

# Differential Object Marking in Aymara

## A Linguistic Contact-Induced Phenomenon from Spanish

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**Abstract** This study investigates the contact-induced processes underlying the Aymara Object Marking system among Aymara-Spanish bilingual speakers. It explores two diatopic varieties: La Paz (Bolivia) and Muzlaque (Peru) Aymara. Unlike previous descriptions, which identified the accusative case as the sole marker of DO, this study reveals that bilingual speakers employ three distinct DO markings: the accusative, nominative, and dative/allative cases. This analysis posits that this departure is due to contact-induced processes, i.e., replica grammaticalisation, influenced by Spanish. Quantitative findings substantiate the hypothesis that Aymara-Spanish bilingual speakers are incorporating contact-induced strategies for DO marking in Aymara.

**Keywords** DOM. Transitive verbs. Spanish. Aymara. Contact-induced language change.

**Summary** 1 Introduction. – 2 The Aymara-Spanish Contact Situation in Bolivia and Peru. – 3 DOM in Spanish and Contact Scenarios with Spanish. – 4 Aymara Verb Inflection and Case Marking System. – 5 Materials and Methodology. – 6 Results. – 6.1 The Object Marking with the Verbs *Nuwa*, *Jiwaya*, and *Yanapa*. – 6.2 The Object Marking with the Verbs *Isa*, *Uña*, and *Thaqha*. – 6.3 The Object Marking with the Verbs *Uma* and *Aphapi*. – 7 Discussion and Preliminary Conclusions.

## 1 Introduction

Since Bosson's seminal work (1985), the linguistic phenomenon of employing different markers for direct objects (henceforth DO) within a single language has been referred to as Differential Object Marking (henceforth DOM). DOM is a typological common phenomenon that has been studied from various perspectives, including traditions focusing on properties of the object, e.g., animacy, specificity, and definiteness (Aissen 2003; Kagan 2020), as well as factors like transitivity (Hopper, Thompson 1980), discourse prominence (García García 2014), and sociolinguistic typology (Sinnemäki 2014).

Definiteness and animacy are the primary predictors that trigger DOM in certain languages (see Sinnemäki 2014). These properties are organised hierarchically and display implicational relationships among their constituent elements. Animacy is ranked in the Animacy Hierarchy, which follows a descending order from human > animate > inanimate (Silverstein 1976), while definiteness is structured according to the Definiteness scale, which considers the degree of nominal specification. The definiteness hierarchy is as follows: Pronoun > Proper name > Definite NP > Specific indefinite NP > Non-Specific indefinite NP (Keenan, Comrie 1977). In languages featuring DOM, nominals situated to the left side on either scale are overtly marked. Consequently, if a nominal possesses a semantic or pragmatic property that positions it to the left of a nominal that is already marked with DOM, it will also be expressed with DOM when functioning as DO.

Russian is an example of a language where DOM is constrained by animacy. In (1a), the inanimate DO is marked with the accusative case, while in (1b), the animate nominal *mal'čik* exhibits overt case inflection, namely *-a*.

- (1) RUSSIAN
- a. On vid-it stul- $\emptyset$   
he see-3SG chair-ACC=NOM  
'He sees a chair'
  - b. On vid-l mal'čik-a  
he see-3SG boy-DOM  
'He sees a boy'
- (Hržica et al. 2015, 359)

In Turkish, the DOM is contingent upon specificity. The suffix *-i* marks specific DOs, as exemplified in (2a) and (2b) in the NP *kitab-i* 'the book'. On the other hand, in example (2c), the marker *-i* would be considered ungrammatical due to the lack of pragmatic specificity.

(2) TURKISH

- a. Ben kitab-i oku-du-m  
1.SG book-DOM read-PST-1.SG  
'I read the book'
- b. Ben bir kitab-i oku-du-m  
1.SG a book-DOM read-PST-1.SG  
'I read a certain book'
- c. Ben bir kitap oku-du-m  
1.SG a book read-PST-1.SG  
'I read a book'

(von Heusinger, Kornfilt 2005, 8)

Finally, in Modern Hebrew, definite DOs are marked by the accusative marker *et* (3a), while indefinite DOs do not exhibit any case marking (3b).

(3) MODERN HEBREW

- a. raiti et ha-yeled  
I.saw DOM the-boy  
'I saw the boy.'
- b. raiti yeled  
I.saw boy  
'I saw a boy.'

(Kagan 2020, 134)

Aymara is an agglutinative indigenous language spoken and in Andean Plateau, following a SOV word order. Verb inflectional suffixes possess a significant degree of fusion (Müller 2013, 39), encoding both verb arguments, the subject and objects. In Andean languages descriptions, this phenomenon is referred to as *transición* (Ade-laar 1997, 259). Traditionally, Aymara has been described as a language that express DO through the accusative case (Hardman et al. 2001; Hardman 2001; Coler 2014). However, oral data gathered from bilingual Aymara-Spanish speakers reveal the use of three distinct markers to express DOs, i.e., the accusative, nominative, and dative/allative cases. Examples (4), (5), and (6) illustrate these three usages, respectively.

(4) Jaxüm umarasipkisa (AILLA: 2\_AY\_TASK)

- jax(u)-um(a)-~~Ø~~ uma-ra-si-p-k(a)-i-sa  
bitter-water-ACC drink-ITER-REFL-PL-INCOMPL-3>3.SPL-ADD  
'They are drinking alcohol'

- (5) Jarüma umasipkixa (AILLA: 4\_AY\_TASK)  
jar(u)-uma-**Ø**                      uma-si-p-k(a)-i-xa  
bitter-water-**NOM**              drink-REFL-PL-INCOMPL-3>3.SPL-TOP  
'They are drinking alcohol'
- (6) Masinakapawa chacharu uñch'uki (AILLA: 2\_AY\_TASK)  
masi-naka-pa-wa              chacha-**ru**              uñch'uk-i  
friend-PL-3.POS-DECL      man-**DAT/ALL**              watch-3.SPL  
'His friends watched the man'

In (4), the accusative case marks the inanimate DO *jaxüma* 'alcohol'. In (5), which is semantically equivalent to (4), the inanimate DO *jarüma* 'alcohol' is marked with the nominative case. Lastly, in (6), the human DO *chacha* 'man' of the verb *uñchuki* 'watch' is marked with the dative/allative case.

This paper aims to argue that the phenomena observed in (5) and (6) for the expression of DOs can be attributed to the contact-induced grammatical replication (Heine, Kuteva 2005) of the Spanish Object Markings System, which encompasses both DOM and zero-marked DO. Animacy and definiteness have been recognised as key factors triggering DOM in Spanish. Since this study aims to demonstrate that the changes in the Aymara object marking system result from the contact with Spanish, a thorough analysis of these factors becomes essential. For these reasons, in this research I will investigate Aymara object marking, focusing on the properties of animacy and definiteness of DOs. Additionally, I will analyse Aymara object marking system from a transitive perspective (Hopper, Thompson 1980), that is, I will investigate whether animate DOs of transitive verbs are more likely to take DOM compared to their inanimate counterparts. To support the hypothesis of an ongoing replication process from Spanish to Aymara, it is pertinent to acknowledge that previous research on Spanish in contact<sup>1</sup> has already documented cases of Spanish DOM replication.

The remainder of this paper is organised as follows: Section 2 provides an overview of the Aymara-Spanish contact situation in Bolivia and Peru. Section 3 explores the phenomenon DOM in Spanish and the associated language contact scenarios. Section 4 offers an overview of the Aymara case marking and verb inflection systems. Section 5 outlines the methodologies and materials used in the present analysis. Section 6 presents and discusses the results, followed by a discussion and preliminary conclusions in Section 7.

<sup>1</sup> Delille 1970; Döhla 2011; Rodríguez Ordóñez 2017; 2020; Pineda 2021.

## 2 The Aymara-Spanish Contact Situation in Bolivia and Peru

The arrival of the Spaniards in the Andean territories, which correspond to present-day Peru, occurred in the 1530s. The conquest continued southward until the early years of the latter half of the century, ultimately resulting in the complete subjugation of modern-day Bolivia. As Mannheim (1991, 65) emphasises, bilingualism during the colonial period was a limited phenomenon, restricted to small segments of the colonial society. Among the settlers, only a few members of the mercantile bourgeoisie and the clergy possessed knowledge of indigenous languages. The clergy, in particular, devoted themselves to studying and employing Andean languages, specifically Aymara and Quechua, as a means of facilitating the process of Christianisation. Also, a few indigenous individuals became proficient in Spanish, with the majority being the offspring of indigenous aristocrats who attended specialised schools where Spanish was taught.

In the context of contemporary language contact between Spanish and Aymara, these two languages come into contact in Bolivia, Southern Peru, northeastern Chile, and to a lesser extent, northwestern Argentina. Bolivia and Peru have the highest number of bilingual Aymara-Spanish speakers.

According to the Bolivian National Census of 2012 (INE 2015), approximately 41.7% of the population belongs to an indigenous group, and within this group, 38.1% identify themselves as Aymara. Additionally, 836,570 individuals claim Aymara as their native language, while 998,314 individuals report having acquired it during their childhood. The department of La Paz has the largest number of Aymara speakers in the country (Molina Barrios, Albó 2006, 115). Moreover, the Aymaras constitute the predominant ethnic group in the metropolitan area encompassing La Paz and El Alto, accounting for 68.4% of the total population (72-4).

Regarding Peru, there is relatively limited clarity concerning the sociolinguistic situation. According to the Peruvian Census of 2017 (INEI 2018), approximately 20.4% of the population identified as belonging to an indigenous group, with 9.2% specifically claiming as Aymara. Furthermore, 18.6% of respondents reported having learned an indigenous language during their childhood, with 10.3% specifying that they acquired Aymara during that period. Aymara is spoken in the departments of Lima, Madre de Dios, Tacna, Moquegua, and Puno. The *Documento nacional de lenguas originarias del Perú* (2013) supplements this information by noting that Aymara communities in Tacna, Madre de Dios, and Lima are the result of recent migration, whereas those in Moquegua and Puno are native settlements.

Official data for the number of individuals who have been bilingual in Aymara and Spanish in the past decade in both countries is

lacking. However, the available data indicate the presence of extensive bilingualism in both countries. Particularly, in the case of Bolivia, bilingualism is institutionalised, as Aymara has been recognised as an official language throughout the state since 2009.

### 3 DOM in Spanish and Contact Scenarios with Spanish

DOM is a phenomenon observed in various Romance languages, and it has been the subject of extensive debate in the case of Spanish, both from synchronic and diachronic perspectives.<sup>2</sup> Research on Spanish DOM supports the following claims: DOs possessing the semantic/pragmatic features [+human] and [+definite] are usually marked with an *a*.<sup>3</sup> The usage of *a*-marking is exemplified by (7a).

- (7)
- |    |                                     |     |          |        |       |       |
|----|-------------------------------------|-----|----------|--------|-------|-------|
| a. | Traj-eron                           | a   | un       | amigo  | con   | ellos |
|    | bring-PFV.3PL                       | DOM | a        | friend | with  | them  |
|    | 'They brought a friend with them'   |     |          |        |       |       |
|    |                                     |     |          |        |       |       |
| b. | Traj-eron                           | una | maleta   | con    | ellos |       |
|    | bring-PFV.3PL                       | a   | suitcase | with   | them  |       |
|    | 'They brought a suitcase with them' |     |          |        |       |       |
|    | (Melis 2021, 40)                    |     |          |        |       |       |

However, specific Spanish varieties may exhibit other linguistic mechanisms, such as clitic-doubling and clitic dative forms, referred to as *leísmo* (Rodríguez Ordóñez 2017, 319). The Spanish variety spoken in the La Paz department (Bolivia) follows a *leísmo* system (Mendoza 1991, 140), which involves using the dative of the clitic pronoun *le* instead of the accusative forms *lo* and *la*, as illustrated in (8).

- (8)
- |                             |       |        |            |             |
|-----------------------------|-------|--------|------------|-------------|
| El                          | niño  | le     | est-á      | observ-ando |
| the                         | child | LEÍSMO | be-PRS.3SG | watch-GER   |
| 'The child is watching him' |       |        |            |             |
| (Quartararo 2021, 85)       |       |        |            |             |

<sup>2</sup> For a detailed overview, see Fábregas (2013).

<sup>3</sup> Scholars hold divergent views regarding the primary determinant of DOM activation between two key features. Indeed, the prevailing consensus among most authors posits that definiteness typically carries greater significance than animacy. Consequently, animate nouns have the potential to lack DOM marking when they exhibit the feature [-definite].

DOs that possess only one of the two features, i.e., either [+human] or [+definite], show certain variability.<sup>4</sup> Inanimate DOs, as illustrated in (7b), do not receive overt marking and instead employ zero marking.<sup>5</sup> Furthermore, the inherent lexical semantics of the verb plays a role in triggering DOM. Von Heusinger and Kaiser (2011, 595) emphasise the role of affectedness, which is the degree of change imposed on the DO by the main transitive predicate. They argue that affectedness is a crucial factor in the use of DOM in Spanish and establish a scalar correlation between DOM and the degree of affectedness implied by verb semantics. This scale of affectedness is exemplified in Table 1.

**Table 1** The affectedness scale

1	2	3	4	5
Direct effect on patient	Perception	Pursuit	Knowledge	Feeling
<i>Matar</i> 'to kill' <i>golpear</i> 'to beat'	<i>Ver</i> 'to see' <i>oir</i> 'to hear'	<i>Buscar</i> 'to search'	<i>Conocer</i> 'to know'	<i>Querer</i> 'to like'
Source: Heusinger and Kaiser (2011, 609), simplified				

Verbs that directly impact the object, such as *matar* 'to kill', *golpear* 'to hit', but also *ayudar* 'to help', trigger DOM. Conversely, transitive verbs like *ver* 'to see' or *buscar* 'to search', which do not imply a change in the state or condition of the patient, may optionally require overt marking before animate DOs (Fernández Ordóñez 1999; Lapesa 2000).

Limited attention has been given to the relationship between DOM and language contact. Some studies have yielded interesting results regarding the connection between Spanish DOM and its presence in the languages spoken in the Iberian Peninsula. For example, a diachronic study on Portuguese DOM conducted by Delille (1970) suggests that it has been diachronically susceptible to contact-induced language change. The analysis establishes a link between the intensity of Spanish-Portuguese language contact and the evolution of object marking in Portuguese. Portuguese DOM saw increased usage

<sup>4</sup> Fábregas (2013, 14) signals that "some animals are more difficult to get with DOM than others, and it seems that those are the animals which are normally construed as not being active enough [...] one can imagine that this has to do with the fact that animals like fish normally do not interact actively with humans – so perhaps they are even categorised as non-animate for the purposes of grammar".

<sup>5</sup> García García (2014), among others, has observed that in the Spanish speaking world the *a*-marking sporadically occurs with inanimate DOs both in spontaneous spoken and written language.

during the Iberian Union but returned to its original *status* after Portuguese independence in 1640. Concerning Catalan, Pineda (2021) suggests that while DOM was already present in Old Catalan (thirteenth century), predating the intense contact with Spanish, its expansion to encompass a wider range of DOs in modern Catalan is a result of the intense language contact with Spanish. Similarly, in the case of Basque, an isolated language spoken in the Iberian Peninsula, the presence of DOM is argued to be a consequence of intense contact with Spanish (Rodríguez Ordóñez 2017; 2020). Rodríguez Ordóñez (2017) demonstrates that certain Basque varieties developed a DOM system that shares both formal and semantic features with the Spanish counterpart. In both languages, DOM is expressed using forms typically employed to mark indirect objects, and both animacy and definiteness are key factors of its occurrence.

When it comes to the presence of DOM in Amerindian languages resulting from contact with Spanish, very few studies have been conducted. Döhla (2011), for example, notes that Guaraní exhibits a DOM system similar to that of Spanish. Modern Guaraní uses the postposition *pe* (9), which functions similarly to the Spanish preposition *a* (see example 7a).

(9) GUARANÍ

Ai-kuaa    nde    sý-pe  
1-know    your    mother-DOM  
'I know your mother'  
(Bittar Prieto 2021, 95)

Further support for the hypothesis of DOM acquisition in Guaraní due to language contact comes from the examination of Missionary grammars. These grammatical analyses reveal that Old Guaraní did not possess DOM. Interestingly, therefore, the emergence of this construction took place either after or during the period of the Spanish colonisation.

#### 4 Aymara Verb Inflection and Case Marking System

Aymara is a highly agglutinating language that exhibits a complex system of suffixes. Its preferred word order is Subject-Object-Verb with a modifier-head structure. Verb inflectional suffixes possess a significant degree of fusion (Müller 2013, 39), encompassing tense, mood, evidentiality, and person. Each verb inflectional suffix encompasses a combination of two verb arguments. Table 2 provides an illustration of the conjugation of the simple tense and the corresponding arguments involved in each inflectional suffix.



**Table 2** The simple tense paradigm

SUBJECT	OBJECT			
	1EXCL	1INCL	2	3 or none
1EXCL			-sma	-ta
1INCL				-tan
2	-ista			-ta
3	-itu	-istu	-tam	-i

The interactions presented in Table 2 do not represent the inflectional paradigms of all verbs. Aymara verbs exhibit two distinct paradigms, as explained by Cerrón Palomino (2000, 218).

The first paradigm entails interactions between one of the four persons as the subject and the third person (1EXCL>3; 2>3; 3>3, and 1INCL>3). This type of inflection includes all intransitive verbs. Conversely, the second paradigm, which encompasses all interactions in Table 2, involves transitive verbs, verbs derived through a causative suffix, and verbs necessitating an indirect object.

Case marking occurs at the end of the noun phrase, corresponding to the head. The nominative case lacks overt marking, a shared feature across all Aymara varieties. The other cases display overt marking. The accusative case is subtractive (Coler 2014), it is achieved by dropping the final vowel of the nominal base or suffix that precede it. The interlinear gloss in examples depicts the presence of the accusative with the symbol -<sub>c</sub>Ø, where ‘c’ represents ‘consonant’, indicating that the previous suffix or base lost the final vowel and ends with a consonant. Additionally, the suffix *-na* serves for marking both the genitive and locative cases, while the suffix *-ru* marks both the allative and dative cases. The declension pattern of nouns is shown in Table 3.

**Table 3** Aymara declension of the nominal base *uta*

case	suffix	UTA ‘HOUSE’
Nominative	-Ø	uta
Accusative	- <sub>c</sub> Ø	ut
Genitive	-na	utana
Locative	-na	utana
Dative	-ru	utaru
Allative	-ru	utaru
Ablative	-ta	utata
Benefactive	-taki	utataki
Comitative	-mpi	utampi
Comparative	-hama/-jama	utjama

Purposive	layku	utalayku
Limitative	-kama	utakama
Perlative	-kata	utakata
Interactive	-pura	utapura

In this section, the primary focus will be on two specific cases: the accusative and the dative.

The subtractive accusative case serves as default case marker for DO marking. Coler (2014, 210) notes that loanwords, which have not been fully integrated into the Aymara phonetic system or compete with native synonyms, may not exhibit inflection for the accusative case. Additionally, the scholar mentions instances of different markings for DOs, such as the dative/allative case (see example 17).

On the other side, both contemporary Bolivian Aymara grammars (Hardman et al. 2001; Hardman 2001) and Old Aymara grammars (Bertonio 1603; Torres Rubio 1616) do not mention distinct markers for expressing DOs. Interestingly, Old Aymara grammars often omit the subtractive accusative case and exemplify DOs using the unmarked nominative case. Examples (10) and (11) come from contemporary Aymara grammars, while (12) is extracted from Bertonio's grammar.

- (10) Jum t'aqtam (Hardman 2001, 158)  
jum(a)- $\emptyset$       thaqh(a)-tam  
2.PR-ACC      look.for-3>2.SPL  
'She was looking for you'
- (11) Janiw tatalamx uñjtti (Coler 2014, 385)  
jan(i)-w(a)    tata.la-m(a)- $\emptyset$ -x(a)    uñj(a)-t(a)-ti  
no-DECL    dad-2.POS-ACC-TOP    see-1EXCL>3.SPL-NEG/IR  
'I don't see your dad'
- (12) Yacamataqui ccahua saurapitha (Bertonio 1603, 32)  
yacama-taqui    ccahua- $\emptyset$     sau-rapi-tha  
boy-BEN    t-shirt-NOM    knit-BN-1EXCL>3.SPL  
'I knitted a t-shirt for a boy'

According to grammatical descriptions, the suffix *-ru* serves to indicate both the destination of a motion verb (13) and indirect objects (14). In the context of Muylaque Aymara,<sup>6</sup> Coler (2014, 219) emphasises that *-ru* is used in certain contexts to mark nominal constituents that function as DOs. The scholar associates these specific usages with particular verbs, such as 'deceive' or 'escort' (15).

<sup>6</sup> Muylaque Aymara is spoken in the village of Muylaque in the Southern part of Peru.

- (13) Markar Chukiyagu markaru sarawayxta (AILLA: 1\_AY\_TASK)  
marka-ru Chukiyagu marka-ru sara-way(a)-x(a)-ta  
city-ALL La Paz city-ALL ir-DF-COMPL-1EXCL.SPL  
'I went to the city, to La Paz city'
- (14) Aka piskaw<sup>7</sup> wawamarux churtxa (Coler 2014, 220)  
aka piskaw(u)-<sub>c</sub> wawa-ma-ru-x(a) chur(a)-t(a)-xa  
this fish-ACC child-2.POS-DAT/ALL-TOP give-1.SPL-TOP  
'I give this fish to your child'
- (15) Inkañit'awjchix tawaqurux (Coler 2014, 219)  
inkaña-t'a-wja-ch(i)-i-x(a) tawaqu-ru-x(a)  
deceive-MOM-BFR-DUB-3>3.SPL-TOP young.woman-DAT/ALL-TOP  
'He must have deceived the young woman'

This brief grammatical overview highlights two crucial elements aligned with the goals of this study. Firstly, Old Aymara grammars do not mention the dative/allative marker, i.e., *-ru*, as a DO marker. In these grammars, the accusative case is portrayed as formally similar to the nominative case. Secondly, contemporary grammars unanimously assert that in all Aymara varieties, the DO is expressed using the subtractive accusative case, with only the description of Muylaque Aymara (Coler 2014) mentioning the other two possible markings, namely the nominative and the dative/allative cases.

## 5 Materials and Methodology

Two linguists collected the data used in this study during fieldwork. The author of this paper gathered materials related to the Aymara variety spoken in the La Paz department (Bolivia), while Matt Coler collected materials of the Aymara variety spoken in the village of Muylaque (Moquegua-Peru).

In the two data collection areas, there exists significant linguistic contact between the two languages, with Spanish being more widely used than Aymara. In the department of La Paz (Bolivia), Aymara people comprise 68% of the total population, with the vast majority being bilingual. In the sociolinguistic context of the Muylaque people in Peru, as noted by Coler (2014, 24), individuals who are fluent in both languages typically tend to be over 40 years of age. However

<sup>7</sup> The term *piskawu*, meaning 'fish', serves as an instance of an adapted Spanish loanword in Aymara. The original Spanish word for fish is *pescado*. In this particular example, the loanword *piskawu* undergoes inflection in the accusative case.

adults, in general, have a good oral comprehension but they struggle to express themselves in Aymara. On the other hand, younger generations and children possess very limited knowledge of Aymara, primarily communicating in Andean Spanish.

For La Paz Aymara, the materials were obtained through spontaneous narratives and two semi-structured tasks designed to stimulate the expression of knowledge: the Family Problems Picture task (San Roque et al. 2012) and The Pear Story (Chafe 1980). The Family Problems task includes 16 black-and-white pictures. Participants described these images and arranged them into a story. The Pear story is a six-minute film: participants watched it and narrated it to the fieldworker. These materials, comprising 16,480 words, are a valuable source for analysing various grammatical and contact phenomena of Aymara. Transcriptions are available in AILLA (the Archive of the Indigenous Languages of Latin America). Eighteen Aymara-Spanish bilinguals, ranging in age from 22 to 63 years, participated in the recordings. All participants were initially Aymara monolingual speakers and learned Spanish through interactions outside their homes and formal education.

In contrast, information about the materials from Muylaque Aymara is limited. Coler (2014, XV) indicates that the data was gathered between 2007 and 2009 and consists of recorded narratives, field notes, and dialogues with Aymara and Spanish bilingual speakers from the village. However, specific details about the number of informants, word count, or the extent of transcriptions are not available. This study draws data from Coler's (2014) comprehensive grammar.

The data analysis was conducted in three main stages. Firstly, the selection of verbs was based on the animacy of their DOs and their affectedness, as established by von Heusinger and Kaiser (2011). The transitive verbs *jiwaya* 'to kill', *nuwa/nuwja* 'to hit', and *yanapa* 'to help' were chosen due to their high degree of affectedness and likelihood of having an animate DO. In Spanish, these verbs (*matar* 'kill', *golpear* 'hit', and *ayudar* 'help') typically require DOM. This is essential to comprehend whether DOM from Spanish is being replicated in Aymara. Perception verbs *uña* 'see' and *isa* 'hear' were selected because they can occur with both animate and inanimate objects. In Aymara, the verb *uña* also means 'to know'. This semantic overlap allowed for the integration of the knowledge verb into the analysis. The verb *thaqha* 'to search' was included based on the affectedness scale (von Heusinger, Kaiser 2011, 609). The verb *muna* 'to like' was excluded due to its broad semantic range. Two other transitive verbs, *apthapiña* 'to harvest' and *umaña* 'to drink', which inherently require inanimate objects, were included to explore variations in marking inanimate objects. In total, eight verbs were selected.

Secondly, the verbs were extracted from the corpus, focusing on

the cases where DOs were explicitly referenced through lexical devices – e.g., to kill the cat vs. to kill. Cases where the DO was exclusively indicated through verb inflection suffixes were excluded. Section 6 will present the absolute frequency of the verbs in the data, distinguishing between cases with a lexically expressed DO and those without.

In the third and final stage, the analysis focused on the suffixes used to express DOs, along with descriptive statistics for the three cases and the properties of animacy and definiteness.

## 6 Results

The second stage of the analysis focused on distinguishing between lexically expressed and non-expressed DOs, and its findings are presented in Table 4. In the subsequent tables of this study, I will use LA, as an acronym for the La Paz variety and MA for the Muylaque variety.

**Table 4** Lexically expressed and non-expressed DOs in the data

VERBS	Lexical DOs				Non-lexical DOs				TOTAL
	LA		MA		LA		MA		
	<i>n<sub>i</sub></i>	%	<i>n<sub>i</sub></i>	%	<i>n<sub>i</sub></i>	%	<i>n<sub>i</sub></i>	%	
<i>Uña</i> ‘to see’	81	42	8	4	94	49	10	5	193
<i>Nuwa</i> ‘to hit’	57	36	2	2	93	58	7	4	159
<i>Uma</i> ‘to drink’	18	14	4	3	105	79	5	4	132
<i>Isa</i> ‘to hear’	15	32	1	2	28	60	3	6	47
<i>Yanapa</i> ‘to help’	2	6	2	6	21	62	9	26	34
<i>Thaqha</i> ‘to search’	6	26	8	34	4	18	5	22	23
<i>Jiwaya</i> ‘to kill’	7	37	5	26	3	16	4	21	19
<i>Apthapi</i> ‘to harvest’	6	43	0	0	8	57	0	0	14
TOTAL	194	31	30	5	355	57	43	7	622

Table 4 illustrates the discrepancy in the absolute frequency of the selected verbs between the two Aymara varieties.<sup>8</sup> La Paz Aymara dataset exhibits a higher number for almost all verbs, except for *thaqha* ‘to search’ and *yanapa* ‘to help’.

<sup>8</sup> The ratio between the total number of occurrences of each verb and the number of instances with lexically expressed direct objects reveals that there is a tendency to express objects through verb inflection. In this regard, the instances with lexically expressed DOs account for approximately 36% of the total occurrences. The explicit expression of verb arguments could be influenced by pragmatic factors. However, these



**Table 5** The distribution of the object markings with the verbs *nuwa*, *jiwaya*, and *yanapa*

Verbs	DO allative/ dative		DO nominative		DO accusative		TOTAL
	LA	MA	LA	MA	LA	MA	
<i>Nuwa</i> 'to hit'	57	-	-	-	-	2	59
<i>Jiwaya</i> 'to kill'	4	-	3	-	-	5	12
<i>Yanapa</i> 'to help'	2	2	-	-	-	-	4
TOTAL	63	2	3	0	0	7	75

**Table 6** The intersection between animacy and case markings for *nuwa*, *jiwaya* and *yanapa*

	Animate				TOTAL
	+Human		-Human		
	LA	MA	LA	MA	
Nuwa					
Allative/dative	57	-	-	-	57
Nominative	-	-	-	-	
Accusative	-	2	-	-	2
Jiwaya					
Allative/dative	4	-	-	-	4
Nominative	3	-	-	-	3
Accusative	-	1	-	4	5
Yanapa					
Allative/dative	2	2	-	-	4
Nominative	-	-	-	-	-
Accusative	-	-	-	-	-
TOTAL	66	8	0	1	75

**Table 7** The distribution of the DOs in relation to the definiteness scale in both varieties

VERBS	Pronoun		Proper name		Definite NP		Specific indefinite NP		Non-Specific indefinite NP		TOTAL
	LA	MA	LA	MA	LA	MA	LA	MA	LA	MA	
<i>Nuwa</i> 'to hit'	16	1	-	-	41	1	-	-	-	-	59
<i>Jiwaya</i> 'to kill'	-	-	-	2	4	1	3	2	-	-	12
<i>Yanapa</i> 'to help'	-	-	-	-	2	1	-	1	-	-	4
TOTAL	16	1	0	2	47	2	3	4	0	0	75

- (18) Uka k'añaskun q'al wulkasxi, jaqinaka jwayxi (AILLA: 4\_AY\_MIS)  
 uka k'añasku-na q'al(a) wulka-s(i)-x(a)-i, jaqi-naka-**Ø**  
 that car-GEN/LOC all roll.over-REFL-COMPL-3.SPL person-PL-**NOM**  
 jiwa-y(a)-x(a)-i  
 die-CAUS-COMPL-3>3.SPL  
 'He rolled over in that car, he killed people'

Turning to the analysis of Muylaque Aymara dataset, it is important to acknowledge that the limited number of occurrences hinders a comprehensive analysis. Nevertheless, some observations can still be made. Firstly, unlike La Paz Aymara speakers, Muylaque Aymara speakers exclusively employ the accusative case with the DOs of the verbs *jwaya* 'kill' and *nuwa* 'beat'. In (19), for instance, despite the high level on both the animacy and the definiteness scales of the DO *juma* 'you', the personal pronoun is marked with the subtractive accusative.

- (19) Jum nuwirikill sartxa (Coler 2014, 222)  
 jum(a)-**Ø** nuw(a)-iri-ki-ll(a) sar(a)-t-xa.  
 you-**ACC** hit-AG.NMZ-DL-EXC go-1>3.SPL-TOP  
 'I just went to hit you.'

It is noteworthy that although the verb *nuwa* 'hit' is associated with the 2nd person pronoun in both examples (16) and (19), the DOs are marked differently. Thus, in (16) from La Paz Aymara, *juma* 'you' receives the allative/dative case, while in Muylaque Aymara (19), the same pronoun receives the accusative case marking.

When it comes to the verb *yanapa* 'help', both varieties use the dative/allative case *-ru* to express the DOs. However, in one of the two cases from the Muylaque Aymara dataset, the *-ru* marking occurs with a human DO positioned at the 'Specific indefinite NP' level of the definiteness scale, as shown in (20). This last observation provides further insights. The boundary between 'definite NP' and 'specific indefinite NP' for the differential selection of the object marking, noted in La Paz Aymara, does not seem to apply to Muylaque Aymara, which uses different markings to indicate objects placed at the same level of definiteness scale, i.e., 'Specific indefinite NP'. Thus, Specific indefinite NPs that function as the DOs of the verb *jwaya* 'to kill' receive the accusative case, while Specific indefinite NPs that function as the DOs of the verb *yanapa* 'to help' are marked with the suffix *-ru* (see examples 17 and 20).

- (20) Kumunpach ma jaqirux yanapt'asiphirix (Coler 2014, 359)  
 kumun(a)-pach(a) ma jaqi-**ru**-x(a) yanap(a)-t'a-si-ph(a)-iri-x(a)  
 community-INC one person-**DAT/ALL**-TOP help-MOM-REFL-PL-AG.NMZ-TOP  
 'The entire community would help a single person'



Given the evident difference in the selection of DO markings observed with the verbs *nuwa* ‘hit’ and *jiwaya* ‘kill’ between the two varieties, the presence of *-ru* on the DOs of the verb *yanapa* ‘help’ could likely be attributed to the bilingual speakers’ need to employ a DOM to comply with the obligatory requirement imposed by the Spanish language for the verb *ayudar* ‘to help’.

Finally, in regard to the verbs *nuwa* ‘hit’ and *jiwaya* ‘kill’, the results obtained from the datasets of the two varieties show contrasting patterns. In the case of La Paz Aymara, speakers strongly prefer employing the *-ru* marking when dealing with objects characterised by a semantic feature [+human], alongside possessing a significant level of definiteness (see examples 16 and 17). The *-ru* marking is indeed observed in conjunction with all definite forms, whereas the nominative marker is employed with the indefinite forms. In Muya-laque Aymara, on the other hand, neither animacy nor definiteness appears to trigger the use of a distinct marker for the objects of the two verbs (see example 19).

## 6.2 The Object Marking with the Verbs *Isa*, *Uña*, and *Thaqha*

When examining the perception and pursuit verbs, specifically *isa* ‘hear’, *uña* ‘see’, and *thaqha* ‘search’, a significant contrast is observed compared to the verbs discussed in Section 6.1. This group stands out with the highest absolute frequency of lexically expressed DOs, with a total of 119 instances. This larger sample size provides a more comprehensive representation of the distribution of the analysed predictors. In particular, the verb *uña*<sup>9</sup> ‘see’ showcases the use of all analysed case markings to indicate DOs [tab. 8], represents all three levels of the animacy scale [tab. 9], and includes all levels of the definiteness scale [tab. 10].

**Table 8** The distribution of the object markings with the verbs *uña*, *isa*, and *thaqha*

Verbs	DO allative/ dative		DO nominative		DO accusative		TOTAL
	LA	MA	LA	MA	LA	MA	
<i>Uña</i> ‘to see’	14	3	32	3	35	2	89
<i>Isa</i> ‘to hear’	10	-	3	-	2	1	16
<i>Thaqha</i> ‘to search’	-	1	5	-	1	7	14
TOTAL	24	4	40	3	38	10	119

<sup>9</sup> The data includes derived forms of the verb *uña*, such as *unjaña* ‘observe/to take care of’, *uñt’aña* ‘know’ and *uñch’ukiña* ‘watch’.

**Table 9** The intersection between animacy and case markings for *uña*, *isa* and *thaqha*

	Animate				Inanimate		TOTAL
	+Human		-Human				
	LA	MA	LA	MA	LA	MA	
UÑA							
Allative/dative	9	2	4	-	1	1	17
Nominative	2	1	-	-	30	1	34
Accusative	3	-	-	1	32	2	38
ISA							
Allative/dative	9	-	-	-	1	-	10
Nominative	2	-	-	-	1	-	3
Accusative	2	-	-	-	-	1	3
Thaqha							
Allative/dative	-	1	-	-	-	-	1
Nominative	5	-	-	-	-	-	5
Accusative	-	1	-	-	1	6	8
TOTAL	32	5	4	1	66	11	119

The analysis of the interaction between case marking and animacy reveals that the verbs *uña* ‘see’ (15 out of 22 cases) and *isa* ‘hear’ (9 out of 13 cases) tend to prefer the dative/allative case marker *-ru* when expressing animated DOs. However, in some cases, despite the semantic feature [+human], the markings correspond either to the accusative or the nominative cases. In the case of inanimate DOs associated with *uña* ‘see’, they are predominantly marked by the accusative or the nominative (65 out of 67 cases). The limited number of occurrences for those correlated with *isa* ‘hear’ (3 instances) and their distribution do not allow for meaningful observations.

The results for the verb *thaqha* are less conclusive. All inanimate objects receive an accusative case marking in both varieties, while human DOs receive all three markings, with the nominative case being the most common (5 out of 7 cases).

Table 10 presents the distribution and intersection between the case marking and the definiteness property of the DOs associated with the three verbs. Across all levels of the hierarchy, the use of the allative case can be observed in at least one of the two varieties [tab. 10].

**Table 10** The intersection between definiteness and case markings for the three verbs

	Pronoun		Proper name		Definite NP		Specific indefinite NP		Non-Specific indefinite NP		TOTAL
	LA	MA	LA	MA	LA	MA	LA	MA	LA	MA	
UÑA											
Allative/ dative	3	1	-	-	7	2	5	-	-	-	17
Nominative	-	1	-	-	26	-	6	-	-	1	34
Accusative	-	-	-	1	24	1	7	1	2		38
ISA											
Allative/ dative	3	-	1	-	4	-	-	-	2	-	10
Nominative	-	-	-	-	3	-	-	-	-	-	3
Accusative	-	-	-	-	2	1	-	-	-	-	3
THAQHA											
Allative/ dative	-	1	-	-	-	-	-	-	-	-	1
Nominative	-	-	-	-	-	-	5	-	-	-	5
Accusative	-	1	-	-	-	-	1	-	-	6	8
TOTAL	6	4	1	1	67	4	24	1	4	7	

Further exploration of the results presented in tables 9 and 10 reveals that in 80% of cases (8 out of 10), personal pronouns are expressed with *-ru* (see examples 21 and 22). Only two instances of proper names are found in the data. However, even in these cases, the proper name referring to a human being bears the dative marking *-ru*, while the proper name of a city lacks such marking and instead shows accusative inflection. Regarding ‘Definite NPs’, the use of case markings by speakers displays significant variability. For ‘Definite NPs’ referring to animate entities, approximately 59% of the cases (10 out of 17 cases) prefer the use of *-ru* marking, while the remaining 41% is expressed through the nominative (5 cases) and accusative (2 cases) markings (see examples 23, 24, and 25). In the remaining cases of ‘Definite NPs’, where DOs are inanimate entities, they are marked with the allative (3 cases), the nominative (24 cases), and the accusative (26 cases).

- (21) Jum thaqasmaya (Coler 2014, 130)  
 jum(a)- $\emptyset$  thaqa-sma-xa  
 you-ACC search-1>2.SPL-TOP  
 ‘It’s you that I look for’

- (22) Jumaruw thaqasmamaxa (Coler 2014, 536)  
juma-**ru**-w(a) thaqa-sma-xa  
you-**DAT/ALL**-DECL search-1>2.SPL-DECL  
'It's you that I am looking for.'
- (23) Wawanaksa näx uñjäwa (AILLA: 1\_AY\_TASK)  
wawa-nak(a)-**Ø**-sa nä-x(a) uñ.ja-:-wa  
child-PL-**ACC**-ADD 1PR-TOP see-1>3.FUT-DECL  
'I will take care of the children'
- (24) Wawanakasa sum uñjañani (AILLA: 1\_AY\_TASK)  
wawa-naka-sa-**Ø** sum uñ.ja-ñani  
child-PL-1INCL.POS-**NOM** good see-1INCL>3.FUT  
'We will take good care of our children'
- (25) Wawanakar sum uñjaña (AILLA: 2\_AY\_TASK)  
wawa-naka-**r(u)** sum(a) uñ.ja-ña  
child-PL-**DAT/ALL** good see-ANMZ  
'It is necessary to take good care of the children'

With respect to 'Specific Indefinite NPs', a clear trend is observed in favour of distinguishing between *-ru* marking and the other two cases. All animated 'Specific indefinite NPs' are marked with *-ru*, while inanimate 'Specific indefinite NPs' are marked with the accusative and nominative cases. In contrast, 'Non-specific indefinite NPs' demonstrate a distinct pattern in the selection of case marking. Out of the seven cases analysed, human DOs exhibit the nominative marking, while the remaining two cases receive the *-ru* marking. Inanimate DOs consistently display accusative or nominative marking.

In the realm of perception and pursuit verbs, as well as the previously discussed verbs (cf. § 6.1), animacy emerges as a prominent semantic feature that strongly influences the choice of the *-ru* marker by speakers. However, in the case of the verbs *uña* 'see', *isa* 'hear', and *thaqha* 'search', definiteness does not seem to be a determining factor. In La Paz Aymara, the predominant usage of the *-ru* marking occurs with animate DOs accounting for 22 out of 36 cases (61%). The other two markers are also present, but with lower percentages: the nominative case is observed in 9 instances, representing approximately 25%, and the accusative case is found in 5 instances, representing 14%. In Muylaque Aymara, despite a limited number of cases (6 occurrences), the suffix *-ru* appears in 3 instances with the verbs *uña* and *thaqha*.

With regard to the marking of the nominative case, the analysis of the considered predictors does not indicate a difference between the nominative and accusative object marking. Both forms are used without implying any semantic differences. Nevertheless, the La Paz

Aymara dataset exhibits a proportionally higher usage of the nominative case on DOs, whereas, in Muylaque Aymara, this phenomenon appears to be rare, as the accusative case is preferred over the nominative case.

### 6.3 The Object Marking with the Verbs *Uma* and *Apthapi*

The final subset of verbs consistently governs inanimate DOs. Table 11 illustrate how case markings are distributed on DOs with the verbs *uma* ‘drink’ and *apthapi* ‘harvest’.

**Table 11** The distribution of the object markings with the verbs *uma* and *apthapi*

Verbs	DO allative/ dative		DO nominative		DO accusative		TOTAL
	LA	MA	LA	MA	LA	MA	
<i>apthapi</i> ‘to harvest’	-	-	2	-	4	-	6
<i>uma</i> ‘to drink’	-	-	10	-	8	3	21
TOTAL	0	0	12	0	12	3	27

In the dataset, there is no *-ru* marking on DOs with the verbs *uma* ‘drink’ and *apthapi* ‘harvest’. Based on previous observations, it is reasonable to suggest that this lack may be due to the fact that these two verbs do not take animate DOs. In this group of verbs, the observable object markings include both the nominative (26) and accusative (27 and 28) cases.

- (26) Janiw jichax sirwis umktti (Coler 2014, 648)  
jani-w(a) jicha-x(a) sirwis(a)-<sub>Ø</sub> um(a)-k(a)-t-ti  
no-DECL now-TOP beer-ACC drink-INCOMPL-1>3.SPL-NEG/IR  
‘I am not drinking beer now.’
- (27) Mä chacha apthapiskiw muxsa achunaka (AILLA: 2\_AY\_PEAR)  
mä chacha apthapi-s(i)-ka-i-w(a) muxsa achu-naka-<sub>Ø</sub>  
one man harvest-REFL-INCOMPL-1>3.SPL-DECL sweet fruit-PL-NOM  
‘A man is harvesting fruit’
- (28) Jupa willtat makatix uka muxsa achunak apthapiri (AILLA: 3\_AY\_PEAR)  
jupa willta-t(a) makat(a)-i-x(a) uka muxsa achu-nak(a)-<sub>Ø</sub>  
3PR again-ABL climb-3.SPL-TOP that sweet fruit-PL-ACC  
apthap(i)-iri  
harvest-AG.NMZ  
‘He again climbed the ladder to harvest those fruits’

The nominative case is used when the DO originates in a Spanish loanword (cf. Coler 2014, 210), as seen in the case of the word *alkula* ‘alcohol’ (29). This noun always appears in the nominative, as exemplified in (29), and is never inflected in the accusative.

- (29) Ukana nayax yatiqawayta kuka akhulliña alkula umaña awtoridadanakampi  
(AILLA: 1\_AY\_TASK)
- |              |            |                      |          |            |
|--------------|------------|----------------------|----------|------------|
| uka-na       | naya-x(a)  | yati-qa-way(a)-ta    | kuka-ø   | akhulli-ña |
| that-GEN/LOC | 1PR-TOP    | know-DW-DF-1EXCL.SPL | coca-NOM | chew-ANMZ  |
| alkula-ø     | uma-ña     | awtoridada-naka-mpi  |          |            |
| alcohol-NOM  | drink-ANMZ | autoridad-PL-COM     |          |            |
- ‘There I learnt to chew coca and drink alcohol with the authorities’

This data further supports the distinction between the two Aymara varieties, which was somewhat noticeable in the previous groups of verbs but it is clear here. The data reveals that the variation in the choice between the nominative and accusative cases for inanimate DOs is more pronounced in the Bolivian Aymara variety, whereas the Peruvian variety displays minimal instances of such variation, especially with the verb *uma* ‘drink’, which is exempt from this variation.

## 7 Discussion and Preliminary Conclusions

Using Thomason’s definition of language contact as “the use of more than one language in the same place at the same time” (Thomason 2001, 1) and expanding upon Weinreich’s ([1953] 1979, 1) assertion that multilingual speakers serve as the primary *locus* of linguistic contact, this study investigates two distinct instances of linguistic contact between Spanish and Aymara. Specifically, it focuses on Aymara spoken by Aymara-Spanish bilingual speakers of two diatopic Aymara varieties: La Paz (Bolivia) and Muylaque (Moquegua-Peru). Both of these contact situations exhibit the traditional social predictors that promote contact-induced language change, namely, the duration of contact and the social, political, and economic subordination of the language experiencing the contact relative to the source language. Over the course of nearly five centuries of linguistic contact between Spanish and Aymara, Aymara-speaking population has been subjected to Spanish socio-economic dominance. This dominance was initially established during the colonial era through the promotion of the coloniser-colonised dichotomy and later enforced in the republican era through social and educational policies imposed by a non-indigenous ruling class which mandated the use of Spanish in all institutions and medias.

Additionally, this study examines contact-induced variation of a morphosyntactic phenomenon, particularly the DO marking system,

between these two genetically and typologically diverse languages. In this sense, it aligns itself with both the “anything goes” perspective (Matras 1998), which suggests that any linguistic material can be borrowed given sufficient social pressure (Thomason 2001) and the idea that typological differences do not serve as a deterrent to contact-induced variation.

The analysis of the DO markers in the two Aymara varieties reveals a more robust presence of lexically expressed DOs in La Paz Aymara compared to Muylaque Aymara. Nevertheless, the findings support the hypothesis that both Aymara varieties are developing a DOM system due to their extensive contact with Spanish.

Specifically, La Paz Aymara exhibits a more advanced acquisition of DOM, with strong tendency to use the allative/dative case marker *-ru* to indicate animate DOs. This DOM system shares formal characteristics with its Spanish counterpart, both employing forms typically reserved for marking indirect objects to express DOM. However, the predictors for DOM activation differ between the two languages: in La Paz Aymara, animacy seems to be the primary factor, while definiteness plays a negligible role.

Another notable phenomenon is the use of the nominative case as a marker for DO. La Paz Aymara shows more variation in this regard compared to Muylaque Aymara, although conclusions about this marker remain preliminary. Examining Old Aymara grammars suggests two potential conclusions: either the use of the nominative as a DO marker is an existing but unacknowledged feature in contemporary Aymara grammars,<sup>10</sup> or it is a result of contact with Spanish, where Aymara bilingual speakers replicate both overtly marked and zero-marked DOs. The analysis suggests that this process is ongoing, resulting in a competition between nominative and the accusative case markers, for inanimate objects. It is proposed that the omission of the subtractive accusative description in Old Aymara grammars (Bertonio 1603; Torres Rubio 1616) can be attributed to the missionaries’ limited understanding of the complex system of vowel deletion<sup>11</sup> that typifies the Aymara language.

Based on data from Muylaque and La Paz Aymara, this analysis demonstrates the extent to which the Object Marking system in Aymara, as spoken by bilinguals, results from grammatical replication (Heine, Kuteva 2005), that is, the transfer of grammatical concepts and models of grammaticalisation from the Model language (M) to the Replica language (R). In the contact between Aymara (R)

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**10** If we deem this conclusion as valid, then it is imperative to undertake additional research to comprehend which factors trigger the nominative case over the accusative case.

**11** For a detailed overview, see Coler et al. (2020).

and Spanish (M) this replication process seems to have operated as follows:

1. Aymara speakers (R) have observed the DO marking system in Spanish (M), specifically the distinction between DOM (+animate) and zero-marked DO (-animate).
2. They identified the dative case (-*ru*) and the nominative case (- $\emptyset$ ) as potential replicating forms in (R) for the distinction DOM vs. DO.
3. They replicated the process of grammaticalisation that occurred in (M), using the formulas such as [a preposition + DO (+animate) > DOM] = [allative/dative -*ru* + DO (+animate) > DOM] and [zero marker + DO (-animate) > OD] = [(nominative - $\emptyset$  + DO (-animate) > OD], creating the constructions Ry1 and Ry2, respectively.
4. They grammaticalised Ry1 and Ry2 in the constructions dative case + animate DO and nominative case + inanimate DO.

In summary, Aymara-Spanish bilingual speakers use the dative/allative case to indicate the differential marking of animate DOs, similar to Spanish speakers who use the DOM marker *a*. Additionally, they use the nominative case to mark DOs that do not require differential marking in Spanish. In other words, when replicating the zero-marking Spanish DO, bilingual speakers choose the nominative since it is the sole case that lacks overt marking.

This variation seems to be triggering a transformation in the complete Aymara DO marking system. Nevertheless, further research, involving other transitive verbs and alternative analytical approaches, is necessary to comprehensively grasp this ongoing phenomenon.

### Acknowledgements

This study is inserted in the Fondecyt de Iniciación Project No. 11220267 “Evidentiality and language contact: the replication of evidentials from Spanish to Aymara”.



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