac	Affix	Suffix	Asymmetric	Same of SN
Allentiac	Particle	Preverbal	Symmetric	Different from SN
Mapudungun	Affix	Suffix	Symmetric	Different from SN

CHAPTER 5:

ANALYSIS OF COMPARATIVE SAMPLE

5.1. Patagonia

5.1.1. Kawesqar (Unclassified)

In Kawesqar standard negation is expressed by means of the negative word *k'élok* (Aguilera, 2001: 257), also written as *qjeloq* in Clairis (1985: 481). Since in Kawesqar verbs occur without inflectional morphology it is not possible to determine whether *k'élok* is a negative particle or a negative auxiliary verb and accordingly it is classified as 'Negative word, unclear if verb or particle'. The negative word *k'élok/qjeloq* occurs in post-verbal position (102-103).

The structure of negative constructions is symmetric since no structural differences between negatives (103) and affirmatives (104) are found. Regarding prohibitive constructions, Aguilera (2001: 257), mentions a 'prohibitive and restrictive' negative word *hálok*. However, from the examples provided it does not seem like prohibitive but rather another type of negative meaning. No more data was found about prohibitive constructions in Kawesqar, so it is left unclassified.

(102)	*coco*	*jeqsor*	*qjeloq*	*ajajema*
	1	see	NEG	devil
	'I haven't seen the devil'			(Clairis, 1985: 472)

(103)	*ce*	*qawloq*	*qjeloq*
	1	know	NEG
	'I don't know' (Clairis, 1985: 481)		

(104) *cece* *qsqoj* *qawloq*
1 swim know
'I know how to swim' (Clairis, 1985: 503)

5.1.2. Yahgan (Unclassified)

In Yahgan or Yámana standard negation is expressed by means of the negative particle *baf* (Outes, 1927: 19). The particle *baf* occurs in preverbal position (105-106). The structure of the negative construction is symmetric since no difference can be found between the negative (106) and affirmative (107) constructions. Prohibitive constructions use the particle *ula(p)* different from the negative used in declarative negatives (Holmer, 1953: 128).

(105) *hai* *baf* *aiola-sa*
1SG NEG understand-2.SG.OBJ
'I don't understand you' (Outes, 1927: 19)

(106) *hai* *baf* *curu*
1.SG NEG love
'I don't love' (Outes, 1927: 19)

(107) *hai* *curu*
1SG love
'I love' (Outes, 1927: 19)

(108) *ula* *tagi-k*a
PROH give-NEG
'Don't give (me)!' (Holmer, 1953: 129)

5.1.3. Selk'nam (Chonan)

In Selk'nam standard negation is expressed by the negative auxiliary verb *sų* which according to Rojas-Berscia (2014: 71) "carries the entire verb inflexion and leaves its complement, the negated verb, in a root state or in the infinitive mood". The auxiliary verb *sų* occurs in postverbal position (109). The structure of negative constructions is asymmetric since in affirmatives (110) the verbal inflection goes on the main verb while

in negatives (109) the negative auxiliary verb carries most of the verb inflection. Prohibitive constructions use the prohibitive suffix *-sį* (111), different from the negative strategy used in declaratives, and the second person singular suffix *-ma* on the verbal stem (Rojas-Berscia, 2014: 68).

(109) *Mįstį sų-n tįlq'į-ka.*
sleep NEG.V-CERT.M boy-DIM
'The boy doesn't sleep' (Rojas-Berscia, 2014: 71)

(110) *Wįş nį-y mįstį-n.*
dog PRS-M sleep-CERT.M
'The dog sleeps.' (Rojas-Berscia, 2014: 88)

(111) *ųk-sį-ma*!
run-PROH-2
'Do not run!' (Rojas-Berscia, 2014: 68)

5.1.4. Tehuelche (Chonan)

In Tehuelche standard negation is expressed by means of the auxiliary verb *k'om* which carries most of the verbal inflection. The negative auxiliary verb *k'om* occurs in preverbal position (112) (Fernandez-Garay, 1998: 428). The structure of the negative construction is asymmetric since in affirmatives (113) the verbal inflection goes on the main verb while in negatives (112) the negative auxiliary verb carries most of the verbal inflection, very similar to Selk'nam. Prohibitive constructions (114) use the particle *ken*, different from the negative used in declaratives.

(112) *k'om-š-kn dotor k-ewen*
NEG-EP-RLS doctor 3.OBJ-find
'The Doctor didn't find him' (Fernández-Garay and Hernández, 2006: 152)

(113) *Maʔ t-k-e:we-š-k' k'eto*
now 3-3.OBJ-find-EP-RLS well
'Now he found him well' (Fernández-Garay and Hernández, 2006: 152)

(114) *ken š m-a:wn e-mewe*
NEG EP 2SG-pawn 1SG.OBJ-consider
'Don't consider me a pawn!' (Fernández-Garay, 1998: 431)

TABLE 6: SUMMARY OF THE VALUES IN THE PATAGONIAN LANGUAGES

Language	Marking of SN	Order of negative marker and Verb	Structure of SN	Prohibitive
Kawesqar	Negative word, unclear if particle or auxiliary verb	Postverbal	Symmetric	No data
Tehuelche	Auxiliary verb	Preverbal	Asymmetric	Different from SN
Selk'nam	Auxiliary verb	Postverbal	Asymmetric	Different from SN
Yaghan	Particle	Preverbal	Symmetric	Different from SN

5.2. Chaco

5.2.1. Pilagá, (Guaicuruan)

In Pilagá standard negation is expressed by means of affixation attaching the prefix *sa-* to the verb (115) and preceding person prefixes (Vidal, 2001: 283). The structure of negative constructions in Pilagá is symmetric since no difference between negatives (116) and affirmatives (115) beyond the presence of the negative suffix is found. No data about prohibitive constructions in Pilagá could be found in the sources so it is left unclassified.

(115) *sa-n-čoʕot-a* *ha-ga'* *yawo-'*
NEG-3-tell-OBJ.SG F-CLF-DIST woman-PAU
'He did not tell about the women' (Vidal, 2001: 284)

(116) *qalaʕasa* *sa-ya-wa-n-get*
but NEG-3-see-ASP-DIR.hither
'But he did not see' (Vidal, 2001: 284)

(117) *y-awat-iyi* *da'* *y-alik* *so'* *onole*
3-watch-DIR conj 3-eat CLF one
'He saw that she ate one' (Vidal, 2001: 254)

5.2.2. Wichí (Matacoan)

In Wichí standard negation is expressed by means of the circumfix *ha- ...-hi* (118) (Nercesian, 2011: 410). Wichí has several negation strategies depending on the modality of the clause. The main distinction on this sense is between realis and irrealis which in Wichí has to do with both the source of information and the degree of certainty of the speaker. Realis is used when the speaker has certainty derived from experience about the statement while irrealis is used for low level of certainty derived from non-experience about the information of the utterance (Nercesian, 2011: 411). According to Nercesian, it is possible the elision of *ha-* maintaining the negative meaning, while it is not possible to elide *-hi* without a change in the meaning. If *-hi* is elided the clause has an interrogative meaning instead of negative (Nercesian, 2011: 413). In realis the circumfix *ha- ...-hi* is

used while in irrealis there can be several circumfixes, *nam-...-(y)a* (1.SBJ), *ka-...-(y)a* (2.SBJ), or *nim-...-(y)a* (3.SBJ). The structure of the negative constructions is symmetric, as seen comparing (118) and (119). In prohibitive constructions Wichí use the negative prefix *yaj-* on the verb (120), different from the negative used in declaratives.

(118) *ha-n'-tefw-(h)i*
NEG.R-1SUJ-eat-NEG.R
'I don't eat'. (Nercesian, 2011: 422)

(119) *n'-tkatay*
1.SBJ-cook
'I cook.' (Nercesian, 2011: 303)

(120) *hays, yaj-lon-n'u*
INTJ PROH-pegar-1.OBJ
'hey, don't hit me!' (Nercesian, 2011: 379)

5.2.3. Lule (Lule-Vilela)

In Lule standard negation is expressed by means of the particle *uyé* (Lafone Quevedo, 1894: 350; Maccioni, 2008: 45). This particle occurs in postverbal position (121). The structure of the negative construction is symmetric since there are no differences in the structure of negatives (121) and affirmatives (122) beyond the occurrence of the negative *uyé*. In prohibitive constructions, Lule use the prohibitive suffix *-tò* (123) (Maccioni, 2008: 35), different from the negative strategy used in declaratives.

(121) *cá-n-s uyé*
go-FUT.1-1SG NEG
'I don`t want to go / I can't go' (Maccioni, 2008: 45)

(122) *cá-n-s*
go-FUT.1-1SG
'I can go / I will go' (Maccioni, 2008: 45)

(123) *can-ce-tò*
go-2SG-PROH
'Don't go!' (Maccioni, 2008: 35)

5.2.4. Vilela (Lule-vilela)

In Vilela standard negation is expressed by means of affixation, attaching the suffix *-rop* to the main verb (124) (Lozano, 1970: 12; Golluscio, 2014). The structure of negative constructions in Vilela is symmetric, since the only structural difference between negatives (124) and affirmatives (125) is the negative suffix. In prohibitive constructions Vilela use the prohibitive suffix *-men* (126), different from the negative strategy used in declaratives.

(124) *ami-te-rop*
look-3-NEG
'(He/she) does not look' (Lozano, 1970: 10)

(125) *ami-tek*
look-3
'(He/she) looks' (Lozano, 1970: 11)

(126) *ke-men*
go-PROH.2SG
'Don`t go!' (Lozano, 1970: 18)

5.2.5. Ayoreo (Zamucoan)

In Ayoreo standard negation is expressed by means of the particles *que* and *ca* (127). *Que* is used for realis (present or past oriented), while *ca* is used for irrealis (future or potential/hypothetical-oriented) which also includes 'imperatives' (Bertinetto, 2009: 41). These particles occur in pre-verbal position. The structure of negative constructions is symmetric since there are no structural differences between the negatives (127) and affirmatives (128) beyond the negative particles. Prohibitive constructions use the negative particle *ca* (129) the same used in declaratives for irrealis and the verbal structure is the same of 'imperatives'. According to Bertinetto (2009: 34), Ayoreo does not have an actual imperative, instead it has a 'Non-indicative' mood used only for second person singular and plural. The 'Non-indicative' is standardly used as imperative-injunctive, but it is also used in other types of non-declarative sentence.

(127) *Mu* *umuñurai* *que* *chayo* *aja* *dosa-tique.*
But bull NEG run LOC side-INDET
'But the bull did not run to the side' (Bertinetto, 2009: 40)

(128) *Chayo* *enga* *cheru* *pite* *uñai* *iji* *yodi.*
runs COORD climb pole other LOC water
'He ran and climbed up another pole in the water' (Bertinetto, 2009: 41)

(129) *ca* *etaque* *Bajma* *Maria.*
NEG refuse.N.IND fiancée Maria
'Do not despise your fiancée Mary!' (Bertinetto, 2009: 42)

5.2.6. Tapieté (Tupi-Guaranian)

In Tapieté standard negation is expressed by means of affixation attaching the suffix *-ä* to the verb (130) (Gonzalez, 2005: 250). The structure of negative clauses in Tapieté is symmetric since no differences between the negatives (130) and affirmatives (131) are found beyond the negative suffix. Prohibitive constructions in Tapieté use the prohibitive particle *awɨ* in pre-verbal position (132), different from the negative strategy used in declaratives (161). In the example future is optional

(130) *a-karu-ä*
1SG.ACT-eat-NEG
'I did not eat' (Gonzalez, 2005: 191)

(131) *a-karu*
1SG.ACT-eat
'I eat / I ate' (Gonzalez, 2005: 155)

(132) *awɨ* *e-mi-kwi*
PROH IMP-move-FUT
'Do not move!' (Gonzalez, 2005: 250)

TABLE 7: SUMMARY OF THE VALUES IN THE CHACOAN LANGUAGES

Language	Type of negative marker	Order of negative marker and Verb	Structure of SN	Prohibitives
Wichí	Affix	Optional double negation	Symmetric	Same as SN
Pilagá	Affix	Prefix	Symmetric	No data
Lule	Particle	postverbal	Symmetric	Different from SN
Vilela	Affix	Suffix	Symmetric	Different from SN
Ayoreo	Particle	preverbal	Symmetric	Same as SN
Tapieté	Affix	Suffix	Symmetric	Different from SN

5.3. Amazonia

5.3.1. Tariana (Arawakan)

In Tariana standard negation is expressed by means of affixation. In the case of prefixless verbs, attaching the prefix *ma-* and the suffix *-kade* to the verbal root (134) and in the case of prefixed verbs only the suffix *-kade* (133). This applies only to non-future negative constructions since in future negative constructions Tariana uses the same prefix *ma-* and the suffix *-kásu* (Aikhenvald, 2003: 400; Aikhenvald, 2014: 92). Regarding the order of negation and verb, negation in Tariana is classified as 'optional double negation'. It is relevant to consider that in Tariana some verbs require prefixes expressing number and person while others do not require them, and words can only have one prefix.

The structure of the negative constructions in Tariana is asymmetric since in negative constructions with prefixed verbs (134), the suffix *-kade* is added and the negative prefix *ma-* replace other prefixes such as person suffixes that are used in the affirmatives (135), in the case of prefixless verbs only *-kade* is added (Aikhenvald, 2003: 400). Prohibitive constructions in Tariana are marked with the prohibitive particle *mhaĩda* (136-137), different from the strategy used in negative declaratives (Aikhenvald, 2003: 409).

(133) *Kaɾu-kade-pu-mahka* *nuha.*
be.scared-NEG-AUG-REC.PST.NON.VIS 1SG.SBJ
'I was well and truly not scared' (Aikhenvald, 2014: 89)

(134) *ma-nu-kade*
NEG-come-NEG
'I don't come' (Aikhenvald, 2003: 400)

(135) *nu-nu*
1SG-come
'I come' (Aikhenvald, 2003: 400)

(136) *Mhaĩda* *pi-ni!*
PROH 2SG-do
'Don't do (this)!' (Aikhenvald, 2003: 97)

(137) *Mhaĩda* *munumeni!*
PROH mutter
'Don't mutter!' (Aikhenvald, 2003: 97)

5.3.2. Yanesha (Arawakan)

In Yanesha, also known as Amuesha, standard negation is expressed by means of a bipartite negative construction with the negative particle *ama* and the enclitics *=e* or *=o* (138), depending on the precedent consonant. The negative particle *ama* occurs in preverbal position, usually at the beginning of the clause, and the enclitics *=e* or *=o* following the verb. Yanesha has three different negative particles: *ama*, for first-hand information, *año'* for reportative, and *arepa't* for mirative (Duff-Tripp, 1997: 128). The structure of the negative constructions is symmetric as seen comparing (138) and (139). In prohibitive constructions, Yanesha uses the same negative marker *ama* and *=o*/*=e* used in declaratives and the non-specified subject suffix *-ats* on the verb (170). Sometimes the future tense clitic *=ch* can be used after *ama*.

(138) *Ama* *muen=o*
NEG want=NEG
'(She/he) don't want / didn't want' (Duff-Tripp, 1997: 128)

(139) *huapa*
come
'(He/she) comes / came' (Duff-Tripp, 1997: 113)

(140) *Ama=ch* *pep-ats-t-o* *atef.*
NEG=FUT do-N.SUBJ-epentethic.suffix-NEG that
'Don't do that!' (Duff-tripp, 1997: 114)

5.3.3. Kokama-Kokamilla (Tupian)

In Kokama, standard negation is expressed by means of the negative particle *tɨma* (141). The particle *tɨma* appears in preverbal position (Vallejos 2010: 531). The structure of negative constructions in Kokama is symmetric since no difference between the negative (141) and the affirmative (142) are found apart from the negative particle.

Prohibitive constructions use the prohibitive particle *ina* (143), different from the strategy used in declaratives.

(141) *tɨma y=ikua*
NEG 3SG.F=know
'She doesn't know' (Vallejos, 2010: 543)

(142) *tsa=yamimi*
1SG.F=hide
'I hide' (Vallejos, 2010: 512)

(143) *ina yamɨma*
PROH be.sad
'Don't be sad!' (Vallejos, 2010: 562)

5.3.4. Gavião (Tupian)

In Gavião standard negation is expressed by means of the particle *ọ́o*, this particle appears in pre-verbal position (144), usually at the beginning of the clause (Moore, 1984). The structure of the negative construction is symmetric since no difference between negatives (144) and affirmatives (145) are found beyond the negative particle. Prohibitive constructions can be marked by the suffix *-ká* as in (146) or by a special form of the second person as in (147), a negative strategy different from declaratives.

(144) *ọ́o tá-ma-álo díá teé eé abí káre-á*
NEG 3PL-PST.ASRT-come soon cont there from yet-s.m
'they didn't return soon from there' (Moore, 1984: 52)

(145) *eé pí bó té éèt táa-jálá kí*
that after TOP NASRT (3SG)-PST.DEF.NASRT 3PL-leave again
'After that he left them again' (Moore, 1984: 51)

(146) *ẹ-zá-ká má ivɨlɨ teé ále-á*
2SG-NPST.DEF.DUR-PROH.MOT other leave.dm cont FUT-s.m
'Don't leave anything there! (Moore, 1984: 78)

(147) *ẹ́ét ẹ-gerè díá teé-á*
2.SG(NPST.DEF.NDUR.PROH.MOT) 2SG-sleep soon cont-sm
'Don't sleep soon!' (Moore, 1984: 79)

5.3.5. Tiriyó (Cariban)

In Tiriyó standard negation is expressed by means of affixation attaching the suffixes *-(s)ewa or -(j)ewa* to the verb (148). According to Meira (1999: 335), negative constructions in Tiriyó are copular clauses with a "negative adverbial" verb form. So, following Meira (1999: 558) 'The negative equivalent of a conjugated clause is a copular or equative clause built around the negative form of the corresponding verb stem: to say, 'I don't kill birds', Tiriyó speakers use 'I am birds not-killing'. Because of these structural differences between the negative (148) and affirmative (149), the constructional structure is asymmetric. Prohibitive constructions (150) use the same negative used in declaratives (Meira, 1999: 559).

(148) *i-këhtun-jewa* *ëmë*
GNR-scream-NEG 2
'You are not screaming.' (Meira, 1999: 559)

(149) *ë-këhtun-ja-e*
2SG-scream-PRS-IPFV-CERT
'You are screaming.' (Meira, 1999: 559)

(150) *i-jëikëëkë* *in-apëë-sewa* *eh-kë*
3-wound 3OBJ-catch-NEG COP-IMP
'Don't touch (lit, catch) his/her wound.' (Meira, 1999: 559)

5.3.6. Kalapalo (Cariban)

In Kalapalo, standard negation is expressed by means of the particle *(i)ñalï*, Sometimes the particle *afitï* is also used as a denial particle (152) (Basso, 2012: 370). These particles appear in preverbal position. The structure of the negative construction is asymmetric since apart from the negative particle, requires the class inclusion copula suffix *-i* (152) while affirmatives (151) do not (Basso, 2012, 269). Negative clauses also can optionally include the negative quantifier *-la* (never). Prohibitive constructions use the 'preventative' prefix *ke-*, different from the negative marker used in negative declaratives (153).

(151) *e-te-lu–iŋo=lefa.*
2-go.away-PNCT.IND-POT=MT
'You will go' (Basso, 2012: 517)

(152) *iñalu u-te-lu-i*
NEG 1-go.away-PNCT.IND-COP
'I won't go away.' (Basso, 2012: 370)

(153) *ke-te-ŋa:*
PREV-go.away-IMP
'Don't go away!' (Basso, 2012: 321)

5.3.7. Tucano (Tucanoan)

In Tucano standard negation is expressed by means of the suffixes *-ti* or *-we*. The suffix *-ti* (155) is not used in present first, second and third (inanimate) persons, in these cases, the suffix *-we* (154) are used instead (West, 1980: 53). These suffixes are attached to any verb except the negative verbs *móó* (not have) and *marí* (not be). The structure of negative constructions is symmetric since no difference is found between negative (155) and affirmative (156) beyond the negative suffix. Prohibitive constructions use the prohibitive suffix *-tícã'* (157), different from the suffixes used in declarative negation (West, 1980: 51).

(154) *ni-we-'e*
to.be-NEG-PRS.1SG
'I am not' (West, 1980: 54)

(155) *ní-ti-mi*
to.be-NEG-PRS.3SG.M
'He is not' (West, 1980: 54)

(156) *ní-mi*
to.be-PRS.3SG.M
'He is' (West, 1980: 54)

(157) *ba'á-tícã'-ña*
eat-PROH-IMP
'Don't eat!' (West, 1980: 51)

5.3.8. Secoya (Tucanoan)

In Secoya standard negation is expressed by means of the auxiliary verbs *pa*, that means ‘not be’ or ‘refuse’, and *peo*, that means ‘not have’ or ‘be without’ (Levinson, 1990: 64). The negative auxiliary verbs *pa* and *peo* appear in postverbal position (158). The structure of negative constructions is asymmetric since the negative auxiliary verbs carries the tense and person inflection in the negative (158) instead of the main verb as in affirmative (159). Prohibitive constructions use the same negative auxiliary verbs used in SN constructions (160).

(158) *cueso* *hua'i-re* *ai-ñe* *pa-huë*
capibara meat-DO eat-NR.CMPL NEG.to.be-PST
‘we didn’t eat capibara meat’ (Levinson, 1990: 65)

(159) *Ja-o* *isi-si* *cura-re* *hua-ni* *aë-'ë*
that-nf.f give-CMPL chicken-DO kill-SEQ eat-PST
‘I killed the chicken she had given me and ate it’ (Levinson, 1990: 78)

(160) *ti* *sa* *më-ni* *ña-ñe* *pa-jë'ë*
absolutely go go.up-SEQ see-NR.N.CMPL be.NEG-IMP
‘(Absolutely) don’t go up to see her! (Levinson, 1990: 106)

5.3.9. Karajá (Macro-Jêan)

In Karajá standard negation is expressed by means of the clitic *=kõ* (Ribeiro, 2012: 63). This clitic occurs in postverbal position (161). The structure of the negative construction is symmetric since no difference between the negative (161) and the affirmative (162) is found beyond the negative clitic. Prohibitive constructions (163) use the same negative element used in SN constructions.

(161) *ɗəkɪ* *ɔhã* *Ø-r-ɪ-r=kõ-r-e*
he armadillo 3-DIR-TR-eat=NEG=DIR-IPFV
‘He doesn’t eat armadillo.’ (Ribeiro, 2012: 63)

(162) *ɗəkɪ* *kədʊra* *Ø-rɪrɔ=r-e=kre*
he fish 3-DIR-TR-eat=DIR-IPFV
‘He ate the fish / He eats fish.’ (Ribeiro, 2012: 60)

(163) *kia=bə̃* *rira=kõ=bə̃*
there=LOC walk.NOM=NEG=LOC
'Don't walk over there!' (Ribeiro, 2012: 245)

5.3.10. Apinayé (Macro-Jêan)

In Apinayé standard negation is expressed by means of the 'clitic sequence' *ket=nɛ* both together Oliveira, 2005: 248; Ham, 1961: 8). Since the clitic sequence is not separable and it appears like a single unit will not be considered as an instance of double negation. This clitic sequence appears in postverbal position (164) (Ham, 1961). The structure of the negative construction is symmetric as seen comparing (164) and (165). Prohibitive constructions (166) use the same negative clitic sequence used in declaratives.

(164) *nã* *pa* *ʔapror* *ket=nɛ*
PST 1SG 3-buy NEG
'I didn't buy it.' (Ham, 1961: 8)

(165) *nã* *pa* *ʔapro*
PST 1SG 3-buy
'I bought it.' (Ham, 1961: 8)

(166) *aprõt* *ket=nɛ*
2SG.run NEG.
'Don't run!' (Ham, 1961: 12)

5.3.11. Kashibo-Kakataibo (Panoan)

In Kakataibo standard negation is expressed by means of the enclitic *=ma* (Zariquiey, 2011: 538). The enclitic *=ma* can appear in different orders, however in SN constructions it appears in postverbal position (168), at the end of the verb stem (Zariquiey, 2011: 538). The structure of the negative construction is asymmetric since negatives (168) do not include person marking in the verb that is included in their affirmative (167) counterpart. Prohibitive constructions (170) use the same negative clitic *=ma* used in declarative negation.

(167) *‘ë=x* *kana* *‘ux-pan-i-n*
1SG=S NAR.1SG sleep-first-IMPF-1/2
‘I will sleep first (and then do something else).’ (Zariquiey, 2011: 532)

(168) *‘ë=x* *kana* *‘ux-pan-i=ma*
1SG=S NAR.1SG sleep-first-IMPF=NEG
‘I will not sleep first (I will do something else before).’ (Zariquiey, 2011: 532)

(169) *‘ux-ax=ma* *ka* *‘i’*
sleep-S/A>A=NEG NAR do.IMP
‘Don’t sleep!’ (Zariquiey, 2011: 496)

5.3.12. Matsés (Panoan)

In Matsés standard negation is expressed by means of affixation attaching the suffix *-en* to the verb (170). Matsés has a wide inventory of negative morphemes used in other negative contexts that are out of the scope of this work and can be seen in Fleck (2003: 996). Negative constructions have an asymmetric structure since they occur in ‘adjectivized’ non-finite clauses that require the auxiliary verb *ic* ‘be’ (170), which carries the regular verbal inflection instead of the main verb as in affirmatives (171) (Fleck: 2003: 997). Prohibitive constructions (172) use the prohibitive suffix *-enda,* different from the negative suffix used in declarative negatives (170).

(170) *mibi* *bun-en-quio* *ic-e-bi*
2.ABS want-NEG-AUG be-N.PST-lSG
‘I don't like/want you.’ (Fleck, 2003: 1042)

(171) *mibi* *bun-e-bi*
2.ABS want-NPST-lSG
‘I like/want you.’ (Fleck, 2003: 1042)

(172) *cun* *shubu-no* *nid-enda*
1.GEN house-LOC go-PROH
‘Don't go to my house!’ (Fleck, 2003: 993)

5.3.13. Shiwilu (Kawapanan)

In Shiwilu, also known as Jebero, standard negation is expressed by means of affixation attaching the suffix *-in* to the verb (173) (van Schie, 2018: 17). The structure of negative constructions is symmetric since no difference between affirmative (174) and negative (175) is found beyond the negative suffix. Prohibitives constructions (176) use the negative particle *aner,* and the suffix *-ta* on the verb, this strategy is different from the one used in negative declaratives.

(173) *kwa* *chuchu-sha* *ka'-ap-in-n-e'*
1SG forest.meat-DIM eat-PROG-NEG-PRD-1
'I am not eating meat from the forest' (van Schie, 2018: 17)

(174) *chuchu-sha* *ka'-rt-e'* *kwa*
forest.meat-DIM eat-PRD-1SG 1SG
'I will eat meat from the forest' (van Schie, 2018: 6)

(175) *kwa* *chuchu-sha* *ka'-in-ert-e'*
1SG forest.meat-DIM eat-NEG-PRD-1SG
'I will not eat meat from the forest' (van Schie, 2018: 17)

(176) *aner'* *ya-wencha-ta*
PROH DES-come-PROH
'Don't come!' (van Schie, 2018: 14)

5.3.14. Cavineña (Tacanan)

In Cavineña standard negation is expressed by means of the enclitic *=ama* which appear in post-verbal position (178). The structure of negative constructions is symmetric since no differences between affirmatives (177) and negatives (178) is observed. According to Guillaume (2008: 108) 'negative clauses are not significantly different from an affirmative clause Although more work might reveal some differences. Prohibitive constructions use the prohibitive suffix *-ume* (179), different from the negative used in SN constructions (Guillaume, 2004: 107).

(177) *Miguel* *=tu-ke* *=Ø* *peyainime* *ba-ya*
Miguel =3SG-FM (=1SG.ERG) sad see-IPFV
'I see that Miguel is sad.' (Guilllaume, 2008: 367)

(178) *[Yukwana* *e-majaka]* *=Ø* *adeba-ya=ama.*
that.stuff.over.there NPF-space (=1SG.ERG) know-IPFV=NEG
'I don't know these places over there.' (Guilllaume, 2008: 429)

(179) *Mi-ke* *je-ume!*
2SG-FM come-PROH
'You (SG) don't come!' (Guilllaume, 2008: 183)

5.3.15. Sanuma (Yanomamian)

In Sanuma standard negation is expressed by means of the negative auxiliary verbs *mi* (180) or *ma* (181), that can be modifiers in the verb phrase and also main verbs on their own. These auxiliary verbs occur in post-verbal position. According to Borgman (Borgman, 1990: 81) '*ma* indicates negative existence (copular) verb, while *mi*, structurally, fits in with the descriptive verbs and indicates 'zero, none' in terms of number or quantity'. Borgman (1990: 82) states that is difficult to determine the contexts of occurrence of one or the other but apparently it is determined by aspectuality. In some cases, it is possible to use any of them (Borgman, 1990: 85).

The structure of negative constructions is asymmetric since in negatives (180-181) the negative auxiliaries carry the tense and aspect inflection instead of the main verb as in affirmatives (182). Prohibitive constructions use the prohibitive particle *tihe* (183), different from the strategy used in declarative negatives, in post-verbal position. The prohibitive "has only the 3rd person pronoun for subject except for transitive and ditransitive constructions, which have the second person" (Borgman, 1990: 78).

(180) *sa* *te* *taö* *mi*
1.SG 3SG know NEG
'I don't know it.' (Borgman, 1990: 85)

(181) *sa* *höla* *ma-ne*
1.SG fight NEG-PRS
'I am not fighting.' (Borgman, 1990: 82)

(182) *sa* *inamo-ti* *kule*
1.SG play-CONT PRS
'I am playing (continually)' (Borgman, 1990: 150)

(183) *a* *ku* *ko-ta* *tihe*
3.SG say return-EXCL PROH
'Don't say that again!' (Borgman, 1990: 79)

5.3.16. Aguaruna (Jivaroan)

In Aguaruna standard negation is expressed by means of suffixation attaching the suffix *-tsu* to the verb (185). The suffix *-tsu* also has the meaning of speculative. This suffix is used for present and remote past, in all other tenses *-tʃa* (184) is used (Overall, 2007: 324). The structure of negative constructions is symmetric since there are no structural differences between affirmatives (186) and negatives (185) beyond the presence of *-tsu* or *-tʃa*. The only difference is the use of the focus suffix *-ka* in the subject when this occurs in the sentence, however its occurrence is optional (Overall, 2007: 234, 482). Prohibitive constructions in Aguaruna use the prohibitive/interrogative suffix *-pa* and the apprehensive suffix *-i* (187). It not clear whether the occurrence of intensive or attenuative suffixes is obligatory or not in prohibitives and imperatives.

(184) *daka-sa-ʧa-tata-ha-i*
wait-ATT-NEG-FUT-1SG-DECL
'I will not wait' (Overall, 2007: 3)

(185) *wi-ka* *buuta-tsu-ha-i*
1SG-FOC cry.IPFV-NEG-1SG-DECL
'I am not crying' (Overall, 2007: 325)

(186) *(wi)* *wɨ-a-ha-i*
(1SG) go-IMPFV-1SG-DECL
'I am going' (Overall, 2007: 441)

(187) *aʧi-ka-i-pa*
touch-INTS-APPR-2.INT/PROHIB
'Don't touch!' (Overall, 2007: 359)

5.3.17. Hup (Nadahup)

In Hup standard negation is expressed by means of affixation attaching the suffix *-nɨ́h* to the verb root (188). The structure of the negative construction is asymmetric since there are further differences between negatives (188) and affirmatives (189) beyond the negative markers. According to Epps (2008: 726) the negative markers in Hup 'usually takes the place of the (otherwise obligatory) Boundary Suffix on the verb stem in the affirmative clause'.

Prohibitive constructions use the same negative suffix *nɨ́h* (191) used in declaratives. Prohibitives also use the adverbial/Telic enclitic *=yɨʔ* along with the affirmative imperative form of the verb 'to be' *-níh*, which acts as the main clause producing the construction [Verb-*nɨ́h* =(*yɨʔ*) *níh*] (Verb-NEG=TEL be.IMP). The entire construction (*-nɨ́h =yɨʔ níh*) is frequently shortened to *-níníh* (Epps, 2008: 800) as in (190). So, both forms are possible, but since *-níníh* is formed from the negative suffix *-níh*, it is classified as using the same negative marker used in SN constructions.

(188) *maŋgă* *hɨ́d-ăn* *təw-nɨ́h*
Margarita 3PL-OBJ scold-NEG
'Margarita didn't yell at them.' (Epps, 2008: 726)

(189) *maŋgă* *hɨ́d-ăn* *təw-ay*
Margarita 3PL-OBJ scold-INCH
'Margarita was yelling at them.' (Epps, 2008: 726)

(190) *cuʔ-níníh!*
grab-PROH
'Don't touch!' (Epps, 2008: 800)

(191) *tæ̃ʔnɔhɔ̃-nɨ́h=yɨʔ* *níh!*
laugh-NEG=TEL be.IMP
'Don't laugh!' (Epps, 2008: 727)

5.3.18. Kulina (Arawan)

In Kulina standard negation is expressed by means of affixation attaching to the verb the suffixes *-hera* (193), for feminine, or *-hara* (194), for masculine (Dienst, 2014: 126). The structure of the negative construction is symmetric since no differences between affirmatives (192) and negatives (193-194) can be found beyond the occurrence of the negative markers. Prohibitive constructions use the same negatives suffixes *-hera* and *-hara* (241) used in SN constructions.

(192) *amonehe* *Ø-zokhe-ni*
woman 3-die-DECL.F
'The woman died.' (Dienst, 2014: 108)

(193) *amonehe* *Ø-zokhe-hera-ni*
woman 3-die.SG-NEG.F-DECL.F
'The woman didn't die.' (Dienst, 2014: 73)

(194) *makhidehe* *Ø-zokhe-hara-i*
man 3-die.SG-NEG.M-DECL.M
'The man didn't die.' (Dienst, 2014: 73)

(195) *ti-hipa-hara-ho!*
2-eat-NEG.F-IMP.M
'Don't eat it!' (Dienst, 2014: 117)

5.3.19. Sabanê (Nambikwaran)

In Sabanê standard negation is expressed by means of affixation, attaching the suffix *-mi(si)na* to the verb (196). According to Araujo (2004: 132) "generally *-mi(si)na* is realized as *-mina*, even though its long form *-misina* occurs unpredictably'. The structure of the negative construction is symmetric since no differences between negatives (196) and affirmatives (197) are found beyond the occurrence of the negative marker. Prohibitive constructions (198) use the same negative suffix *-mi(si)na* used in SN constructions.

(196) *ay-i-mina-tapanal-i*
go-VS-NEG-FUT.NEUT-ASSR
'She/he does not go.' (Araujo, 2004: 133)

(197) *ay-i-tapanal-i*
go-VS-FUT.NEUT-ASSR
'She/he goes.' (Araujo, 2004: 133)

(198) *taw-i-mina*
cut-VS-NEG
'Do not cut!' (Araujo, 2004: 135)

5.3.20. Bora (Bora-Huitoto)

In bora standard negation is expressed by means of the particle *tsá* and the suffix *-tu(ne)* (200) or only the suffix *-tu(ne)* (199), so the negative construction is considered for the purposes of classification as 'Variation between negative word and affix'. The particle *tsá* occurs in pre-verbal position and the suffix *-tune* is attached to the verb in the cases of sentences with preverbal subjects and *-tu is used* in the case of postverbal subjects (Thiesen and Weber, 2014: 326). Since the negative construction can use both *tsá ...-tu(ne)* or only *-tu(ne)* it is classified as optional double negation.

The structure of the negative construction is symmetric since no difference between negatives (199-200) and affirmatives (201) are found beyond the occurrence of the negative marker(s). Prohibitive constructions (202) use the suffixes *-hdi(ne)* (*ʔti-ne*) with monosyllabic verbs and *-di(ne)* (*ti-ne*) with polysyllabic ones (Thiesen and Weber, 2014: 330). This marking strategy is different from the one used in declaratives (Thiesen and Weber, 2014: 333).

(199) *Májchó-tuú-be*
eat-NEG-SG.M
'He has not eaten (bread).' (Thiesen and Weber, 2014: 327)

(200) *Tsá o ááhɨve-tú.*
NEG 1 go.home-NEG
'I did not go home' (Thiesen and Weber, 2014: 326)

(201) *Iijyúijyu* *o* *péé*
yesterday 1 go
'I went yesterday.' (Thiesen and Weber, 2014: 159)

(202) *¡Peh-díñe! / ¡Peh-dí!*
go-PROH
'Don't go!' (Thiesen and Weber, 2014: 330)

5.3.21. Urarina (Isolated)

In Urarina standard negation is expressed by means of suffixation, attaching to the verb a suffix that can take several forms such as *-ene*, *-a*, *-e*, *-i*, *ʔe*, etc. (203-204) According to Olavsky (2006: 484) these suffixes 'are used with regard to person, conjugation class, and other factors [...] I consider them as projections of one morpheme, even though they have quite different forms'. The structure of negative constructions is symmetric since no differences between negatives (203-204) and affirmatives (205) are found beyond the occurrence of the negative markers.

Prohibitive constructions use the negative particles *nihjanria*, *hjauiɲe* (or variant *ɲaauiɲe*), or *kwa* (Olavsky, 2006: 352). The first two are used for strong prohibition while the third is used for 'weak temporary prohibition' (Olavsky, 2006: 579). Prohibitives mark the second person singular in the verb except for the ones that use *kwa* in which 'all person marking is neutralized and the neutral suffix *-a* is attached to the verb.' (Olavsky, 2006: 352). In sum prohibitive constructions (206-207) use negative strategies different from the ones used in declaratives.

(203) *kauatɛa-ĩ* *itɛa-ʔe-i*
good-PRT do-NEG-2SG
'You did not do it well.' (Olavsky, 2006: 486)

(204) *itɛa-si-e-i=ni=tau*
do-CMPL-NEG-2=DIREV=REAS
'You did not do it.' (Olavsky, 2006: 504)

(205) *itɕa-i=ni=tau*
do-2=DIREV=REAS
'You did it (earlier today).' (Olavsky, 2006: 497)

(206) *hjauiŋe* *hja-i* *kaɯ̃=ne*
PROH urinate-2SG here=NEGF
'Don't urinate here!' (Olavsky, 2006: 507)

(207) *mhjauria* *be-i=ŋe*
PROH tell-2SG=NEG
'Don't tell it!' (Olavsky, 2006: 507)

5.3.22. Trumai (Isolated)

In Trumai standard negation is expressed by means of the particle *tak* (208). The particle *tak* appears in postverbal position (Guirardello, 1999: 232). In Trumai clauses can have different word orders, but *tak* occurs always after the verb. The structure of negative constructions is symmetric since no differences between negatives (208) and affirmatives (209) are found beyond the occurrence of the negative marker. Prohibitive constructions use the same negative particle *tak* (210) used in SN constructions. (Guirardello, 1999: 111)

(208) *ha* *katnon* *tak*
1.ABS work NEG
'I am not working' (Guirardello, 1999: 195)

(209) *Ha* *katnon*
1.ABS work
'I work' (Guirardello, 1999: 195)

(210) *di* *tak* *wanach*
woman NEG IMP
'Do not marry!' (lit: be a woman). (Guirardello, 1999: 114)

5.3.23. Yurakaré (Isolated)

In Yurakaré standard negation is expressed by means of the particle *nish* or *nij* (211). This negative particle appears in preverbal position (van Gijn, 2006: 286). The structure of negative constructions is symmetric since no differences between negatives (211) and affirmatives (212) are found beyond the occurrence of the negative marker. Prohibitive constructions use the prohibitive suffix *-yu* on the verb (213), different from the negative marking used in declaratives.

(211) *nish* *bobo-ø=w=ya* *latiji*
NEG hit.kill-3=PL=NVR subsequently
'They did not kill him then.' (van Gijn, 2006: 287)

(212) *bobó-ø=w=ya*
kill-3=PL=NVR
'They killed him.' (van Gijn, 2006: 46)

(213) *ti-n-dumaja-yu*
1SG-IO-bother-PROH
'Don't bother me!' (van Gijn, 2006: 161)

5.3.24. Movima (Isolated)

In Movima standard negation is expressed by means of the negative particle *kas*. This particle occurs in preverbal position (214). The structure of the negative construction is asymmetric since it requires, apart from the negative element, the nominalization of the verb (Haude, 2006: 316) as seen comparing (214) and (215). Prohibitive constructions use the particle *ka'* (216), different from the particle used in SN.

(214) *kas* *dum<a>ye-wa=is* *is* *we:ye=is*
NEG encounter<DO>-NR=PL.A PL ox=PL.A
'They didn't find their ox.' (Haude, 2006: 469)

(215) *man<a>ye=is* *pa:ko* *is* *o:ma*
meet<DO>=PL.A dog PL tapir
'The dogs found tapirs.' (Haude, 2006: 329)

(216) *ka'* *rey* *tan-na=n*
PROH again cut-DO=2
'Don't cut it!' (Haude, 2006: 442)

5.3.25. Puinave (Unclassified)

In Puinave standard negation is expressed by means of suffixation, attaching the prefix *sãn-* to the verb (217) (Girón, 2008: 259). The structure of negative constructions is asymmetric since in negatives there is a morpho-phonological change in which all the verbs ending in codas different from /m, p, u, n, t, i/ change to /t/ as seen in example (217). It also seems that negatives (217) also differ from affirmatives (218) in that negatives do not have tense marking. Prohibitive constructions (219) use the prohibitive prefix *kupɤi-* , different from the negative used in SN constructions, along with the second person singular prefix *ma-* on the verb (Girón, 2008: 396).

(217) *ja-sãn-kiɨ́*
3SG-NEG-llorar.NEG
'He doesn't/didn't cry' (Girón, 2008: 260)

(218) *a-kiḱ-di*
1SG-cry-PST
'I cried' (Girón, 2008: 320)

(219) *ma-kupɤi-kuɨ́*
2SG-PROH-scape
'Don't scape!' (Girón, 2008: 397)

5.3.26. Kwaza (Unclassified)

In Kwaza standard negation is expressed by means of affixation, attaching the suffix *-'he* to the verb (220) (van der Voort, 2004: 520). The structure of negative constructions is symmetric since no differences between negatives (220) and affirmatives (221) are found beyond the occurrence of the negative marker. Prohibitive constructions use the same negative suffix *-'he* used in SN constructions plus the prohibitive suffix *-ky* (222).

According to van der Voort (2004: 319) there are three prohibitives, but only the most basic one is considered here. The other two are negative exhortative and "monitory".

(220) *areta-'he-da-ki*
know-NEG-1SG-DEC
'I don't know' (van der Voort, 2004: 520)

(221) *wai-'nãi* *are'ta-da-ki*
good-NOM know-1SG-DEC
'I know very well' (van der Voort, 2004: 701)

(222) 'ja-he-ky
eat-NEG-PROH
'Don't eat!' (van der Voort, 2004: 321)

5.3.27. Kakua (Unclassified)

In Kakua standard negation is expressed by means of affixation, attaching the suffixes *-kan* or *-kap* to the verb (223). The structure of the negative construction is asymmetric, since when the negative suffix is attached to the verb, the declarative enclitic *=na* that appear in the affirmatives does not occur, as seen comparing (223) and (224). Prohibitive constructions use the prohibitive suffix *-kabuhú* (225), different from the negative strategy used in SN constructions.

(223) *beh-kan=ka*
go-NEG=ASS
'(I am) not going' (lit: not going) (Bolaños, 2016: 335)

(224) *beh=na=ka*
go=DECL=ASS
'I am going' (Bolaños, 2016: 334)

(225) *ma=ʔɨm-kabuhú*
2SG=be.afraid-PROH
'Don't be afraid!' (Bolaños, 2016: 339)

5.3.28. Mosetén (Unclassified)

In Mosetén, also known as Chimané or Tsimané, standard negation is expressed by means of the particle *jam*, this particle appears in preverbal position (226). The structure of negative constructions is symmetric since no differences between negatives (226) and affirmatives (227) are found beyond the occurrence of the negative particle *jam*. Prohibitive constructions (228) use the same negative marking strategy as SN constructions.

(226) *Yae* *jam* *jaem-e-'* *shokdye'*.
1SG NEG good-VI-3.F.0BJ chicha
'I do not like chicha.' (Sakel, 2004: 329)

(227) *Yae* *jaem-e-'* *shokdye'*.
1SG good-VI-3.F.0BJ chicha
'I like chicha.'(Sakel, 2004: 329)

(228) *Jam* *mo'* *jaem'-wa!*
NEG 3.F.SG good-VI.IMP.TR.F.SG.0BJ
'Don't do that!' (Sakel, 2004: 198)

TABLE 8: SUMMARY OF THE VALUES OF THE FEATURES IN THE AMAZONIAN LANGUAGES

Language	Marking of SN	Order of negative marker and Verb	Structure of SN	Prohibitives
Tariana	Affix	Optional double negation	Asymmetric	Different from SN
Yanesha	Double negation	Double negation	Symmetric	Same as SN
Kokama	Particle	Preverbal	Symmetric	Different from SN
Gavião	Particle	Preverbal	Symmetric	Different from SN
Tiriyó	Affix	Suffix	Asymmetric	Same as SN
Kalapalo	Particle	Preverbal	Asymmetric	Different from SN

Tucano	Affix	Suffix	Symmetric	Different from SN
Secoya	Auxiliary verb	Postverbal	Asymmetric	Same as SN
Karajá	Particle	Postverbal	Symmetric	Same as SN
Apinayé	Particle	Postverbal	Symmetric	Same as SN
Kashibo-Kakataibo	Particle	Postverbal	Asymmetric	Same as SN
Matsés	Affix	Suffix	Asymmetric	Different from SN
Shiwilu	Affix	Suffix	Symmetric	Different from SN
Cavineña	Particle	Postverbal	Symmetric	Different from SN
Sanuma	Auxiliary verb	Postverbal	Asymmetric	Different from SN
Aguaruna	Affix	Suffix	Symmetric	Different from SN
Hup	Affix	Suffix	Asymmetric	Same as SN
Kulina	Affix	Suffix	Symmetric	Same as SN
Sabané	Affix	Suffix	Symmetric	Same as SN
Bora	Variation between negative word and affix	Optional double negation	Symmetric	Different from SN
Urarina	Affix	Suffix	Symmetric	Different from SN
Trumai	Particle	Postverbal	Symmetric	Same as SN
Kwaza	Affix	Suffix	Symmetric	Same as SN
Yurakaré	Particle	Preverbal	Symmetric	Different from SN
Kakua	Affix	Suffix	Asymmetric	Different from SN
Mosetén	Particle	Preverbal	Symmetric	Same as SN
Movima	Particle	Preverbal	Asymmetric	Different from SN
Puinave	Affix	Prefix	Asymmetric	Different from SN

CHAPTER 6:

DISCUSSION OF RESULTS

In this section the comparison of the Andean languages to each other, the comparison of the Andean languages to the sample of South American languages and the comparison to the World Atlas of Language Structures' global sample are presented. The comparison is done firstly globally including all the features and the languages of the sample and comparative sample and including the computational analysis of the data. Secondly, comparing the values for each individual feature in the languages of the sample and comparing them to the comparative sample of South American languages and the global sample from WALS.

6.1. General discussion of features

In this section the comparison in done over the base of the computational analysis from all the features combined. The computational procedure explained in section 3.6. Procedure and data analysis resulted in the calculation of the typological distance between the languages of both the Andean and comparative samples. The typological distance between the languages is represented by heatmaps and two-dimensional maps. The results of these representations are discussed below.

6.1.1. Typological distance in heatmaps

In the following heatmaps, the clearer squares represent a lower typological distance between the languages in the X and Y axis that intersect at a certain square. For example, the distance between Trumai (X axis) and Trumai (Y axis) is naturally zero, so it is represented in a clear color, while the distance between Trumai (X axis) and Puinavé (Y axis) is much higher so it is represented with a darker color. When a group of languages have a lower typological distance, they form a cluster of languages represented in clear color.

The analysis considering all the features shows that at least three clusters of languages that show low typological distance between the languages included in them, that is, are more similar to each other, can be identified. Regarding the Andean languages, they appear in these three clusters. In the first cluster (upper left) we find Puquina, Allentiac, Santiago del Estero Quechua, Ecuadorian Quechua. In the second cluster (center) we find Yauyos, Cajamarca, Ayacucho and, Pacaraos Quechua, Jaqaru, Aymara, and Mochica. And in the third cluster (lower right) we find Mapudungun, Kunza and Ancash Quechua. There are also the cases of Chipaya, Cholón and Millcayac that are not grouped in any of these clusters. It is also necessary to notice that the first two clusters while different are reasonably similar to each other.

FIGURE 3: HEATMAP SHOWING THE CLUSTERING OF THE LANGUAGES

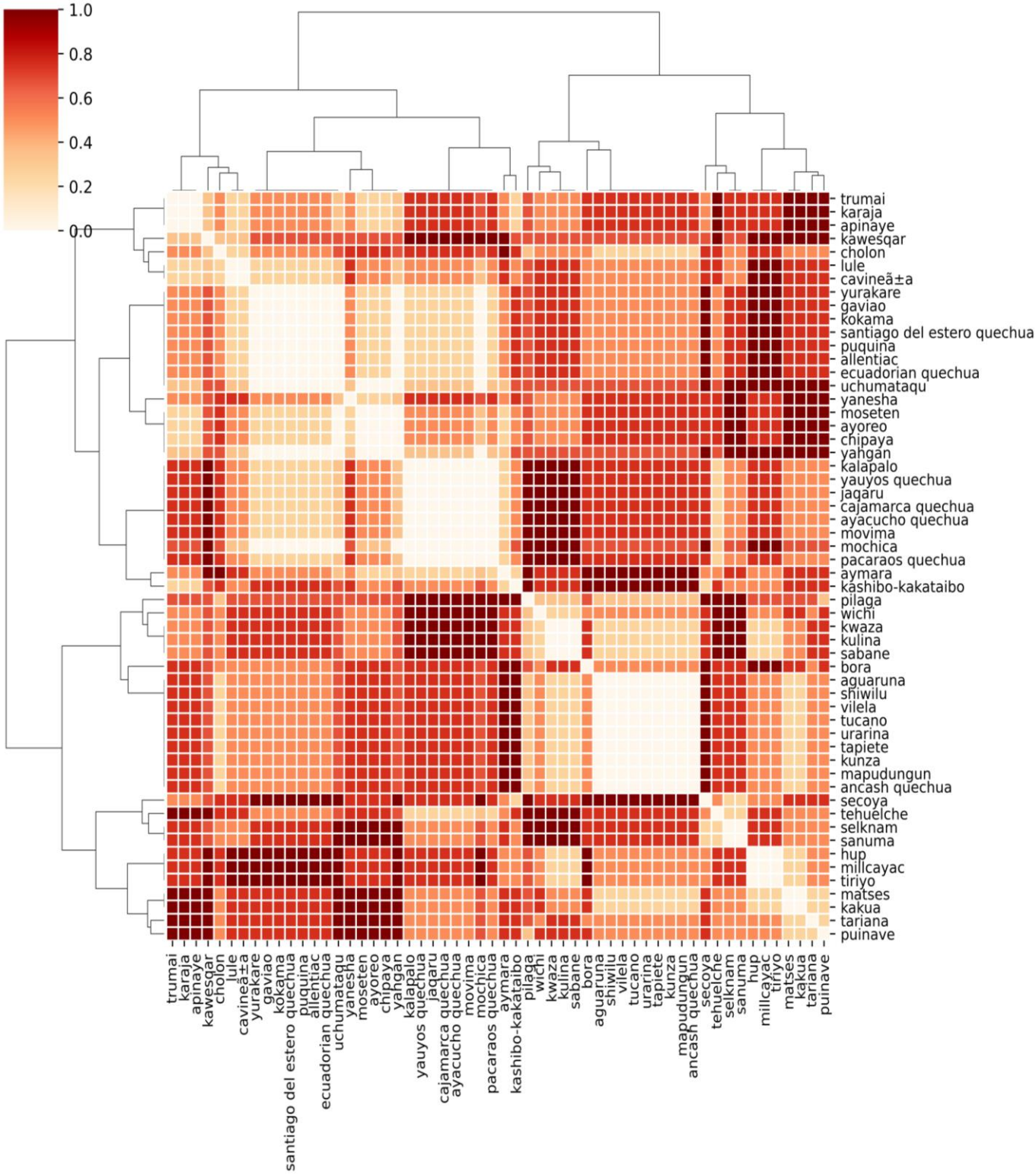
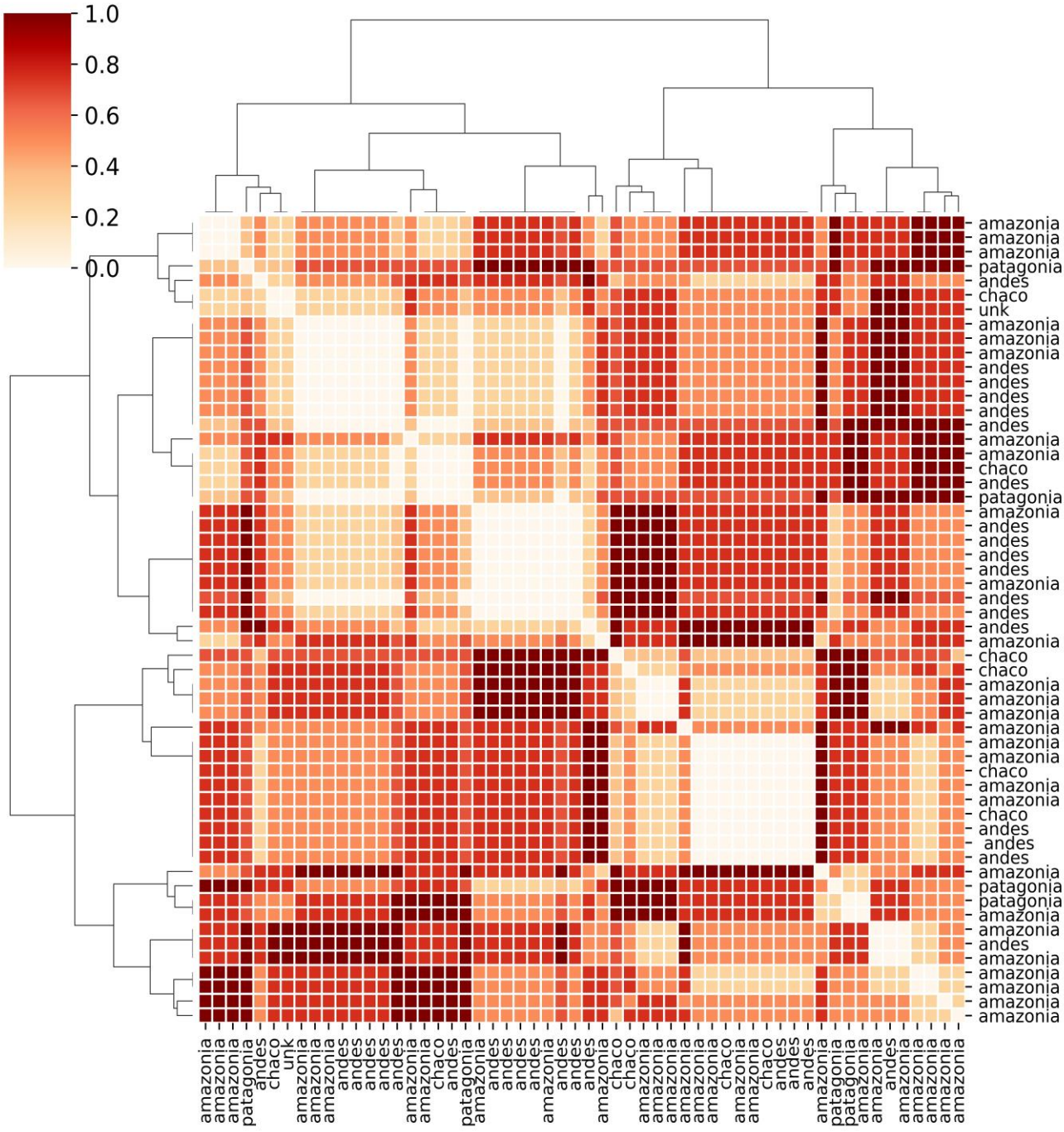


FIGURE 4: HEATMAP SHOWING THE CLUSTERING OF THE LANGUAGES ACCORDING TO THEIR AREA



If we look at these distributions of the Andean languages in different clusters some explanations for such distribution can be suggested. In the first cluster (upper left) we found Puquina, Allentiac, Santiago del Estero Quechua, Ecuadorian Quechua. All of them are languages with negative particles in preverbal order, symmetric structure and have prohibitive markers different from the negative markers used in SN constructions. This cluster includes also Gavião, Kokama and Yurakaré -all of them Amazonian- which share the same features.

In the second cluster (center) we find Yauyos, Cajamarca, Ayacucho and, Pacaraos Quechua, Jaqaru, Aymara, and Mochica. All these languages also have negative particles in preverbal order and prohibitive markers different from the negative markers used in SN constructions, except for Aymara that use the same negative marker in prohibitive and SN constructions and is slightly different in the cluster. However, in this cluster, differently from the first cluster, the languages have an asymmetric structure, except for Mochica that was left unclassified.

It is interesting to notice that the Quechuan languages in this cluster are the ones that would be in an intermediate stage of the Jespersen cycle and the fact that these are the Quechuan languages with the most similarities to Aymaran languages, considering the well-known intense and long-lasting contact relations between both families. These are also the languages from central Andes considered to be the core of the Andean linguistic area. However, the relation between the Quechuan Jespersen cycle and Quechuan-Aymaran contact remains to be addressed. This cluster includes also Kalapalo and Movima -both Amazonian- which share the same features. It is also relevant to notice that, in general, the only difference between these languages and the ones in the first cluster is their asymmetric structure of negative constructions. These two clusters include most Andean languages and almost all of central Andes.

In the third cluster (lower right) we find Mapudungun, Kunza and Ancash Quechua. All these languages have affixes, specifically suffixes, as negative markers, symmetric structure and SN constructions and prohibitives use different negative markers. This cluster includes also Aguaruna, Shiwilu, Tucano, and Urarina from Amazonia, and Vilela and Tapieté from Chaco which share the same features. From the three clusters this is the one in which Andean languages are more like languages from other Areas and more different from the rest of Andes.

The distribution of the languages in the clusters shows that Andean languages are grouped in three different clusters, plus three languages outside those clusters. This distribution reflects on one hand the differences between the Andean languages to each other, and on the other, their similarities to other non-Andean languages, both near and far from the Andes. These distribution shows that according to the data from the selected features the Andean languages do not form a single group and are not clearly differentiated from the languages in the comparative sample. Therefore, the distribution of the languages in these clusters does not correspond to the areal divisions considered. However, it can be seen that the first two clusters while different, are reasonably similar to each other. In these two clusters we find most of the Andean languages, and almost all central Andean languages.

6.1.2. Typological distance in two-dimensional map

In the following 2D representations, each language is represented by a typological vector that assigns numbers to the different ordered feature and then ordered in the X and Y axis according to their typological vector. The 2D representation groups languages according to the similarities in their typological vectors, that is, their typological distance. Apart from representing the distance between languages, this type of representation allows to test whether the languages form groups based on the areas they belong to.

The software also permits to evaluate the quality of the clustering technique by means of the calculation of the silhouette coefficient or silhouette score. The silhouette score is a metric used to evaluate this, and its values ranges from -1 to 1. This metric can suggest which is the optimal number of clusters for the representation. It is important to notice that the optimal number of clusters should not exceed 5 since a bigger number is only necessary when the volume of data is bigger and more diverse and should be bigger than 2 since a lower number might oversimplify the analysis. In this case, the optimal number of clusters is 3 with a silhouette score of 0.52 as shown in the silhouette score in Figure 5 below.

FIGURE 5: SILHOUETTE SCORE OF THE CLUSTERING

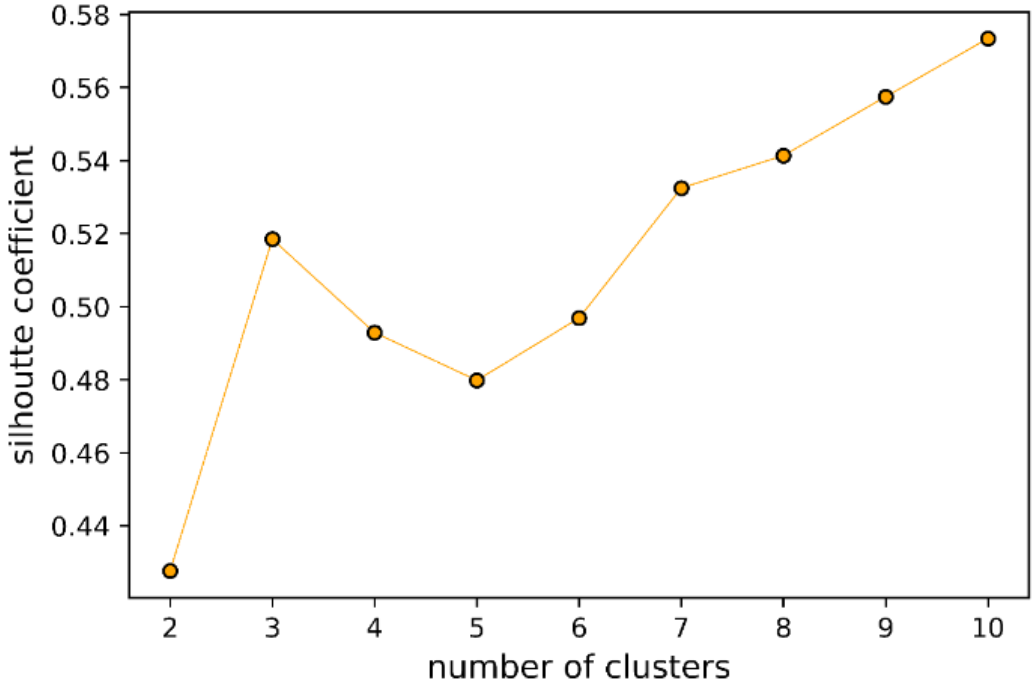
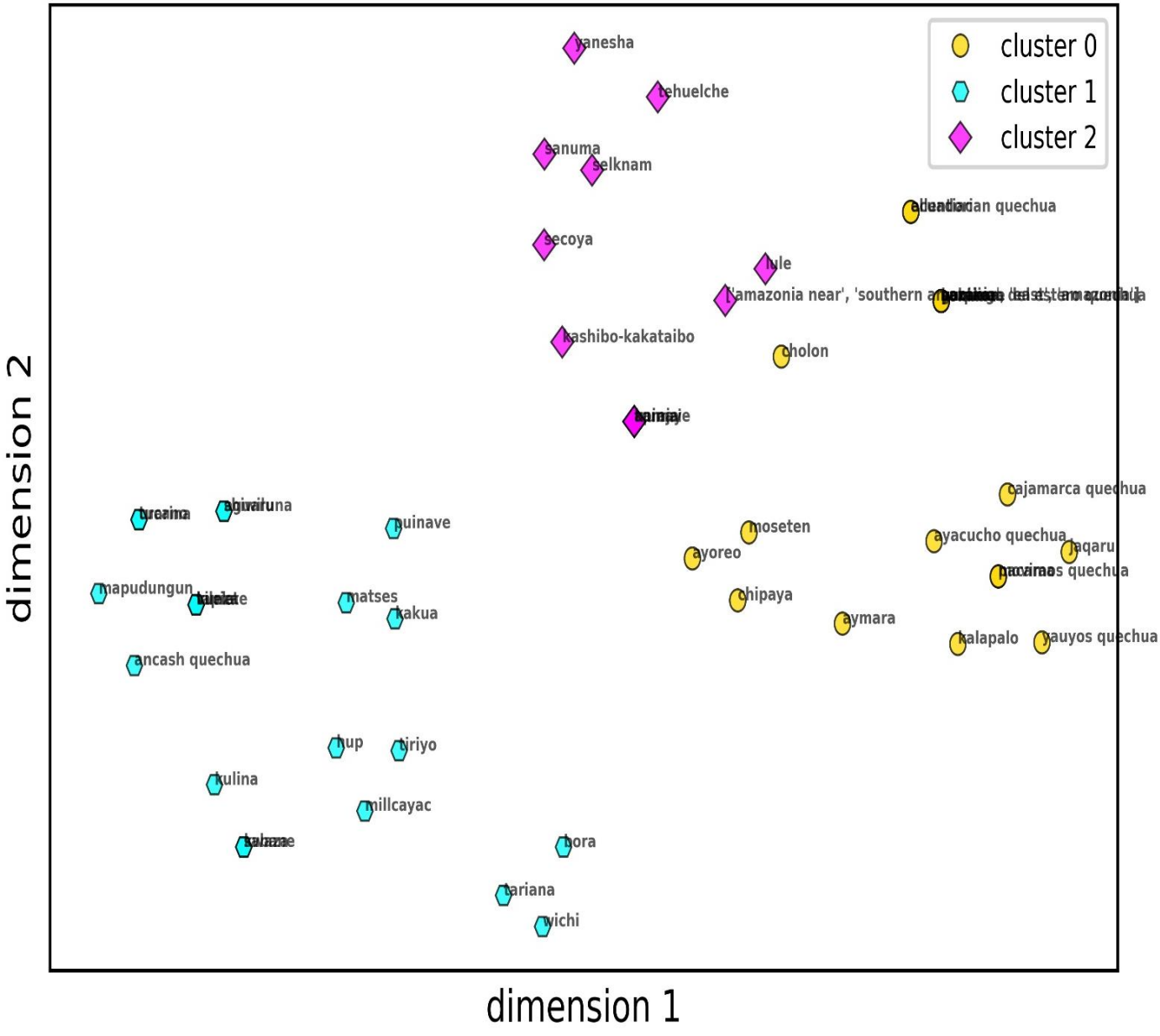


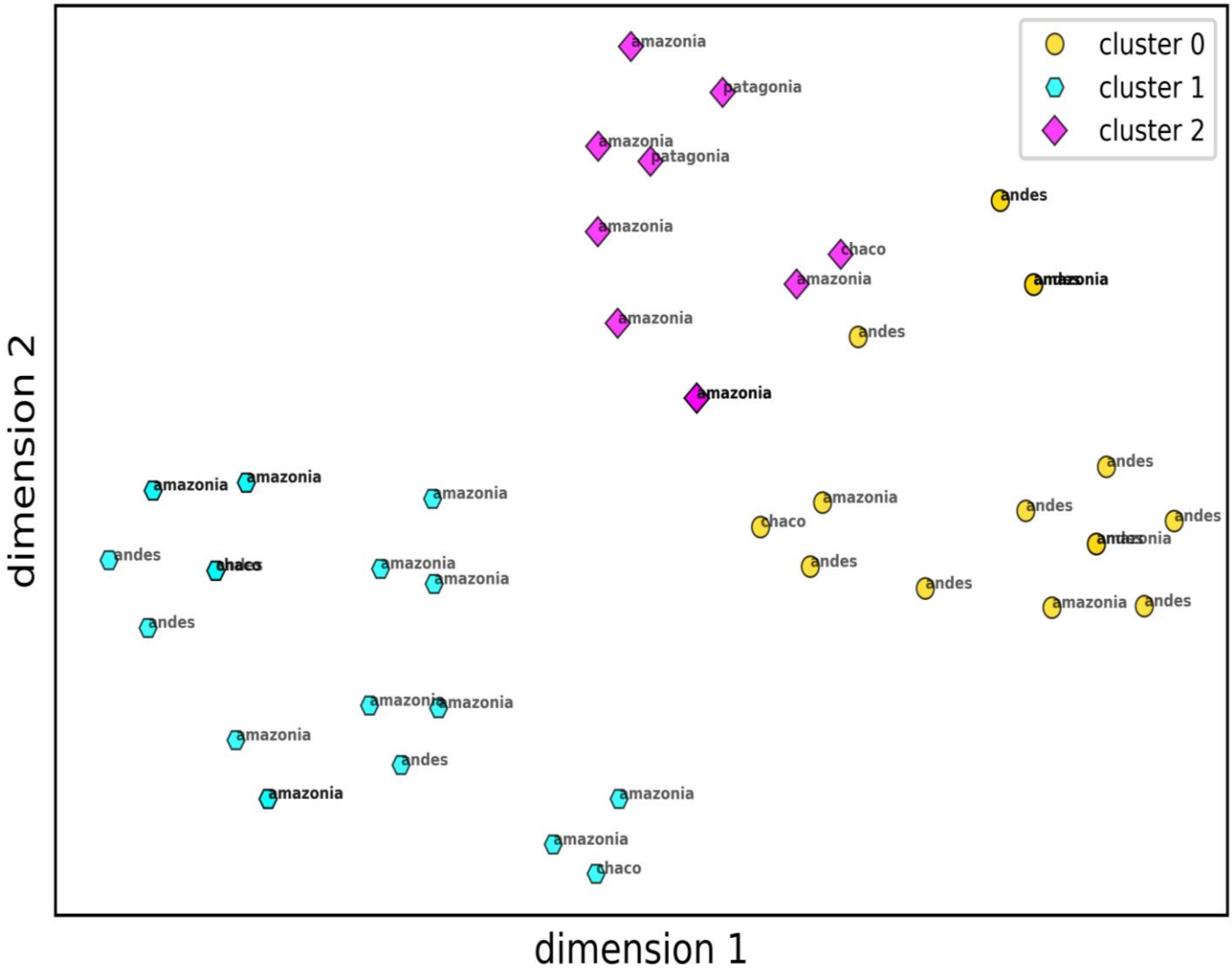
FIGURE 6: 2D REPRESENTATION OF TYPOLOGICAL DISTANCES



From the Analysis of the 2D projection showing the languages it can be noted that the Andean languages appear in two of the three clusters generated. In cluster 1 we find Mapudungun, Millcayac, Kunza and Ancash Quechua, and in cluster 0 we find the rest the Andean languages with variable degrees of closeness. No Andean language can be found in cluster 2. In cluster 1 we find the languages that have in common the use of suffixes as negative markers and the fact that they belong to southern Andes, with the exceptions of Ancash Quechua, and Allentiac that belongs to southern Andes but is not found in the cluster. In cluster 0 we find the rest of the Andean languages.

It is interesting to notice that while Aymaran and some Quechuan languages are grouped closely together, the rest of the Andean languages are more distant. This reflects the close contact between Aymaran and some Quechuan languages, that while similar to the majority of the Andean languages are more similar between themselves. In the case of the Quechuan languages in this groups, they even diverge from the rest of the language family they converge with Aymaran languages.

FIGURE 7: 2D REPRESENTATION OF TYPOLOGICAL DISTANCES FOR AREAS



The second 2D projection shows the languages of the samples represented by the areas to which they belong and the differentiation in the clusters. The distribution of the languages in these clusters shows that, again, the Andean languages are grouped in different clusters, in this case in two different groups. This pattern of agglomerative clustering also shows that the distribution of the languages in these clusters does not correspond to the areal divisions proposed and the Andean languages are so not clearly grouped between themselves and at simultaneously differentiated from the languages from adjacent areas. However, in this representation some differentiation between most Andean languages, that roughly corresponds to central Andes and southern Andes can be noticed.

This distribution support the idea of dividing Andes between central Andes which includes the majority of the languages, and southern Andes with the exception of Allentiac that is closer to central Andes. It must be noticed that within the central Andes the Aymaran and some Quechuan languages while similar to the rest of the group are more similar between themselves. It must also be notices that Allentiac that would be expected to be grouped with southern Andes show clear similarities to central Andes. The possibility of more intense contact with central Andes in Allentiac and more intense contact with southern Andes in Millcayac could explain why they are grouped in the way they are and the extreme divergence between these languages in the considered features.

6.2. Comparison of negation in the Andean languages

In this section, the comparison of the values for each feature in the languages of the Andes and the languages of the sample of South American languages are presented. The values for the features in all the Andean languages can be seen in Table 5 and the values for the languages of the comparative sample can be found at the end of their respective sections.

6.2.1. Marking strategy of SN and order of SN and verb

Comparing the negative marking strategies and their order in relation to the verb in standard negation constructions, the data shows that most of the Andean languages of the sample (13), with notable exceptions (5), share the same marking strategy. In this regard, it can be stated that two groups can be clearly distinguished. In the first group, we have most languages that use negative particles in preverbal position, and in the second, languages with negative suffixes attached to the verb. In the first group the negative particles occur in preverbal position while in the second the affixes are all suffixes attached to the verb. In the majority group we have Puquina, Mochica, Allentiac, Chipaya, Uchumataqu, Aymara, Jaqaru and all Quechuan languages with one exception, Ancash Quechua.

The second group includes Mapudungun, Millcayac, Kunza, Cholón, and Ancash Quechua. In the case of Ancash Quechua, its divergence from the rest of Andes and from other Quechuan languages can be explained by diachronic processes. According to Pineda-Bernuy (2014) and van der Auwera (2016) it would be in a more advanced stage of the Quechuan Jespersen Cycle (described in section 4.1. Quechuan family) in which the suffix *-tsu* (*-chu*) replaces the original preverbal particle *mana*. In the case of Cholón, the language is quite different in many respects to the rest of Andean languages. For example, in Torero (2002) it is one of the languages with the lower level of similarity to the rest of the Andean languages. A possible explanation for this is the fact that Cholón is a language that for its geographical location is closer to western Amazonia and was in contact with Amazonian languages, and also it is a language that has been considered as and Amazonian language, as shown in section 2.2.1.1.6.

The other three exceptions are Kunza, Millcayac and Mapudungun that conform the Southern Andes sub-area, along with Allentiac. In this respect it seems clear that Southern Andes, at least considering these features and with the exception of Allentiac, diverge from the rest of the Andean languages. Some explanations could be (1) the Southern Andean languages represent a periphery within the Andean area with a less intense contact with the rest of Andes and were thus less affected by the diffusion of features, which could explain why they do dot converge in the same way as the rest of the Andes. Or (2) Southern Andean languages had a more intense contact between themselves which could explain the convergence of features and the divergence from the rest of Andes. A third possibility could be a partial overlapping of these two explanations. In any case the exception represented by Allentiac with respect of the rest of Southern Andes, and particularly with Millcayac is an interesting exception that should be addressed. This division between the languages roughly corresponds to central and southern Andes, with specific exceptions.

Regarding the negative marking strategies for SN constructions is interesting to notice some similarities between the negative particles *mana*, *ana*/*hana*, *jani*, *naha*/*na*, and *ænta* that can be observed in Table 9. It can be seen that most languages have particles that in phonetic terms have at least a nasal consonant and an open central vowel. Exceptions to this are Jaqaru, with the particle *isha,* and the other previously mentioned languages that differed from the rest of Andes and have suffixes. Between the languages with suffixes no formal similarity could be found between them. The only similarities are between Millcayac *-na* and the particles *na* or *ana* previously mentioned and Kunza's *-hans*/*-haus* and *jani* and *hana*. The list of negative markers used in SN constructions and Prohibitives is shown in Table 9 below.

TABLE 9: NEGATIVE MARKERS IN THE ANDEAN LANGUAGES

Language	Negative marker	Prohibitive marker
Yauyos Quechua	*mana* [*-chu*]	*Ama* [*-chu*]
Pacaraos Quechua	*mana* [*-su*]	*Ama* [*-su*]
Cajamarca Quechua	*mana* [*-chu*]	*Ama* [*-chu*]
Ayacucho Quechua	*mana-m* [*-chu*]	*Ama* [*-chu*]
Ecuadorian Quechua	*mana*	*Ama* [*-chu*]
Santiago del Estero Quechua	*mana*	*Ama* [*-chu*]
Ancash Quechua	*-tsu*	*Ama* [*-tsu*]
Aymara	*Jani* [*-ti*]	*Jani* [*-ti*]
Jaqaru	*Isha* [*-txi*]	*Jani* [*-txi*]
Chipaya	*ana*	*ana*
Uchumataqu	*ana/hana*	No data
Cholón	*-pa/-pe/-pitso*	*-čin/-mu/-nik*
Mochica	*ænta*	*amo*
Puquina	*Appa/apa*	*ama*
Kunza	*-hans/-haus*	*-cha*
Millcayac	*-na* [*-e/-eye*]	*-na*
Allentiac	*naha/na*	*-uche/-teche/-tenche*
Mapudungun	*-la*	*-ki*

Regarding the order of negative markers and verb an interesting relation has to do with the order of negative markers and verb compared to the dominant word order[4] in the

[4] The comparison between order of negative markers and verb and the dominant word order in the languages was suggested by one of the professors in charge of the evaluation of this work to whom I thank for his suggestion.

languages. Two types of order of negative marker and verb are found in the Andean languages; however, the general word order does not seem to have a clear correlate in the order of the negative markers and the verb. Both preverbal particles and suffixes are found both in SVO and SOV languages, and only preverbal order is found in languages with SOV/OSV and free orders as seen in Table 10.

TABLE 10 COMPARISON OF TYPE OF NEGATIVE ORDER AND WORD ORDER

Language	Order of negative marker and verb	Basic word order
Ancash Quechua	suffixation	SVO
Yauyos Quechua	preverbal	SVO
Pacaraos Quechua	preverbal	SVO
Cajamarca Quechua	preverbal	SVO
Ecuadorian Quechua	preverbal	SVO
Ayacucho Quechua	preverbal	SVO
Santiago del Estero Quechua	preverbal	SVO
Aymara	preverbal	SOV
Jaqaru	preverbal	SOV
Chipaya	preverbal	free
Uchumataqu	preverbal	SOV/OSV
Cholón	suffixation	SVO
Mochica	preverbal	SOV
Puquina	preverbal	SOV
Kunza	suffixation	SOV
Millcayac	suffixation	SOV
Allentiac	preverbal	SOV
Mapudungun	suffixation	SVO

6.2.1.1. Comparison to comparative sample

As we have seen, most of the Andes with some exceptions share the same type of negative markers and the same type of order in relation to the verb, thus we could divide Andes in two groups, the majority group that includes central Andean languages and the minority group that roughly corresponds to southern Andes with some exceptions. When comparing the data from the sample to the sample of languages from Amazonia, Chaco, and Patagonia, we see that in these areas the diversity is much wider. In the languages of the Chaco sample, negation is expressed mainly by means of affixation, and only two languages have negative particles, one of them preverbal and the other postverbal. In Patagonia one of the languages has a postverbal negative word and it is unclear whether it is a particle or an auxiliary verb, other language has preverbal particle, and two other languages has auxiliary verbs. Most of the languages from Chaco and Patagonia show clear differences with the two groups of Andean languages.

In Amazonia there is an even wider variety of types of marking strategies. From 28 languages, 13 of them mark negation by means of affixation, 11 by particles, 2 by auxiliary verbs, 1 with variation between negative word and affix, and 1 language with double negation. Regarding the order of negative marker and verb, 6 languages have preverbal negation, 7 postverbal negation, 1 prefixed negation, 11 suffixed negation, 2 languages have optional double negation and one of them has obligatory double negation. From the languages of the Amazonia that use particles, 6 languages have preverbal particles like the central Andean languages. From these 6 languages, 5 are located near the Andes according to the criteria explained in section 3.4. From these languages, 11 have negative suffixes, which makes them very similar to southern Andes.

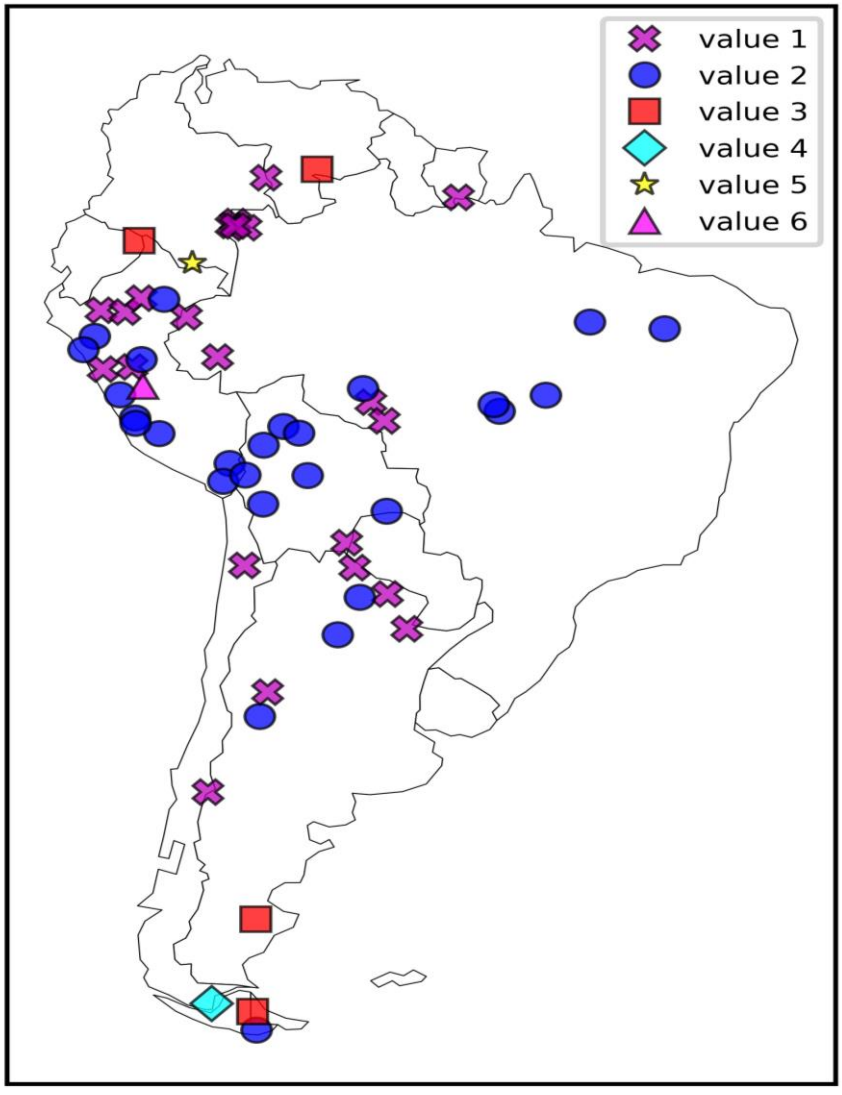
Formal similarities are not much in the languages of the sample, however some of them should be highlighted such as the use of *=ama* in Cavineña, *=ma* in Kashibo-Kakataibo and *ama …=e/=o* in Yanesha which are strikingly similar to prohibitive

particle *ama* used in Quechuan. Other interesting formal similarities are found in the suffixes *-tsu/-tʃa* of Aguaruna that resemble the Quechuan *-tsu/-chu* and the particle *jam* of Mosetén with clear similarity to Aymara's *jani*. All these languages mentioned are located near the Andes. However, even when these formal similarities are interesting, we should be cautious not to attribute them so quickly to contact with Andes without more study of these languages and their contacts.

In general, the use of negative particles in preverbal position that is the most common strategy in the Andean languages is also attested in several languages outside the Andes, though mostly near the Andes. The use of affixes, and particularly suffixes is the most common strategy attested in the rest of the languages from the comparative sample, particularly in Amazonia, and is also the pattern used in the second group of Andean languages that roughly corresponds to southern Andes. This data suggests that, considering the type of negative marker and its order in relation to the verb, the difference between the Andean languages and the languages of the comparative sample is not so clear, especially in the Amazonian languages located near the Andes. This supports the idea that the borders between proposed areas are not clear-cut and there are no sharp boundaries between them, and the borders should be conceived more like a continuum of linguistic features.

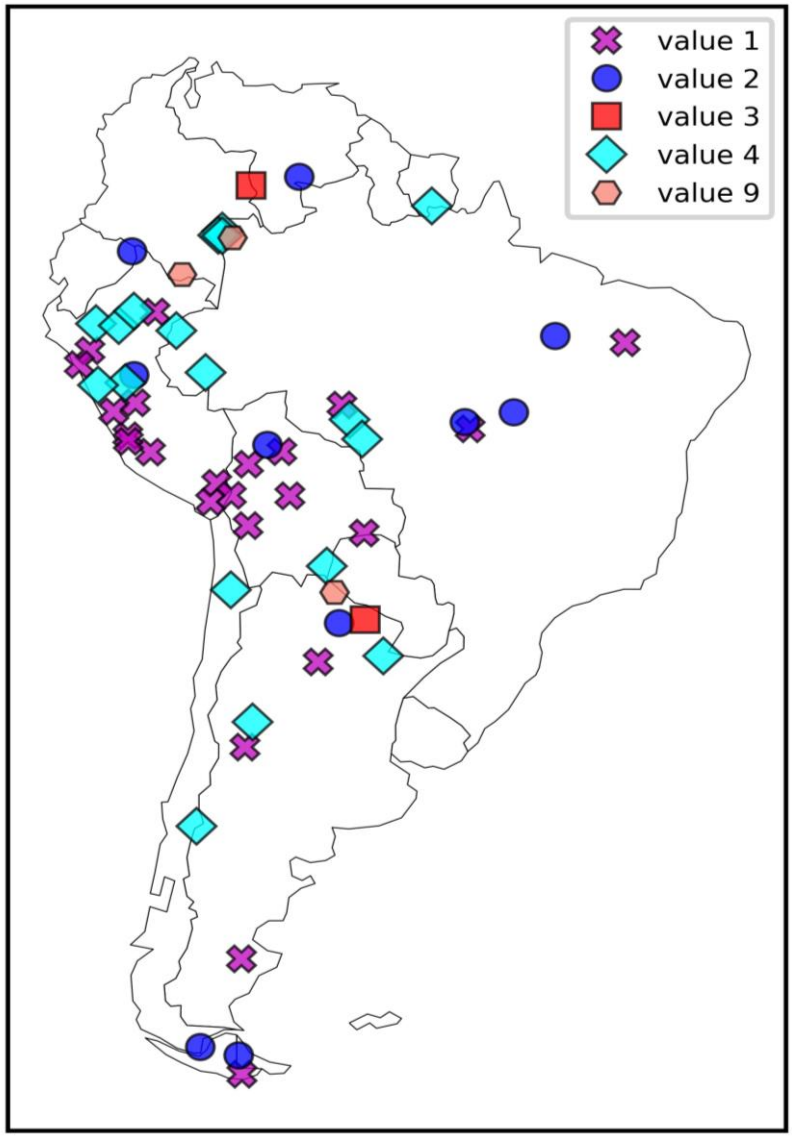
The following maps shows the geographic distribution of the types of negative markers and the order of negative markers and verb in the languages of the sample and comparative sample. In the map in Figure 8 the different types of SN marking strategies and their geographical distribution can be seen. Value 1 represents languages with negative affixes, value 2 languages with particles, value 3 languages with negative auxiliary verbs, value 4 languages with a negative word that is not clear whether it is a particle or a verb, value 5 variation between negative word and affix, and value 6 languages con bipartite marking of SN.

FIGURE 8: GEOGRAPHICAL DISTRIBUTION OF TYPES OF NEGATIVE MARKERS.



In map 2 in Figure 9 the different types of order of negative markers and verb and their geographical distribution can be seen. Value 1 represents languages with preverbal order, value 2 languages with postverbal order, value 3 languages with prefixation, value 4 languages with suffixation, value 5 languages with negative tone, value 6 languages with mixed types (more than one type of order), value 7 languages with optional double negation and value 8 languages with optional double negation.

FIGURE 9: GEOGRAPHICAL DISTRIBUTION OF TYPES OF ORDER OF NEGATIVE MARKER AND VERB



If we compare these data to the data from the world atlas of language structures (Dryer, 2013a) some tendencies can be noted. In the WALS's global sample of 1011 languages, in 339 languages negation is marked by means of affixes, in 477 by means of particles, in 45 by means of auxiliary verbs, in 65 languages the marking is by means of negative

words, but it is unclear whether they are particles of auxiliary verbs, in 19 languages there is variation between negative words and affixes, and in 66 languages negation is marked by means of double negation. Regarding the order of negative markers and verb, in a global sample of 1325 languages, Dryer (2013b) find that in 525 languages negation occurs in preverbal position, in 171 negation occurs in postverbal position, in 162 languages negation is prefixed to the verb, in 202 suffixed, in only one language there is negative tone, in 63 languages there are mixed types, in only one there is optional single negation, in 114 obligatory double negation, in 80 optional double negation and in 6 optional triple negation. In these samples, the most common type of negative markers in South America are affixes and regarding to the order the most common is suffixation and postverbal words, so South America is one of the world regions that follows in the lowest degree the global tendency.

When comparing Andes to this sample it can be noticed that while central Andes follow the global tendency, does not follow the South American tendencies of type of negative markers and order of negative markers and verb. Central Andes has preverbal particles which is the most common strategy globally, however within the WALS's sample, affixation, and specially suffixation is the most common. So, central Andes follows the most common worldwide patterns both in type of negative marker and order of negative marker and verb. However, it shows clear differences with the tendency of these patterns within South America. On the other hand, southern Andes while diverging from the rest of Andes and the global tendency, seem to follow the South American tendency.

6.2.2. Structure of negative constructions

Regarding the type of structure of negative constructions, two groups of Andean languages can be distinguished. The first group includes Pacaraos, Yauyos, Cajamarca, and Ayacucho Quechua, Aymara, Jaqaru and Millcayac that have asymmetric structures. The second group includes the rest of the Andean languages with symmetric structures. In the case of Quechuan, it has been stated that most of the languages have undergone the Jespersen Cycle and the languages with asymmetric negation are in a stage in which apart from the negative marker *mana*, the suffix *-chu* is required. A stage before *-chu* becomes only negative and replace *mana* as the negative marker, as the case of Ancash. In the case of Aymaran, it is more difficult to explain. Both Aymara and Jaqaru share this value but it is also known that both Quechuan and Aymaran have been in close contact since ancient times and both groups share a considerable number of linguistic features. In this line a plausible explanation would be linguistic diffusion, however its direction is unclear since for Quechuan the diachronic process has been well-studied but not Aymaran. The comparison of languages in this feature reflects the diachronic changes in the Quechuan family and possibly the Quechuan-Aymaran convergence rather than an areal distribution.

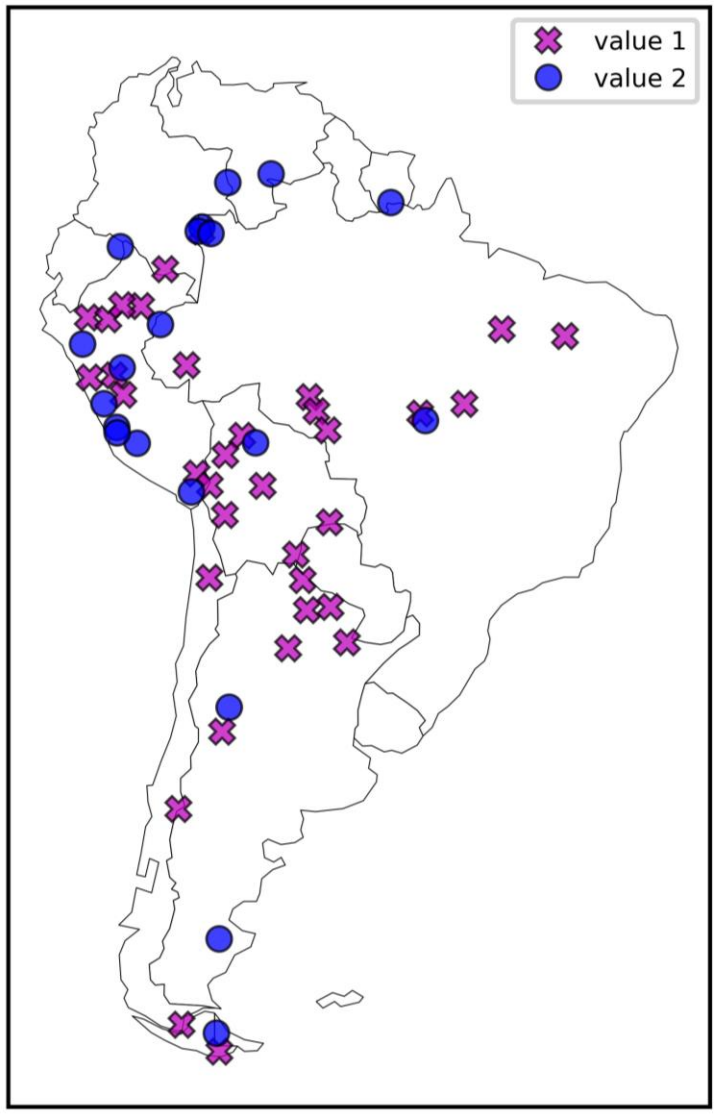
Aymaran and Quechuan languages with asymmetric negative constructions, share interesting similarities. Firstly, the type of asymmetry found in both cases is A/Real, that is, an asymmetry in the marking of reality status of events, in which the negative construction requires to be marked with a non-realized category. Secondly, the mentioned 'irrealis' suffixes are used both in negative and polar interrogative functions. Third, the A/Real asymmetry is represented by a suffix (*-chu, -su, -ti* and *-txi*) that is added on the verb along with a preverbal negative particle. Other arguable similarity that can be observed are between these suffixes is that in phonetic terms these suffixes have plosive or affricate consonants and a close vowel. Since the Quechuan-Aymaran contact is known to be ancient and both families show striking similarities, the possible role of that contact in the diachronic development described for Quechuan and the directionality of the influence is something that remains to be addressed.

The case of Millcayac, despite having also an asymmetric negative construction, shows differences in relation to Quechuan and Aymaran. Firstly, the asymmetric construction of Millcayac is not found in the other member of its family, Allentiac. Secondly, the type of asymmetry in Millcayac is A/Cat, that is, changes in the marking of grammatical categories. In this case tense/aspect, since the negative construction require the co-occurrence of the imperfective past suffix *-eye/-e* which is different from the type of asymmetry found in Quechuan and Aymaran. However, despite these differences, Millcayac shows a similarity to Aymara, that apart from the suffix *-ti*, usually also includes the incompletive suffix *-k(a).* According to Hardman, Vasquez and Yapita (2001: 301) and Coler (2014: 384) the incompletive suffix *-k(a)* is frequent but not obligatory in negative clauses so it was not considered as an asymmetry. However, despite of not being considered as an asymmetry, the occurrence of the incompletive in Aymaran negative constructions is similar to the occurrence of imperfective past in Millcayac since both incompletive and imperfective aspects are very close in meaning and both occur as suffixes on the verb. However, this possible similarity remains to be explored.

6.2.2.1. Comparison to comparative sample

If we compare the structure of negative constructions in the languages of the Andes and the languages of the sample of South American languages, it can be noted that in the comparative sample of 38 languages, 25 have a symmetric structure while 13 have asymmetric structure. The languages of the sample with asymmetric structures and their respective type of asymmetry are: Selk'nam (A/fin), Tehuelche (A/Fin), Tariana (A/Cat), Tiriyó (A/Cat), Secoya (A/Fin), Kakataibo (A/Cat), Matsés (A/Fin), Sanuma (A/Fin), Hup (A/Cat), Kakua (A/Cat), Movima (A/Fin), and Puinavé (A/Cat). The frequency of the occurrence of asymmetric negative constructions does not show much difference between the Andes and the comparative sample. As can be seen in map 3 in Figure 10, both symmetric and asymmetric types do not show clear geographic distributions.

FIGURE 10: GEOGRAPHICAL DISTRIBUTION OF TYPES OF STRUCTURES OF SN CONSTRUCTIONS



However, if we pay attention to the type of asymmetry found in the languages of the comparative sample, they are either A/fin or A/cat, and none of them have an A/NonReal type of asymmetry. While in the Andean languages, almost all the ones with asymmetric negative constructions are the subtype A/NonReal, except for Millcayac (A/Cat). However, in the case of Millcayac, the link between the imperfective and interrogative and irrealis is still under investigation and cannot been discarded or confirmed yet. While the presence of asymmetric negative constructions does not show significant differences between the Andean languages and the languages of the comparative sample, the type of asymmetries found are clearly distinct.

For this feature the comparison with the WALS's global sample since in the WALS the classification included the paradigmatic asymmetries that were not considered in this study for the reasons explained in section 2.3.4. The WALS considers types of negative constructions that are always constructionally and paradigmatically symmetric (Sym), the ones that are always constructionally and paradigmatically asymmetric (Asy) and the ones that are both symmetric and asymmetric either constructionally or paradigmatically (SymAsy).

6.2.3. Prohibitive constructions

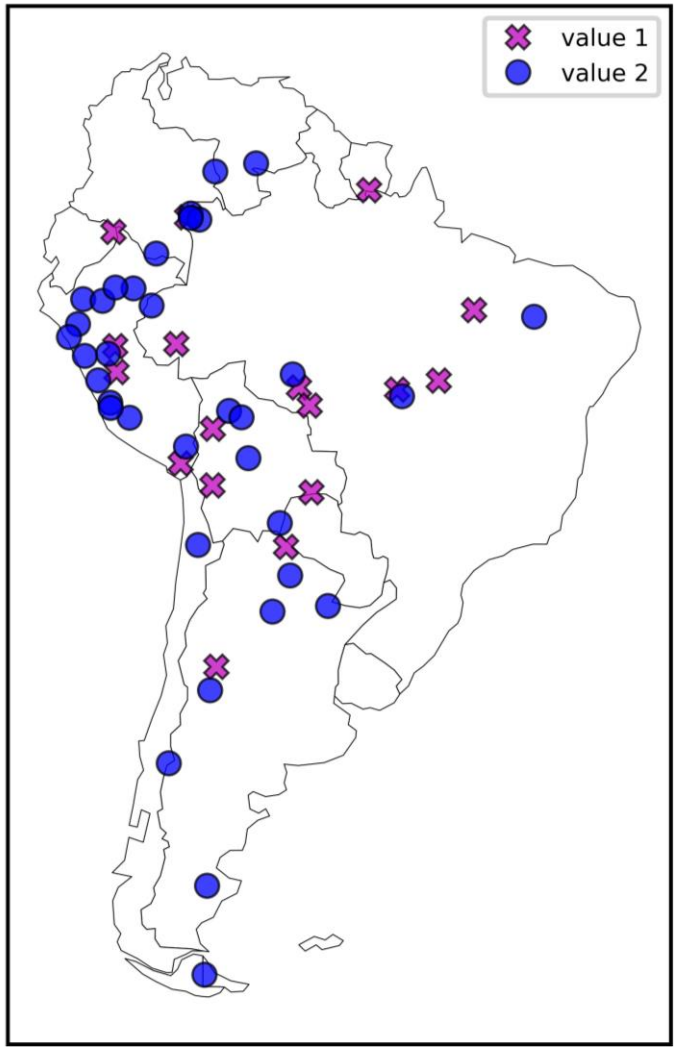
In prohibitive constructions most languages use marking strategies different from SN constructions, the only exceptions to this trend are Millcayac, Aymara and Chipaya. There is also one case -Uchumataqu- for which no data could be found in the consulted sources. However, in the case of Uchumataqu, looking at other negative constructions in the language that mostly use the same particle *ana*, and looking at the closest language in terms of phylogenetic affiliation, Chipaya, and a language with strong contact relations, Aymara, it would be expectable that the language had the same negative strategy in prohibitives, but this cannot be proved here.

Regarding prohibitive markers, it is also interesting to look at the formal similarities between them. On one side Mochica and Puquina had prohibitive particle *ama* and *amo*, almost identical to *ama used* in all Quechuan languages. In the case of Quechuan and Puquina it is almost sure that the similarity is due to contact, and according to Adelaar and van de Kerke (2009: 141), this particle was diffused from Quechua to Puquina. In the case of Chipaya, *ana* is also very similar to *ama.* In the case of Aymara and Jaqaru, both share the same prohibitive marker, *jani*, which is not surprising considering they belong to the same family, though is not so formally like the rest of Andes. More similarities can be found between Kunza's *-cha* that is arguably very similar to Allentiac's *-uche*/*-teche*/*-tenche* (possibly variations of *-che*). There are also languages that does not show similarities to any other language such as Mapudungun's *-ki*, Millcayac's, *-na*, and Cholón's *-čin*, *-mu*, and *-nik*.

6.2.3.1. Comparison to comparative sample

In the comparative sample, most of the languages follow a similar tendency using a different negative marker in prohibitive constructions. In the comparative sample, from 38 languages, 22 languages use a different negative marker for prohibitives and 14 use the same as in declaratives and for two languages data could not be found. As we have seen the use in prohibitive constructions of a negative marker different from the ones used in declarative negatives in the comparative sample follows a similar tendency than Andes. However, in the Andean languages the use of a different negative marker is much more common, as only three languages in the sample use the same negative marker in both types of constructions. Despite this small difference between Andes and the comparative sample, it is not possible to state that Andes is clearly different. Moreover, there are some formal similarities between prohibitive particle ama and some prohibitives in Amazonian languages that should be noted.

FIGURE 11: GEOGRAPHIC DISTRIBUTION OF TYPES OF PROHIBITIVE CONSTRUCTIONS



In the global sample from the WALS, out of 496 languages, 168 of them use the same negative marker in prohibitives and declaratives, while 328 use different strategies. In general, we observe that the Andean languages follow a similar tendency than the languages of the sample of South American languages and the global sample from WALS. However, in the Andes, the same tendency is slightly stronger with most of the languages with different negative markers in prohibitives. The sample, the comparative sample of South American languages and the world sample follows similar tendencies. So, it is not

possible to stablish a strong differentiation the Andean languages from the Comparative sample or the Global sample according to the type of prohibitive constructions. On another note, while there are clear similarities of type of construction, not much formal similarities could be found. However, the clear similarity between the prohibitive particle *ama* from Quechuan and Puquina, Mochica's *amo*, Chipaya's *ana* and the negative markers in some Amazonian languages located close to the Andes should be considered.

The maps presented in this section makes it clear that no clear separation between the sample of Andean languages and the languages of the comparative sample can be found. Even though similarities can be found, the differences between the Andean languages to each other and the similarities between Andean languages and some languages outside the area are clear. These distributions provide evidence against the very idea of imposing geographic boundaries to linguistic areas and in favor of explaining of the actual clusters of features based on the available data as seen in section 2.1.3.

Even though the explanation for the observed similarities and differences between the languages on a social-political, historical, geographical, and anthropological levels lay beyond the intended scope of this work, some possible exploratory explanations can be proposed. These distributions can be explained in several ways. Firstly, the contact relations between the languages are not limited to the languages that are grouped together and considered to be a linguistic area and the languages can also be in contact with other languages outside the area. This is particularly clear in the relation between Andean and Amazonian languages that are close to the Andes and have well-known contact relations to Andean languages as seen in section 2.2.5. These relations not necessarily are limited to geographically close or adjacent languages since language contact can be driven by migrations, trade, intermarriage, or more indirect interactions. Certainly, human activities are not limited by proposed linguistic areas, and inter-areal relations certainly occur. There can also exist the possibility of more local instances of contact and convergence between two or more languages that lead to divergence from the rest of the languages in

the area. This could be the case of the languages of southern Andes, that show clear differences with the rest of Andean languages, but also show similarities to languages outside the area, in particular Amazonian languages, in the considered features. Another case in point is the stronger convergence between some Quechuan and Aymaran languages.

Secondly, beyond the possible areal convergence of features, languages can go through individual developments that cannot be explained by contact induced convergence itself. The similarities and differences between the languages can also be explained by the linguistic diversity of the continent. This could possibly be the case that explains similarities between Andean languages and Amazonian, Chacoan, and Patagonian languages located far away and with no known contact with the Andes. Additionally, we cannot discard the possibility that these similarities with no clear explanation are just due to coincidence. Furthermore, if we consider the global tendencies in the distribution of these features it is a possibility that two languages with similar features but no known contact show similarities when that features are common worldwide. For instance, preverbal negative particles are the most common marking strategy in the Andes, but also the most common one around the world, so the possibility of finding languages with the same strategy across the continent, despite not having any relation, cannot be discarded.

Additionally, it is necessary to consider the fact that some data is not available since many languages disappeared before being documented and the lack of documentation for pre-Hispanic history. Similarly, not much diachronic data about the languages is available and the available data is limited to the last centuries at best, so reconstruction is needed for a diachronic analysis. This lack of data can produce gaps in the reconstructed networks of relations between languages making it harder to know the relations of contact between them and their evolution in time.

CHAPTER 7:

CONCLUSIONS

This study described the marking of negation in the Andean languages identifying the values of the selected features in each of the languages and compared them to each other, to a comparative sample of languages from Patagonia, Chaco, and Amazonia and to a global sample. The comparison was done firstly by a computational analysis and represented by heatmaps and 2D representations and then comparing the values of the languages in each of the features. The main results of this analysis are presented below.

The comparison for each features in the languages of the Andes shows that in general they have clear similarities. In most languages standard negation is expressed by means of preverbal negative particles, has symmetric structure and SN constructions use different negative markers than prohibitive constructions. Formal similarities in the negative markers are also found in most of the languages. However, the languages also show clear differences. While most of the languages share the mentioned features, Cholón, Ancash Quechua and southern Andean languages except for Allentiac express negation by means of affixation, specifically by means of suffixes attached to the main verb. Regarding the type of structure of negative constructions two groups of languages can be distinguished, in the first group we find some Quechuan languages, Aymaran languages and Millcayac with asymmetric structures and in the second group we find the rest of the Andean languages. Regarding the type of prohibitive constructions most languages use in prohibitive constructions a negative marker different from the one used in SN constructions, with the exceptions of Aymara, Chipaya and Millcayac.

In this distribution of features that some patterns can be found. One of them is the differentiation between Southern Andes, except for Allentiac, from central Andes. Particularly noticeable here is the striking difference between the Huarpean languages Millcayac and Allentiac. A possible explanation could be closer relations between Millcayac and Southern Andes on one side and Allentiac and the rest of the Andes on the other. Another interesting pattern is the similarity between some Quechuan and Aymaran languages that can be explained by the longstanding contact between both families. In the case of Cholón its differentiation could be given by its location at the borders of the Area and its relations to the Amazonia and the possibility of excluding it from the Andes as some studies previously cited.

Another important aspect is the relevance of the diachronic study of the languages to understand the current distribution of the features in the languages. This is very well exemplified by the diachronic development of the negative makers in the Quechuan language family that explain the current variation within the family and some differences between these languages and the rest of Andes. However, the diachronic study could also explain the differentiation of Aymaran languages and the differences between Millcayac and Allentiac.

Regarding the comparison of the sample of Andean languages to the comparative sample of South American languages, this shows that while Andes shows some differences it also shows clear similarities to languages from outside the area. The clearest are the similarities between southern Andes and some Amazonian and Chacoan languages and between central Andes to some Amazonian languages, especially some western Amazonian languages located near the Andes. These similarities could provide support to proposals of inter-areal contact between Andes and Amazonia and support the proposals of an intermediate area between the Andes and Amazonia. However, and more relevant for this work, these distributions of features show that the Andean languages are not clearly distinct and well differentiated from the adjacent linguistic areas considered.

Regarding the computational analysis, this allows to find a general overview of the distribution of features and the grouping of languages according to similarities and differences. This analysis consistently shows that negation does not follow an areal pattern in the Andes. Instead, the Andean languages are divided in two or three different clusters, and moreover, within these clusters they are grouped to languages outside the area. This distribution proves that there is not enough similarity within the area and not enough differentiation from adjacent areas. This analysis provides evidence against considering negation as an areal feature, at least in the proposed terms and with the languages considered in this study.

Regarding the proposed hypothesis of this study, and considering the results and discussion presented, I conclude that there is not enough evidence to consider negation as an areal feature, at least not in the way it was originally proposed in this study. The reason for this is that there are clear differences within the Andean languages and the differentiation from adjacent areas is not clear enough. Therefore, I consider that the proposed hypothesis that the languages of the Andes should show similarities on the values assumed by the features in the domain of negation as a result of areal-scale language contact is rejected.

However, based on the analysis and discussion of the data, if one would try to support the proposal of negation as an areal feature, there is another possibility. This proposal should reformulate the hypothesis and consider that Andean languages are divided in at least two groups with divergent features; central Andes and southern Andes. This proposal should also consider the particular case of Quechuan-Aymaran contact that while having a certain level of convergence with the rest of central Andes, converge between themselves in a higher degree. In the case of southern Andes, it could even be considered not to be part of Andes based on this data.

Furthermore, this proposal should consider the inter-areal relations between these languages and languages outside the area especially western Amazonian languages, the diachronic changes that have developed since the times these languages were in contact and the fact that the Andean languages follow global tendencies in the considered features of negation. Additionally, a new proposal should explain why some languages are exceptions to the proposed grouping. In the case of Cholón, the language can be considered as Amazonian and put out of the sample, in Ancash Quechua its divergence can be explained by the Quechuan Jespersen cycle and in Allentiac its similarities to central Andes could be explained by a closer contact to these languages rather than to the other southern Andean languages. With this reformulated proposal, the data provides more support to consider that negation is an areal feature at least in the central Andes despite not showing enough differentiation from adjacent areas and global tendencies.

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