Simon Claassen (s4401581) Luis Miguel Rojas-Berscia (1<sup>st</sup> reader) Helen de Hoop (2<sup>nd</sup> reader)

# Verbal derivation in Upper Amazonian Quechua

# A preliminary Semantic Syntax perspective

# Contents

Abstract	3
Introduction	4
Phonology	5
Nominal morphology	6
Verbal morphology	14
Literature	23
Semantic Syntax	23
Generative semantics	26
Method	34
Analysis	35
Conclusion	53
Abbreviations	56
References	57

# Abstract

The dialect of Quechua IIB spoken in the Peruvian regions of San Martín and Loreto, Upper Amazonian Quechua, exhibits both similarities to and differences from the dialects spoken in the direct surroundings. It has an SOV structure and a highly agglutinative morphology, using numerous bound morphemes attached to noun or verb stems to express a variety of grammatical features, like person, tense and aspect. A striking phenomenon in Upper Amazonian Quechua and other varieties of Quechua concerns the placement and possible order of these morphemes as well as the principles governing this order. Using the syntactic theory of generative semantics (Lakoff, 1971), Parker (1973) carried out an analysis of verbal suffix placement in Ancash Quechua, a different variety of Quechua. In this article, I provide an analysis for the order of indexation of various suffixes to verbal stems in Upper Amazonian Quechua. Different suffix orders change the scope of the suffixes and thus the interpretation of the sentence. For this analysis, I resort to the theory known as *Semantic Syntax* (Seuren, 2018), a syntactic theory based on the theory of generative semantics.

# Introduction

Quechua is a language family composed of several dozens of related languages and dialects, which are spoken by a total number of around 8 to 12 million people spread across South America (Hornberger & King, 2001), most notably in Peru, Bolivia and Ecuador. Since the Quechuan languages are dispersed across such a large geographical area, ranging from Colombia in the north to Argentina and Chile in the south, there is a lot of variation between the different varieties of Quechua (Coronel-Molina, 2011). Some varieties of Quechua are even mutually unintelligible, such as the variety of Ancash Quechua (Parker, 1976), spoken in Peru, and Santiagueño Quechua, spoken in Argentina (Adelaar, 1995).

Their diversity, which is often compared to the diversity between the different Romance languages, such as Spanish and Portuguese (Parker, 1976), Spanish and French (Weber, 1989) and Spanish and Italian (Heggarty et al., 2005), raises the question why the different varieties of Quechua are often collectively called 'Quechua', as if they were a single language. Cerrón-Palomino (1985) addresses this issue. He states that the erroneous name of the 'Quechua language' is on the one hand caused by the fact that most indigenous people in South America did not have a name for their own language, with Quechua being called *runa simi* 'language of the people' by its speakers, and on the other hand by the fact that most current glottonyms in South America are based upon names which were, often quite arbitrarily, assigned to different ethnic groups by the first Spanish chroniclers.

Even though the different varieties of Quechua exhibit great variation in both lexicon and morphosyntax, there are also many structural characteristics that are shared by many Quechuan languages. For instance, languages of this family are SOV (subject - object - verb) in their basic structure, meaning that they are predicate final, and they share similarities in the basic structure of both noun and verb phrases (Muysken, 1977). The Quechuan languages are also highly synthetic languages with

an agglutinative morphology, using a considerable number of suffixes that can be attached to nominal or verbal stems in order to express numerous grammatical features (Muysken, 1981).

All varieties of Quechua can be classified into two main groups, often called *Quechua I* and *Quechua II* (Adelaar, 2004). This division, initially proposed by Torero (1968), is now generally adhered. Quechua I comprises the Central Quechuan varieties, whereas Quechua II can be further subdivided into *Quechua II A* (also Cajamarca-Cañaris or Yungay Quechua), *Quechua II B* (Northern Quechua) and *Quechua II C* (Southern Quechua). All these families can again be subdivided into smaller subfamilies. Together with two other varieties, Upper Amazonian Quechua, the variety which is dealt with in this article, is categorized as a Northern Quechuan variety, spoken in the Peruvian regions of San Martín and Loreto.

As was stated before, the Quechuan languages are highly synthetic. Upper Amazonian Quechua is no exception. It employs a variety of both nominal and verbal suffixes. In the following sections, a grammar sketch of the language is presented with a special focus on these different suffixes.

### Phonology

Tables 1 and 2 below show the different consonants and vowels of the language, respectively. The letters shown in brackets behind some of the phonemes are the letters used in the orthography of Quechua to represent these phonemes (Coombs, Coombs, & Weber, 1976). This orthography will be adhered throughout this paper.

	bilabial	alveolar	postalveolar	retroflex	palatal	velar	glottal
plosive	р	t				k	
affricate			t∫ <ch> dʒ <ll></ll></ch>				
fricative		S	∫ <sh></sh>				h
nasal	m	n			n <ñ>		
flap		<r> 1</r>					
semivowel	w		j <y></y>				

Table 1: consonants of Upper Amazonian Quechua (Coombs et al., 1976)

	front	central	back
high	i		u
mid			
low		а	

Table 2: vowels of Upper Amazonian Quechua (Coombs et al., 1976)

### Nominal morphology

Nouns in Upper Amazonian Quechua can take a variety of suffixes to express multiple grammatical categories: number, size, case and possession (Coombs, Coombs, & Weber, 1976). These four grammatical categories and their respective suffixes will be discussed in the following section.

Upper Amazonian Quechua distinguishes between two numbers, singular and plural. While singular number is not marked morphologically, plural number is expressed by the suffix *-kuna*. For instance, *wasi* 'house' can be pluralized to *wasi-kuna* 'houses' (Coombs et al., 1976).

The suffix *-sapa* has an augmentative meaning, for instance *maki* 'hand' vs. *maki-sapa* 'big hand' (Coombs et al., 1976). The suffix *-(s)itu* has a diminutive meaning, as can be seen in (1) below. The initial *s* of the suffix is dropped whenever the suffix is preceded by a consonant, but retained whenever it is preceded by a vowel.

(1) kawa-ni suk taksha wasi-situ-ta

see-1 one little house-DIM-ACC

'I see one little house.' (Coombs et al., 1976)

The suffix is a borrowing from Spanish. When this suffix is used on Spanish loanwords, gender distinction is made. The form -(s)itu is reserved for masculine nouns and -(s)ita is used on feminine nouns. When used on Quechuan words, the variant -(s)itu is used. Another allomorph of this suffix, -(s)iti, is used when the suffix is followed by the limitative suffix -lla or -llu, as can be seen in (2) below.

(2) *shamu-shka-ni waw-iti-lla-yni-wan*come-PST-1 child-DIM-LIM-1.POSS-COM
'I came only with my little child.' (Coombs et al., 1976)

Upper Amazonian Quechua uses case suffixes to specify the grammatical function of a noun within a sentence structure. Table 3 below gives an overview of these different case suffixes on the noun *wasi* 'house'. Examples of the different suffixes can be found in (3-23). These suffixes can be used both on nouns and pronouns, which is elaborated upon further on.

nominative	wasi
accusative	wasi-ta
locative	wasi-pi
ablative	wasi-manta
allative	wasi-man
terminative	wasi-kaman
intrative	wasi-pura
benefactive	wasi-pa
comitative	wasi-wan
causative	wasi-rayku
comparative	wasi-shina
totalitative	wasi-ntin
limitative	wasi-lla

Table 3: case suffixes of Upper Amazonian Quechua (Coombs et al., 1976)

Upper Amazonian Quechua is a nominative-accusative language. It deploys the accusative suffix *-ta* to mark the object of a transitive sentence. The nominative case, which is used for the subjects of both intransitive (3) and transitive sentences (4), has no overt marking. This unmarked form is also used for nominal predicates (5) and as a vocative case when addressing people (6).

- (3) chay wamra puri-yka-shpa puklla-n
  - DEM boy walk-prog-sim play-3

'The boy plays while walking.' (Coombs et al., 1976)

(4) pay ñuka-ta maka-wa-n

3 1-ACC hit-1-3

'He hits me.' (Coombs et al., 1976)

(5) ñuka ka-ni Pedro

1 be-1 Peter

'I am Peter.' (Coombs et al., 1976)

(6) sobrino ñuka-pish yarka-ni sobrino
nephew 1-ADD hunger-1 nephew
'Nephew, I am also hungry, nephew.' (Coombs et al., 1976)

The suffix *-ta* is used both for direct (7) and indirect objects (8), thus also encompassing the use of the dative case. Furthermore, it can also indicate a route or trajectory (9), similar to a perlative case, and can sometimes appear in place of *-man* as the allative case (10).

- (7) ishkay warmi-ta kawa-rka-ntwo woman-ACC see-PST-3'He saw two women.' (Coombs et al., 1976)
- (8) Pedro-ka pelota-ta Juan-ta ku-rka-n
  Peter-TOP ball-ACC John-ACC give-PST-3
  'Peter gave the ball to John.' (Coombs et al., 1976)
- (9) kuti-ni wasi-yni-ta

return-1 house-1-ACC

'I return to my house.' (Coombs et al., 1976)

(10) yayku-shka bentana-ta

enter-PST window-ACC

'He entered through the window.' (Coombs et al., 1976)

The language has several grammatical cases which express location or motion, such as *-pi*, specifying a location, both in space (11) and time (12), *-pura*, specifying the surroundings or environment (13), *-man* and *-manta*, indicating motion towards (14) or from a noun (15), respectively, and *-kaman*, indicating the end or limit of a movement (16). (11) *chakra-pi-mi* trabaha-yka-n farmland-LOC-EXP work-PROG-3

'He is working on the farmland.' (Coombs et al., 1976)

(12) marso-pi-mi shamu-ni

March-LOC-EXP come-1

'I come in March.' (Coombs et al., 1976)

(13) pay-kuna tanta-na-ku-shka-ka bruhu-pura

3-PL reunite-REFL-ANTIP-PST-TOP wizard-ITRT

'They reunited among the wizards.' (Coombs et al., 1976)

(14) kuti-ni wasi-yni-man

return-1 house-1-ALL

'I return to my house.' (Coombs et al., 1976)

(15) ñuka-ka ka-ni-mi Lamas-manta

1-TOP be-1-EXP Lamas-ABL

'I am from Lamas.' (Coombs et al., 1976)

(16) kaya ri-n Lima-kaman

tomorrow go-3 Lima-TERM

'Tomorrow he goes until Lima.' (Coombs et al., 1976)

The benefactive suffix *-pa* indicates a benefactor (17) and is often used in combination with the benefactive verbal suffix *-pu*. It is also used in possessive constructions with an overt possessor to mark this possessor (18), which makes it similar in function to a genitive case. The comitative suffix *-wan*, though usually used to indicate accompaniment (19), can also be used to indicate an instrument (20), thus bearing similarities to an instrumental case.

(17) suwa-ni familia-yni-pa

rob-1 family-1-BEN

'I rob for my family.' (Coombs et al., 1976)

(18) Juan-pa wallpa-n
John-BEN hen-3
'John's hen' (Coombs et al., 1976)
(19) wawki-yni-wan-mi ri-shka-ni
brother-1-COM-EXP go-PST-1
'I went with my brother.' (Coombs et al., 1976)
(20) machete-wan trabaha-yka-ni
machete-COM work-PROG-1
'I am working with a machete.' (Coombs et al., 1976)

The causal suffix *-rayku* is not related to and should not be confused with the causative verbal suffix *-chi*. The causal case suffix indicates that a noun is the cause or reason of a certain action, as can be seen in (21). Also, a noun in this case is not a core argument, as opposed to the argument of a verbal causative.

(21) kullki-n-rayku-lla wañu-chi-rka-nki
money-3-CAUS-LIM die-CAUS-PST-2
'You killed him only because of his money.' (Coombs et al., 1976)

The comparative suffix *-shina* is used when the appearance or qualities of one noun are compared or equated to that of another and can be translated as 'like', as shown in (22) below. The totalitative suffix *-ntin* indicates that a noun is completely and entirely involved in a certain action, for instance *ishka* 'two' vs. *ishka-ntin* 'both of them'.

(22) *pay-ka kuchi-shina*3-TOP pig-COMP'He is like a pig.' (Coombs et al., 1976)

The limitative suffix *-lla* is listed here as a case suffix. Syntactically, however, it should probably be analyzed differently, since the suffix does not occupy the word-final position normally reserved for case suffixes. Instead, it appears after the

diminutive suffixes, as can be seen in (2). The suffix indicates the exclusivity of an argument (23). Additionally, an allomorph *-llu* of this suffix exists. This allomorph is always, though not obligatorily, used after nouns with a masculine gender.

(23) Juan-lla shamu-shkaJohn-LIM come-PST'Only John came.' (Coombs et al., 1976)

Possessive constructions in Upper Amazonian Quechua are doubly marked, which means that both the possessor and the possessed noun are marked. The possessor, if overtly expressed, is marked with the genitive suffix *-pa*, whereas the possessed noun is marked with a person suffix, all of which are shown in Table 4 below.

	SG	PL
1.excl	wasi-yni	wasi-ynikuna
1.INCL	wasi-nchi	wasi-nchikuna
2	wasi-yki	wasi-ykichi
3	wasi-n	wasi-nkuna

Table 4: possessive suffixes of Upper Amazonian Quechua (Coombs et al., 1976)

As can be seen, Upper Amazonian Quechua distinguishes between three different persons, with an additional distinction between first person exclusive and inclusive. The plural forms of the first person and the third person are composed of the singular forms and the plural suffix *-kuna*. The first person inclusive and the second person plural forms both contain the pluralizing morpheme *-chi*.

The nominal suffixes have a fixed order, which is shown in Table 5 below. Diminutive suffixes are placed immediately after the stem, followed by the limitative suffix. After this, the possessive suffixes appear, followed by the augmentative suffix and the plural suffix. Finally, the case suffixes are placed behind.

stem	diminutive	limitative	possessive	augmentative	number	case
wasi	-(s)itu	-lla	-yni	-sapa	-chi	-ta
	-(s)ita		-yki		-kuna	-ра
	-(s)iti		-11			-pi

Table 5: order of nominal suffixes of Upper Amazonian Quechua (Coombs et al., 1976)

Upper Amazonian Quechua has three sets of pronouns: personal pronouns, demonstrative pronouns and interrogative pronouns. The latter are also used as indefinite pronouns. The word *kiki-* is obligatorily followed by one of the person suffixes mentioned above and emphasizes that the preceding noun or pronoun is the exclusive participant in an action. It is also sometimes classified as a pronoun, usually called an intensive pronoun.

As can be seen in Table 6 below, this variety of Quechua has the personal pronouns *ñuka, kan* and *pay* for first, second and third person, respectively. The pronouns *kan* and *pay* can be pluralized by adding the plural suffix *-kuna*, creating *kan-kuna* and *pay-kuna*, respectively. The first person pronoun has two different forms, the exclusive *ñuka* and the inclusive *ñukanchi*. The first person plural exclusive pronoun is *ñukaykuna*, whereas the first person plural inclusive pronoun is *ñukaykuna*. In these forms, one can recognize the morphemes *-kuna* and *-chi*, the latter of which is also used to pluralize the possessive suffix.

	SG	PL
1.excl	ñuka	ñukaykuna
1.INCL	ñukanchi	ñukanchikuna
2	kan	kankuna
3	pay	paykuna

Table 6: personal pronouns of Upper Amazonian Quechua (Coombs et al., 1976)

The language distinguishes between two demonstrative pronouns, one proximal and one distal. The proximal demonstrative pronoun is *kay*, while the proximal

demonstrative is *chay*. The interrogative pronouns used in the language are *pi* 'who', *ima* 'what', *maykan* 'which' and *mashna* 'how much'. The former three of these pronouns also function as indefinite pronouns. They can then be translated as 'somebody', 'something' and 'some', respectively.

#### Verbal morphology

Verbs in Upper Amazonian Quechua are conjugated for person, number, tense, aspect and mood. Both the subject and the object are encoded on the verb with person markers. The language distinguishes between the same person and number combinations as the pronouns and possessive markers. There is also a number of suffixes which change the valency of the verb. The following section gives an overview of the various grammatical categories expressed on verbs and their respective suffixes.

The language has a future/non-future tense system. When unmarked, the nonfuture is interpreted as present tense. There are two different past tense markers in the language. The recent past, marked with the suffix *-shka*, is used mostly in everyday speech, whereas the remote past, *-rka*, is reserved mostly for stories and narrations. The future tense has a unique set of person suffixes.

Tables 7-10 below give an overview of the suffixes for the different combinations of person, number and tense of the language. Separate tables are given for the intransitive and transitive forms. For the intransitive forms, the verb *ri*- 'go' is used, while the verb *maka*- 'hit' is used for the transitive forms.

	SG	PL
1.excl	ri-ni	ri-nisapa
1.INCL	ri-nchi	ri-nchisapa
2	ri-nki	ri-nkichi
3	ri-n	ri-nsapa

Table 7: intransitive non-future forms of Upper Amazonian Quechua (Coombs et al., 1976)

1sg.excl>2sg	maka-yki	1pl.excl>2sg	maka-ykisapa
1sg.excl>2pl	maka-ykichi	1pl.excl>2pl	maka-ykisapa
2sg>1sg.excl	maka-wanki	2pl>1sg.excl	maka-wankichi
2sg>1pl.excl	maka-wankisapa	2pl>1pl.excl	maka-wankichi
3sg>1sg.excl	maka-wan	3pl>1sg.excl	maka-wansapa
3sg>1sg.incl	maka-wanchi	3pl>1sg.incl	maka-wanchisapa
3sg>2sg	maka-shunki	3pl>2sg	maka-shunkisapa
3sg>1pl.excl	maka-wansapa	3pl>1pl.excl	maka-wansapa
3sg>1pl.incl	maka-wanchisapa	3pl>1pl.incl	maka-wanchisapa
3sg>2pl	maka-shunkichi	3pl>2pl	maka-shunkisapa

Table 8: transitive non-future forms of Upper Amazonian Quechua (Coombs et al., 1976)

	SG	PL
1.EXCL	ri-sha	ri-shasapa
1.INCL	ri-shun	ri-shunchi
2	ri-nki	ri-nkichi
3	ri-nka	ri-nkasapa

Table 9: intransitive future forms of Upper Amazonian Quechua (Coombs et al., 1976)

1sg.excl>2sg	maka-yki	1pl.excl>2sg	maka-ykisapa
1sg.excl>2pl	maka-ykichi	1pl.excl>2pl	maka-ykisapa
2sg>1sg.excl	maka-wanki	2pl>1sg.excl	maka-wankichi
2sg>1pl.excl	maka-wankisapa	2pl>1pl.excl	maka-wankichi
3sg>1sg.excl	maka-wanka	3pl>1sg.excl	maka-wankasapa
3sg>1sg.incl	maka-washun	3pl>1sg.incl	maka-washunsapa
3sg>2sg	maka-shunki	3pl>2sg	maka-shunkisapa
3SG>1PL.EXCL	maka-wankasapa	3pl>1pl.excl	maka-wankasapa
3sg>1pl.incl	maka-washunchi	3pl>1pl.incl	maka-washunsapa
3SG>2PL	maka-shunkichi	3pl>2pl	maka-shunkisapa

Table 10: transitive future forms of Upper Amazonian Quechua (Coombs et al., 1976)

As can be seen, most non-future suffixes contain *-n*. This *-n* is often analyzed as a non-future marker, but it is not completely productive, as can be seen in the 1>2 suffix *-yki*. The past tense forms of the verbs are not listed in the tables above. Past tense forms do not have separate morphemes, as was stated before, but rather can be derived from the present tense forms by adding *-shka* or *-rka*. In the past tense formed with *-shka*, however, two small irregularities occur. First of all, the suffix *-n* is omitted when there is a third person subject and secondly, the suffix *-nki* is omitted when there is a third person subject and person object.

Upper Amazonian Quechua has several grammatical aspects that can be expressed on the verb. The progressive aspect, marked by the suffix *-yka*, indicates that an action is ongoing and lasts for a while. The delimitative aspect, indicated by the suffix *-ri*, expresses that an action has just recently begun or lasts for only a short while. Finally, the suffixes *-raya* and *-paya*, which indicate the habitual and purposive aspects, respectively, indicate that an action is performed on a regular basis, with the latter adding a sense of purpose to the predicate.

Aside from the indicative mood, there are three other grammatical moods that can be encoded on verbs. The imperative mood, first of all, expresses a command or a request. It may appear in the second and third person and has distinct morphological forms for these different persons. Table 11 below gives an overview of the different forms of the imperative, used on the verb *shamu*- 'come'. The use of both the second and third person forms of the imperative are illustrated in (24-25) below.

	SG	PL
2	shamu-y	shamu-ychi
3	shamu-chun	shamu-chunsapa

Table 11: imperative forms of Upper Amazonian Quechua (Coombs et al., 1976)

(24) yanapa-wa-y help-1-2.IMP 'Help me!' (25) yanapa-shu-chun help-2-3.IMP 'May he help you.'

The conditional mood is expressed by the suffix *-man*. It is used to express a possible or probable action or event. The conditional mood uses the same person marking suffixes as the present indicative, with the exception of the first person singular, where the conditional mood uses *-y* rather than *-ni*. The desiderative mood is expressed by the suffix *-naya*. This mood adds a notion of desire to the predicate.

Upper Amazonian Quechua has a number of valency-changing suffixes. These suffixes can either increase the valency of a verb by adding an argument or decreasing the valency by subtracting an argument. In the following, these different suffixes will be discussed.

The suffix *-chi* is a causative marker. When added to a verb stem, it increases the valency of the verb by formally adding an agentive argument who causes the action to happen. In (26) below, the verb *ku-*, meaning 'to give', has a valency of three, since it takes a subject *chay wamra*, an object *pelotata* and an indirect object *shipashta*. In (27) however, the causative suffix is added to the verb. This adds a fourth argument to the verb, which the subject causes to fulfill the action expressed by the verb.

(26) *chay wamra ku-shka pelota-ta shipash-ta*DEM boy give-PST ball-ACC girl-ACC'The boy gave the ball to the girl.'

(27) *chay wamra ku-chi-shka pelota-ta shipash-ta*DEM boy give-CAUS-PST ball-ACC girl-ACC'The boy made him give the ball to the girl.'

In this example, the additional argument is not overtly expressed. This argument can be expressed in the same way in which objects are marked, either by adding a person marker to the verb, as can be seen in (28), or by adding a noun with the accusative suffix *-ta*, like in (29). Sometimes, the addition of a causative suffix can alter the meaning of the verb, like *wañu-* 'die' vs. *wañuchi-* 'kill'.

(28) *chay ullku kawa-chi-ku-wa-n*DEM man see-CAUS-ANTIP-1-3
'The man makes me see.'
(29) *timpu-chi-yka-ni yaku-ta*boil-CAUS-PROG-1 water-ACC
'I am boiling the water.'

The reflexive marker *-na* can be used to indicate that the object of a verb is the same as the subject. Whereas in (30) *allkuta* is the object, in (31) the reflexive marker is used to indicate that the boy performs the action of the verb on himself. The suffix can also have a reciprocal meaning. This suffix is very frequently used in combination with the suffix *-ku*, which will be discussed further on. The frequent combined use of these suffixes has led some to analyze them as one suffix *-naku* (Coombs et al., 1976). I surmise this as incorrect, since I also found *-na* in isolation.

(30) chay wamra maylla-n allku-ta

DEM boy wash-3 dog-ACC

'The boy washes the dog.'

(31) chay wamra maylla-na-ku-nDEM boy wash-REFL-ANTIP-3'The boy washes himself.'

The suffix *-ku* can be used to indicate a change in valency of the verb. When the suffix is used in isolation, it serves as an antipassive marker. For instance, in (32) the verb *kawa*- has two arguments, *chay ullku* and *warmita*. In (33), the addition of the antipassive suffix reduces the valency of the verb by removing the direct object.

(32) *chay ullku kawa-n warmi-ta* DEM man see-3 woman-ACC 'The man sees the woman.'

(33) *chay ullku kawa-ku-n* DEM man see-ANTIP-3 'The man sees.'

As stated before, the suffix is also very frequently used in combination with the reflexive suffix *-na*. In most of these cases, *-ku* does not appear to change the meaning of the predicate. It simply seems to be customary to use this suffix in reflexive constructions, since almost no instances of *-na* without *-ku* were attested. Those few cases where *-na* could be used without *-ku* were complex constructions where multiple verbal suffixes were involved. In these cases, the addition of *-ku* appeared to slightly change the meaning of the predicate.

The suffix -*ku* is usually attached to transitive verbs. In some cases, however, the suffix can be used on intransitive verbs as well, as can be seen in (34). In these cases, the suffix appears to put an emphasis on the subject of the verb. For certain grooming verbs, the suffix has a reflexive interpretation, where it indicates that the subject does not perform the action onto another entity, but onto himself. In (35), for instance, the action conveyed by the verb *ñakcha*- is executed onto the object referred to by the argument *allkuykita*, whereas in (36), the antipassive suffix indicates that the subject is performing the action onto oneself.

(34) puñu-ku-mu-sha kay-pi
sleep-ANTIP-DIR-1.FUT DEM-LOC
'I will sleep here.'
(35) kan ñakcha-nki allku-yki-ta

2 comb-2 dog-2-ACC 'You comb your dog.'

(36)*ñakcha-ku-ni* comb-ANTIP-1 'I comb myself.'

The benefactive suffix *-pu* increases the valency of a verb by adding an object. In benefactive constructions, the additional object generally benefits from the action expressed by the verb. For instance, the verb in (37), *wañuchi-*, has two arguments. In (38), the addition of *-pu* adds an argument to the predicate. When this argument is overtly expressed, it is marked with the benefactive nominal suffix *-pa*. The argument can also be expressed through affixation of a person marker to the verb, like in (39), where the first person object marker is used. When the benefactive is a first person, an allomorph of the suffix *-pa* is sometimes used on the verb.

(37) pay wañu-chi-n obeha-ta

3 die-CAUS-3 sheep-ACC

'He kills the sheep.'

(38) pay wañu-chi-pu-n obeha-ta ñuka-pa

3 die-CAUS-BEN-3 sheep-ACC 1-BEN

'He kills the sheep for me.'

(39) *chay warmi apa-pu-mu-wa-yka wayu-ta*DEM woman carry-BEN-DIR-1-PROG fruit-ACC'The woman is bringing the fruit (here) for me.'

The suffix *-mu* has a directional meaning. It adds an argument to the verb which expresses directionality. It can be used to promote oblique phrases indicating direction to objects. The directionality expressed by this morpheme is usually aimed towards the speaker, for instance *apa-* 'carry' vs. *apamu-* 'bring', as can be seen in (16) above.

The verbal suffixes of Upper Amazonian Quechua usually have a fixed order, which is shown in Table 12. First of all, the position right behind the verbal stem is reserved for the causative, which is followed by the delimitative and subsequently the directional. The position after that is reserved for the object markers *-wa* and *-shu*, for first and second person objects, respectively, and the reflexive and reciprocal *-na* and *-ku*, the antipassive. The next position is occupied by the benefactive and the position after that by the habitual, purposive and desiderative. The following position is used for the progressive, followed by the past tense suffixes. After this, the subject markers are placed, followed by the pluralizing suffix *-chi*, which is in turn followed by the conditional *-man* and finally the plural suffix *-sapa*.

stem	causative	delimitative	directional	object	benefactive	habitual	progressive	past	subject	plural	conditional	plural
ri	-chi	-ri	-mu	-wa	-ри	-raya	-yka	-shka	-ni	-chi	-man	-sapa
				-na	-ра	-рауа		-rka	-sha			
				-ku		-naya			-y			

Table 12: order of verbal suffixes of Upper Amazonian Quechua (Coombs et al., 1976)

In the verbal morphology of most varieties of Quechua, repetitive affixation of verbal morphemes can result in lengthy verbal predicates. In many varieties, it is also possible for these suffixes to appear behind the verbal stem in different orders. These different orders reflect different intended meanings. These underlying meanings, which can sometimes be quite different from each other, are realized as seemingly similar utterances consisting of the same morphemes, just arranged differently. Upper Amazonian Quechua is an example of a variety of Quechua which deploys different orders of verbal suffixes to convey specific meanings. In this variety of Quechua, changes in the order of several verbal suffixes reflect different underlying meanings of the predicate. Several suffixes that are involved in this process are the causative marker *-chi*, the reflexive marker *-na*, the antipassive marker *-ku* and the benefactive marker *-pu*. In this article, I analyze the changes in order of these suffixes and the different underlying meanings which they reflect. In order to do this, I will resort to the syntactic theory known as Semantic Syntax (Seuren, 2018).

# Literature

In the following section, the syntactic theories which are called upon in this article will be exemplified. First of all, the theory of Semantic Syntax will be explained, followed by its predecessor, generative semantics. An analysis using generative semantics of a variety of Quechua, Ancash Quechua, will also be presented.

#### Semantic Syntax

The theory known as Semantic Syntax (Seuren, 2018) is a syntactical theory largely based on the theory of generative semantics. Besides syntax, it also incorporates semantics when analyzing the structure of sentences. The theory assumes a transformational mediational model of grammar, which transforms a *semantic analysis* into a corresponding *surface structure*.

A semantic analysis is a representation of the linguistic meaning of a sentence. According to the theory, any sentence in any language is a surface representation of an underlying semantic analysis. This semantic analysis is transformed into its respective surface structure by language-specific rules. Both the semantic analysis and the surface structure, as well as the intermediate steps, can be represented through *immediate constituent analysis* (Bloomfield, 1933).

Together, the language-specific rules that transform semantic analyses into surface structures form the grammar of a language. This grammar is considered to be a transformational grammar, converting one structure built up through immediate constituent analysis into another. A grammar consists of both the syntax and the morphology of a language, of which only the former is involved in Semantic Syntax. The syntactic rules of a language are imposed onto a semantic analysis in two steps, the *cycle*, consisting of cyclic rules, and the *postcycle*, consisting of postcyclic rules. The structure obtained after the cycle is called the *shallow structure*.

Examples of the several steps which are involved in the formation of a surface structure 'The cat ate the mouse' from a semantic analysis are shown in Figures 1-6 below. Figure 1 shows the semantic analysis, showing the S° node with the three constituents of the sentence, as well as the S' and S'' nodes, containing the two tense nodes. The letters in brackets below these tense nodes are the cyclic rules that will affect them. In Figure 2-4, one can see that these rules are applied one at a time. The rule LOWERING lowers the tense nodes to the verb node and the rule SUBJECT RAISING raises the NP containing the subject of the sentence to the S'' node at the top of the tree, which results in the shallow structure in Figure 4.



*Figure 1: structure of a semantic analysis (Seuren, 2018)* 



Figure 2: structure after the application of the cyclic rule LOWERING to  $\mathcal{O}$  (Seuren, 2018)



Figure 3: structure after the application of the cyclic rule SUBJECT RAISING to the cat (Seuren, 2018)



Figure 4: shallow structure after the application of the cyclic rule LOWERING to PAST (Seuren, 2018)

Through the postcycle, the shallow structure is transformed into the surface structure. First, in Figure 5, the postcyclic rule DO-SUPPORT takes effect, which deletes the Ø, after which the rule AFFIX HANDLING combines the past tense affix and the verb into a finite verb (FV), which takes on an irregular form in this case. This finally results in the surface structure presented in Figure 6.



Figure 5: structure after the application of the postcyclic rule DO-SUPPORT (Seuren, 2018)



Figure 6: surface structure after the application of the postcyclic rule AFFIX HANDLING (Seuren, 2018)

#### **Generative semantics**

The theory of Semantic Syntax is based upon the theory of generative semantics, a syntactic theory that arises from and is strongly related to the theory of generative syntax (Lakoff, 1971). Generative semantics differs from generative syntax in the way in which meaning is assigned to form.

Generative syntax assumes interpretive semantics. This means that syntax is autonomous and capable of generating well-formed syntactic structures, which are later assigned their respective meanings. Generative semantics, on the other hand, assumes a different process, which starts with an intended meaning, the propositional meaning, and generates a syntactic form based upon this meaning. The theory thus assumes that syntax and semantics are not completely separate, but rather influence each other.

An analysis of a variety of Quechua using generative semantics was carried out before by Parker (1973), who analyzed verbal derivation in Ancash Quechua, a variety of Quechua spoken in the Peruvian region of Ancash. In Ancash Quechua, like in Upper Amazonian Quechua, it is possible to change the order of certain verbal affixes, which causes subtle changes in the meaning of the predicate as a whole. In Ancash Quechua, the same verbal suffixes are involved in these processes as in Upper Amazonian Quechua. In (40-41) below, this change in meaning is demonstrated with the benefactive suffix.

(40) akra-pu-yka

choose-BEN-PROG

'I am choosing it (for somebody who is present).' (Parker, 1973)

(41) akra-yka-pu

choose-PROG-BEN

'I am choosing it (for somebody who isn't present).' (Parker, 1973)

The above two utterances usually yield the same translation, 'I am choosing it for him.' Still, there appears to be a slight difference between the two. As can be seen, in the former example, the beneficiary is present during the action and is probably participating in or observing the action, whereas in the latter, the beneficiary is not present and thus not taking part in the action expressed by the verb.

In (42-43), examples of a change in suffix order involving the causative marker attached to an intransitive verb are presented, (44-45) illustrate examples with the causative marker used on a transitive verb and (46-48) show examples using the reflexive and antipassive suffixes.

(42) yaku-ta timpu-chi-ykawater-ACC boil-CAUS-PROG'I am boiling the water.' (Parker, 1973)

(43) yaku-ta timpu-yka-chi

water-ACC boil-PROG-CAUS

'I am making him boil the water.' (Parker, 1973)

(44) rura-chi-yka

do-CAUS-PROG

'I am making him do it (while I'm present).' (Parker, 1973)

(45) rura-yka-chi

do-PROG-CAUS

'I am making him do it (while I'm not present).' (Parker, 1973)

(46) rika-na-ku-chi-nki

see-refl-antip-caus-2

'You make them see themselves.' (Parker, 1973)

(47) rika-chi-na-ku-nki

see-CAUS-REFL-ANTIP-2

'You make yourself see yourself.' (Parker, 1973)

(48) rika-na-chi-ku-nki

see-REFL-CAUS-ANTIP-2

'You make them see you.' (Parker, 1973)

In his analysis, Parker proposes that different roots and suffixes in Quechua can form entities at the phonological level, also known as words, but at the morphosyntactic level, the different suffixes attached to a root should rather be analyzed as different constituents within a phrase. According to his analysis, whenever a suffix is attached to the end of a word, it predicates the preceding phrase in its entirety. Figure 7 below shows a representation of the syntactic structure (40), whereas Figure 8 shows a syntactic tree structure of (41), as proposed by Parker (1973). Following this analysis, one could explain the changes in meaning brought about by the alternation of the suffix *-pu* and the suffix *-yka*.



*Figure 7: syntactic structure of* akra-pu-yka (*Parker, 1973*)



Figure 8: syntactic structure of akra-yka-pu (Parker, 1973)

In the first sentence, the suffix *-pu* is attached to the verb *akra-* first, which means that it is placed in a lower position in the syntactic tree. This unit contains both the meaning of 'choosing something', which is carried by the verb, and the notion that the action is performed for the good of somebody else, which is carried by the benefactive suffix. The unit as a whole thus means 'I choose it for him.'

Next, the progressive suffix *-yka* is added to the predicate. This suffix is placed in a higher node on the syntactic tree, so that the node containing *-pu* stands in between the verbal node and the node with the progressive suffix. The addition of the progressive suffix adds the notion of a progressive aspect to the whole predicate. This means that the meaning of the predicate so far, 'choosing of something for somebody', receives a progressive interpretation.

In the second sentence, the suffix *-yka* is attached to the verbal stem first. This adds a progressive aspect to the meaning of the verb *akra-*, which means 'choose'. In the tree structure, one can see that the suffix *-yka* is now attached to a lower node, closer to the verbal stem. The combination of these two morphemes results in the meaning 'I am choosing it.'

Now, if one adds the suffix *-pu*, it is placed in a higher node in the syntactic tree, after the progressive suffix. Because the suffix is placed at the end of the predicate, it adds a meaning to the predicate as a whole. It thus adds the notion of performing an action for somebody else to the progressive 'choosing of something', adding a benefactive interpretation to the complete unit.

The alternation in order of the two suffixes thus leads to a logical change in meaning. In the first sentence, the progressive suffix is added to the verb after the benefactive suffix, which means that it adds a progressive aspect to both the 'choosing of something', expressed by *akra*-, and the 'for somebody', expressed by the suffix *-pu*. This implies that these two components of the predicate are both

happening progressively and are thus occurring simultaneously. The person expressed by the benefactive is thus assumed to be present during the action.

In the second sentence, however, the progressive suffix is placed before the benefactive suffix. This means that the progressive aspect is only affecting the action expressed by the verb *akra-* and not the notion expressed by the benefactive suffix. Since the benefactive suffix is now added at the end of the predicate, the meaning of this suffix is incorporated after the addition of the progressive aspect to the meaning of the verb. In other words, the progressive aspect is only implying that the 'choosing of something' is happening progressively. The part meaning 'for somebody' is added later and is thus not implied to be happening simultaneously with the action expressed by the verb. The person expressed by the benefactive is consequently assumed to be absent during this action.

Parker's analysis could also be used to explain the differences in meaning between the pairs of sentences in (42-48). In (42), the progressive marker is placed at the end of the word, which means that it adds a progressive aspect to both the verb *timpu-* and the causative marker, thus implying that the 'boiling of the water' and the notion that the subject is causing this action to take place are happening progressively and simultaneously. This suggests that the subject 'I' is present during the action and that there is no need for another argument to perform this action.

In (43), however, the causative suffix is placed after the progressive suffix. The notion of the causative element is thus added to the predicate after the addition of the progressive aspect to the verb *timpu-*, which implies that the progressive suffix is only stating the 'boiling of the water' to be happening progressively. The notion that somebody is making the action expressed by the verb happen is added later on by the causative suffix, implying that the person expressed by this causative suffix is not present to be causing the action. This requires the addition of an argument

referring to the person who is made to perform the action by the person expressed by the causative suffix.

The same goes for (44-45). When the progressive suffix is placed after the causative suffix, it affects both the meaning of the verbal stem and the notion expressed by the causative suffix, which suggests that these components are taking place progressively and simultaneously, thus meaning that the subject 'I' is present while causing the action to take place. When the causative suffix is placed after the progressive suffix, the progressive suffix adds its meaning to the predicate first and does not affect the notion expressed by the causative suffix, meaning that only the action expressed by the verb is stated to be happening progressively. The notion that somebody is causing this action to happen is added later, implying that it is not happening simultaneously to the action of the verb and that the subject 'I' is not present while causing the action to happen.

Finally, it appears as though in (46-48), the position of the causative suffix in relation to the reflexive and antipassive suffixes affects the identity of the subject and object arguments of the verb, thus affecting the meaning of the predicate. The order of the causative and reflexive suffixes seems to determine the referent of the subject of the verb, whereas the order of the causative and antipassive suffixes seems to determine the referent of the object of the verb. Whenever the causative suffix is placed before both the reflexive and antipassive suffixes, the causative agent 'you' is introduced before anything else and can thus be selected as both the subject and the object of the verb. When only the reflexive suffix but not the antipassive suffix is added before the causative suffix, only the subject argument has to be selected before the introduction of the causative agent 'you' and when both suffixes are attached before the causative suffix, both the subject and the object have to be determined before the addition of the causative agent 'you'. One can thus see that when the suffixes *-na* and *-ku* appear after each other, either before or after *-chi*, the referents of

the subject and object of the verb are identical, whereas when *-chi* separates these two suffixes, they are different.

As was stated before, this variation in the order of suffixes is also possible in the dialect of Upper Amazonian Quechua. In this variety of Quechua, changes in suffix order also reflect underlying predicates with different meanings. Using the theory of Semantic Syntax, I analyze these changes in meaning and the syntactic structures underlying them. For my analysis, I will use Quechuan utterances from my own corpus.

# Method

All of the data presented in this article were collected during a field trip to northwestern Amazonia in May 2017. The data were provided by several inhabitants of the village of Munichis, one of the villages where Upper Amazonian Quechua is spoken, located in the region of Loreto in northeastern Peru.

The speakers whom I worked with were four elderly people, all born and raised in Munichis. Their names were Melchor Sinti Saita, the only man of the four whose age was 86, Donalia Icahuate Baneo, whose age was 67, Rosa Amelia Baneo, aged 64, and Lidia Saita Baneo, whose age is unknown.

The data were collected in three elicitation sessions during my stay in Munichis from May 7 until May 11. During these sessions, I mostly collected data by offering Spanish sentences to my consultants and asking them to translate these to Quechua. I would also formulate sentences in Quechua myself and ask the consultants for grammaticality judgments or how they would translate these sentences into Spanish. The data were later transcribed using the Quechua orthography specified in the phonology section. They were subsequently glossed and translated, so that they would be suitable for citation.

# Analysis

As was mentioned before, the causative, reflexive, antipassive and benefactive suffixes in Upper Amazonian Quechua are involved in a process where changes in the order of some of these suffixes result in changes in the meaning of the predicate. Consider the following examples. In (49), the causative suffix is placed before the reflexive suffix, whereas in (50), these suffixes seem to be switched around. Finally, in (51), the antipassive suffix is absent, marking one of the few occurrences of the reflexive suffix without the antipassive suffix. As can be seen, all three examples have different meanings.

(49) chapa-chi-na-ku-nchi

see-CAUS-REFL-ANTIP-1.INCL

'We make ourselves see ourselves.'

(50) chapa-na-chi-ku-nchi

see-refl-caus-antip-1.incl

'We make him see us.'

(51) chapa-na-chi-nchi

see-refl-caus-1.incl

'We make him see himself.'

In (52-53) below, the causative and reflexive suffixes again occur in different orders. Once more, this results in a change in meaning similar to the one demonstrated above. In the following, I will attempt to provide an analysis for the placement of these suffixes using Semantic Syntax.

(52) maylla-chi-na-ku-pu-yka-n-sapa pay-pa
wash-CAUS-REFL-ANTIP-BEN-PROG-3-PL 3-BEN
'They are making themselves wash themselves for him.'

#### (53) chay wamra maylla-na-chi-ku-pu-yka

DEM boy wash-REFL-CAUS-ANTIP-BEN-PROG 'The boy is making him wash himself (for him).'

The analysis proposed by Parker (1973) for the variety of Quechua which he studied, Ancash Quechua, also works for Upper Amazonian Quechua. Parker suggests that suffixes placed at the end of a verbal predicate affect not only the verbal stem, but also all other preceding suffixes. This means that differences in meaning change the scope of these suffixes, which causes the differences in the order of suffixes of the different predicates.

In order to analyze (49-51) using Semantic Syntax, one needs to take into account the language-specific rules that compose the grammar of Upper Amazonian Quechua, especially the rules which apply to the placement of the causative, reflexive and antipassive suffixes. I will demonstrate these rules and how they influence the placement of these suffixes by showing derivations of (31), (33) and (42) using Semantic Syntax.

In (31), the reflexive suffix *-na* appears. In Semantic Syntax, reflexive constructions are considered to be a lexical unit. This means that a reflexive notion should already be present in the semantic analysis, where it is located close to the verbal node, as they form a unit. One can see that the reflexive suffix is affected by the cyclic rule LOWERING. This means that the suffix is detached from its current position and reattached in a lower position in the tree, namely the S<sup>ovERB</sup> node. Figures 9-12 below show the transformation of a semantic analysis of (31) into its corresponding surface structure. In Figures 10-12, the rule LOWERING is applied to the three verbal suffixes. First, the reflexive suffix is lowered, followed by the antipassive suffix *-ku* and finally the suffix *-n*, which is analyzed here as a non-future marker.



Figure 9: semantic analysis of a reflexive construction



Figure 10: structure after the application of the cyclic rule LOWERING to -na



Figure 11: structure after the application of the cyclic rule LOWERING to -ku



*Figure 12: surface structure after the application of the cyclic rule LOWERING to -***n** 

An example of a sentence with the antipassive suffix *-ku* is found in (33). Like the reflexive suffix, this suffix is also present in the semantic analysis, forming a unit with the verbal node. As one can see in the previous example, this suffix is also affected by the rule LOWERING. Just like the reflexive suffix, it is lowered to the V node of the S<sup>overb</sup> node underneath it. In Figures 13-15 below, the formation of (33) into its surface structure is shown. In Figure 14, the antipassive suffix is lowered. After this, in Figure 15, the suffix in the tense node is also lowered.



Figure 13: semantic analysis of an antipassive construction



Figure 14: structure after the application of the cyclic rule LOWERING to -ku



Figure 15: surface structure after the application of the cyclic rule LOWERING to -  $\!n$ 

The causative suffix *-chi* appears in (42). This suffix is not affected by the rule lowering, like the two previously mentioned suffixes, but rather induces PREDICATE

RAISING, which means that the V node in the S<sup>overb</sup> node is raised to a higher position in the tree, the S<sup>oCAUS</sup> node. In Figures 16-18 below, one can see the formation of the surface structure of (42) from its semantic analysis. One can see that in Figure 17, the rule PREDICATE RAISING is applied. In Figure 18, the rule LOWERING is applied to the progressive suffix, lowering in to the V node underneath.



Figure 16: semantic analysis of a causative construction



Figure 17: structure after the application of the cyclic rule PREDICATE RAISING to timpu-



Figure 18: surface structure after the application of the cyclic rule LOWERING to -yka

One can see that the changes in the order of suffixes in (49-51) resemble those in (46-48). The same suffixes are involved, namely the causative, reflexive and antipassive suffixes. These suffixes appear in the same order in (48) as they do in (50), namely first the reflexive, then the causative and then the antipassive suffix. These two sentences also have the same meaning, apart from the fact that the different arguments refer to different persons in both sentences, a second person singular acting upon a third person plural and a first person dual acting upon a third person singular, respectively. The sentences in (47) and (49) also display both the same order of suffixes, namely *-chi-na-ku*, and the same meaning, apart from the person of the arguments. Finally, the sentences in (46) and (51), despite not having the same sequence of suffixes, with the latter lacking the antipassive suffix in between the reflexive and causative suffixes, do have the same meaning apart from the persons.

In (49), the causative suffix is attached to the verbal stem first, followed by the reflexive suffix and finally the antipassive suffix. Because the causative suffix is added to the predicate before both the reflexive and the antipassive suffix, the notion that somebody is causing the action expressed by the verb to happen is applied to the meaning of the predicate before the need for a reflexive subject or object. After this, the reflexive and antipassive suffixes are added, which add the reflexive notion to the predicate. Because the subject causing the action to happen has already been

added before, this argument can be selected as both the subject and object of the verb.

Figure 19-24 show the transformation of the semantic analysis corresponding to (49) into its respective surface structure. In the semantic analysis in Figure 19, the *-n* of the person suffix *-nchi* is regarded as a non-future marker and thus fulfills the tense node of S'. Underneath, there are four S° nodes, one for the verb and one for each valency changing marker. Since the agent of the S°CAUS node is located below the S°REFL and S°ANTIP nodes, their respective suffixes can both affect this agent, which means that both NP nodes of the S°VERB node are fulfilled by the same person.

In order to form the shallow structure, the rule PREDICATE RAISING is applied to the verb node in Figure 20, causing it to move to the same position as the causative suffix. Then, in Figure 21-23, the rule LOWERING is applied *-na*, *-ku* and *-n*, in that order, resulting in the shallow structure in Figure 23. The postcyclic rule PERSON AGREEMENT then adds the person suffix just above the tense marker in the tree structure, resulting in the surface structure in Figure 24.



Figure 19: semantic analysis of chapa-chi-na-ku-nchi



Figure 20: structure after the application of the cyclic rule PREDICATE RAISING to chapa-



Figure 21: structure after the application of the cyclic rule LOWERING to -na



Figure 22: structure after the application of the cyclic rule <code>LOWERING</code> to <code>-ku</code>



Figure 23: shallow structure after the application of the cyclic rule LOWERING to -n



Figure 24: surface structure after the application of the postcyclic rule PERSON AGREEMENT

In (50), like in (48), the reflexive suffix is placed after the verbal stem first, followed by the causative suffix and finally the antipassive suffix. The antipassive suffix is placed first, selecting the subject argument of the verb. Because the causative suffix is placed before the antipassive suffix, the causative suffix first introduces an additional argument 'we'. After this, the antipassive suffix is added, which requires a reflexive object. Because the extra argument has already been introduced by the causative suffix, this argument can be selected as the reflexive object of the action expressed by the verb.

The derivation of the surface structure of (50) from its semantic analysis is shown in Figure 25-30. In the semantic analysis, shown in Figure 25, the NP containing the agent of the S<sup>°CAUS</sup> node is located below the S<sup>°ANTIP</sup> node, it can be selected as the object of the verb *chapa*- and thus fulfills the NP node of the S<sup>°VERB</sup> node containing this position. The S<sup>°REFL</sup> node, however, is located below the S<sup>°CAUS</sup> node. Therefore, the suffix *-na* cannot influence the causative agent and this agent cannot refer to the same referent as the subject of the verb. The shallow structure of this sentence is again obtained through the application of the LOWERING and PREDICATE RAISING rules to the respective V nodes in Figure 25-29. Finally, in Figure 30, the surface structure of the sentence is formed after the postcyclic rule PERSON AGREEMENT has added the corresponding person suffix in the highest V node.



Figure 25: semantic analysis of chapa-na-chi-ku-nchi



Figure 26: structure after the application of the cyclic rule LOWERING to -na



Figure 27: structure after the application of the cyclic rule SUBJECT RAISING to chapa-



Figure 28: structure after the application of the cyclic rule LOWERING to -ku



Figure 29: shallow structure after the application of the cyclic rule LOWERING to -  $\!n$ 



Figure 30: surface structure after the application of the postcyclic rule PERSON AGREEMENT

Finally, in (51), the reflexive suffix is also added first, adding a reflexive interpretation to the predicate. In the example from Parker's analysis with the same meaning, the antipassive suffix is added next, but in Upper Amazonian Quechua, this suffix can apparently be omitted in this context without affecting the meaning. Next, the causative suffix is added, adding an extra argument 'we' to the predicate. Because this argument, which is the agent of the causative component, is added later on, it cannot be affected by the reflexive component of the predicate. Instead, the agent of the verb *chapa*- is affected by the reflexive suffix.

In the semantic analysis of this sentence shown in Figure 31, the S<sup>o</sup>CAUS</sup> node is located above the S<sup>o</sup>REFL</sub> node. The NP of the S<sup>o</sup>CAUS</sup> node, containing the causative agent, can thus not be affected by the reflexive suffix. There is no S<sup>o</sup>ANTIP</sub> node in this structure, given the absence of the antipassive suffix. In (46), the meaning of which is parallel to the meaning of this sentence, however, the antipassive suffix is present. Its corresponding S<sup>o</sup>ANTIP</sup> node would occupy a position between the S<sup>o</sup>CAUS</sup> and S<sup>o</sup>REFL nodes, meaning that this suffix cannot affect the causative agent, even if it would be present in the structure.

In Figure 32-34, the cyclic rules LOWERING and PREDICATE RAISING affect their corresponding V nodes, converting the semantic analysis into the shallow structure shown in Figure 34. In Figure 35, the shallow structure is transformed into the surface structure by the postcyclic rule PERSON AGREEMENT, which adds the person marker above the tense node.



Figure 31: semantic analysis of chapa-na-chi-nchi



Figure 32: structure after the application of the cyclic rule LOWERING to -na



Figure 33: structure after the application of the cyclic rule PREDICATE RAISING to chapa-



*Figure 34: shallow structure after the application of the cyclic rule LOWERING to -n* 



Figure 35: surface structure after the application of the postcyclic rule PERSON AGREEMENT

In (52-53), changes in meaning can be observed which are similar to the ones analyzed before. In (52), the causative suffix is also added before the reflexive and antipassive suffixes. This means that the causative notion is added to the meaning of the verb *maylla*- before the notion added by the reflexive and antipassive suffixes. Since the argument introduced by the causative suffix has already been added, this argument can function as the reflexive object required by the reflexive and antipassive suffixes.

In (53), the order of the reflexive, causative and antipassive suffixes is the same as in (50). The meaning of this utterance, however, is more similar to the meaning of (51). This might be explained by the addition of the benefactive suffix. Because this suffix is added, a new argument is added to the predicate. Whereas in (50), it is the object of the verb *chapa*- which refers back to the subject of the sentence, in (53), the reflexive reference to the subject of the predicate is taken over by the argument introduced by the benefactive suffix.

The analysis presented here, however, poses a problem within Semantic Syntax. As was stated before, the reflexive and antipassive constructions are considered to be lexical units in Semantic Syntax. This means that they are retrieved from the lexicon as one entity and already form a unit in the semantic analysis, consisting of the S<sup>oVERB</sup>, S<sup>oREFL</sup> and S<sup>oANTIP</sup> nodes. It is therefore impossible for the S<sup>oCAUS</sup> node to appear in between the S<sup>oVERB</sup> node and either one of the S<sup>oREFL</sup> and S<sup>oANTIP</sup> nodes in the semantic analysis and, by the rules which currently compose Semantic Syntax, it would not be possible to derive surface structures where the causative suffix is placed before either one of the reflexive and antipassive suffixes. Following the principles of Semantic Syntax, it would therefore only be possible to generate surface structures with suffix orders such as *-na-ku-chi* and *-na-chi*, which would only account for one of the different meanings discussed here.

# Conclusion

The Quechuan languages, diverse as they may be, also share many features. One feature which is shared by at least two varieties of Quechua, namely Ancash Quechua and Upper Amazonian Quechua, is the ability to express different ideas using very similar sentences, which differ only in the order of the suffixes attached to the verb.

Parker (1973) analyzed this phenomenon in Ancash Quechua using generative semantics. The analysis which he proposed assumes that verbal suffixes added at the end of a verb affect the verbal predicate as a whole, not only including the lexical meaning of the verb but also previously added verbal suffixes. He demonstrates this using examples of sequences consisting of the causative, reflexive, antipassive and benefactive suffixes.

In Upper Amazonian Quechua, these same suffixes appear to be involved in a similar process. In fact, the changes in suffix order and their respective meanings attested in Upper Amazonian Quechua are almost completely identical to the ones from Ancash Quechua. Parker's hypothesis that newly attached suffixes affect the meaning of the predicate as a whole should then also work for Upper Amazonian Quechua.

Semantic Syntax, a theory which is heavily based on generative semantics, might also be able to provide a suitable way to analyze Upper Amazonian Quechua. Indeed, this theory seems to be able to accurately derive most Upper Amazonian Quechuan sentence structures from their respective semantic analyses using the transformational rules of the grammar of the language.

A problem is encountered when Semantic Syntax is applied to the more complex structures discussed above, which show variation in their suffix order based on their intended meaning. As Semantic Syntax assumes that reflexive and

antipassive constructions are retrieved from the lexicon as single units, implying that their nodes should form a unit within the semantic analysis as well, and as the rules of Semantic Syntax do not allow for a possibility to transform this semantic analysis into a surface structure in which another suffix, such as the causative suffix, has been moved to a location in between this lexical unit, it is not possible to analyze the structures of all possible suffix orders discussed in this article.

This impossibility could perhaps be explained by the fact that the sentences used in this analysis are not only quite complex, but also very artificial. The consultants from Munichis told me several times that the Quechuan translations which they gave me for the sentences which I presented to them in Spanish were perfectly grammatical, yet nobody would ever utter them. As these sentences were fabricated, they would possibly never appear in spontaneous, everyday speech and thus sounded very unnatural to the speakers, despite their grammaticality.

The implications of these results could be argued. As the theory of Semantic Syntax has been proven to be a useful tool to analyze structures in numerous different languages (Seuren, 2018) and also to analyze an array of sentences in Upper Amazonian Quechua, one could wonder what this tells us about the inability of Semantic Syntax to analyze the variation in suffix orders in this variety of Quechua.

A possibility for further research could be the application of different transformational rules, which might even include rules that have not been applied to Quechua before, to these complex sentences, so that it would be possible to derive the proper semantic analysis, that would, via the application of the transformational rules result in the surface structures which we find in the corpus. Another possibility might require a functional and formal reanalysis of the different derivational verbal suffixes of Upper Amazonian Quechua. This would require further fieldwork-based analysis.

Nevertheless, it would certainly be worth it to look further into this matter. The variation in suffix order in Upper Amazonian Quechua appears to be a wellstructured process, as the interpretations corresponding to different suffix orders are almost identical to the meanings attested for the same suffix orders in a vastly different dialect of Quechua. There thus seems to be a regular pattern across these different varieties. It would be interesting to see exactly how this process works and if it could be fully formalized by a syntactic theory, like Semantic Syntax.

# Abbreviations

1 = first person	EXP = experiential marker
2 = second person	FUT = future tense
3 = third person	IMP = imperative mood
ABL = ablative case	INCL = inclusive
ACC = accusative case	ITRT = intrative case
ADD = additive marker	LIM = limitative case
ALL = allative case	LOC = locative case
ANTIP = antipassive marker	PL = plural
BEN = benefactive marker	POSS = possessive marker
CAUS = causative case/marker	PROG = progressive aspect
COM = comitative case	PST = past tense
COMP = comparative case	REFL = reflexive marker
DEM = demonstrative pronoun	SG = singular
DIM = diminutive marker	SIM = simultaneous marker
DIR = directional marker	TERM = terminative case
EXCL = exclusive	TOP = topic marker

# References

- Adelaar, W. F. (1995). Raíces lingüísticas del quichua de Santiago del Estero. *Actas de las Segundas Jornadas de Lingüística Aborigen*, 25-50.
- Adelaar, W. F. (2004). *The languages of the Andes*. Cambridge: Cambridge University Press.
- Bloomfield, L. (1933). Language. New York: Holt.
- Cerrón-Palomino, R. (1985). Sobre el nombre "Quechua". Lexis, 9(1), 87-99.
- Coombs, D., Coombs, H., & Weber, R. (1976). *Gramática quechua: San Martín*. Lima: Ministerio de Educación. Instituto de Estudios Peruanos.
- Coronel-Molina, S. M. (2011). Revitalization of endangered languages: Quechua in the Andes. *Droit et cultures. Revue internationale interdisciplinaire*, 62, 105-118.
- Heggarty, P., Valko, M. L., Huarcaya, S. M., Jerez, O., Pilares, G., Paz, E. P., Noli, E., Usandizaga, H., & Gutmann, C. (2005). Enigmas en el origen de las lenguas andinas: aplicando nuevas técnicas a las incógnitas por resolver. *Revista Andina*, 40, 9-57.
- Hornberger, N. H., & King, K. A. (2001). Reversing quechua language shift in South America. *Multilingual Matters*, 166-194.
- Lakoff, G. (1971). On generative semantics. Semantics: An interdisciplinary reader in philosophy, linguistics and psychology, 232–296. Cambridge: Cambridge University Press.
- Muysken, P. (1977). *Syntactic developments in the verb phrase of Ecuadorian Quechua*. Lisse: The Peter De Ridder Press.
- Muysken, P. (1981). Quechua word structure. Binding and filtering, 279-327.

- Parker, G. J. (1973). *Derivación verbal en el quechua de Ancash* (No. 25). Universidad Nacional Mayor de San Marcos, Centro de Investigación de Lingüística Aplicada.
- Parker, G. J. (1976). *Gramática quechua: Ancash-Huailas*. Lima: Ministerio de Educación.
- Seuren, P. A. M. (2018). Semantic Syntax. Second revised edition, Leiden: Brill.
- Torero, A. (1968). Procedencia geográfica de los dialectos quechuas de Ferreñafe y Cajamarca. *Anales Científicos de la Universidad Agraria Lima*, 3-4.
- Weber, D. (1989). A grammar of Huallaga (Huánuco) Quechua (Vol. 112). Berkeley: University of California Press.