

EXPRESSING PATHS OF MOTION IN APURIMAC QUECHUA*

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1. Introduction

Cross-linguistically, spatial expressions contain the same basic elements of Figure, Motion, Path, and Ground (Talmy 1985). For example, the English sentence in (1) tracks the Motion (i.e. *ran*) of a Figure (i.e. *Killa*) as it traverses a Path (i.e. *across*) in relation to a Ground (i.e. *the field*). There exists both inter- and intra-linguistic variation with respect to the ways in which languages encode such Motion events (Beavers et al. 2010, Vuillemer and Kopecka 2019). Under the framework of previously established typological categories for expressing Paths of motion, this work examines the lexicalisation patterns of the variety of Quechua as spoken in the village of Calcauso in the Apurimac region of Peru.

- (1) ‘Killa ran across the field.’
Figure Motion Path Ground

1.1 Background

Seminal work by Talmy (1985) has prompted a dichotomic classification of languages based on how they characteristically capture the “colloquial, frequent, and pervasive” patterns of expressing Motion. The two-way typology differentiates “satellite-framed” from “verb-framed” constructions that are available in a language. While the former type lexicalises the core component of Motion (i.e. the Path) in an element in sister relation to the verb, the latter type lexicalises it in the verb itself. “Satellite-framed” (henceforth, S-framed) patterns, which are observed in all Germanic languages such as English in (2), typically express Path with a prepositional satellite (e.g. *into*), while Manner of motion (e.g. *ran*) is expressed in the main verb. As the Brazilian Portuguese equivalent in (3) illustrates, “verb-framed” (henceforth, V-framed) patterns involve the expression of Path in the main verb (e.g. *entrou* ‘enter’) and Manner as an optional verbal adjunct (e.g. *correndo* ‘running’); such patterns are found in all Romance languages.

- (2) ‘John ran into the store.’
(3) *João entrou na loja (correndo)*
João enter.PST in.the store (run.GER)
(lit.) ‘João entered the store (running).’

(Examples from Suzi Lima 2019)

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Prior work on typologically and genetically varied languages have mostly provided support for the existence of the S-framed and V-framed dichotomy (see Levin and Hovav (2015) for a list of languages that have received extensive attention in the literature). However, more recent studies have challenged Talmy's (1985) classification by revealing that most languages do not exclusively employ S-framed or V-framed constructions; rather, the lexicalisation patterns of a particular language will often straddle the two categories (Beavers et al. 2010, Levin and Hovav 2015).

Verb serialising languages pose a problem for the binary typology because Manner and Path are expressed in separate but equivalent grammatical forms. For example, verb phrases in Mandarin Chinese clauses can include a serial verb construction, as in (4), where both Manner and Path are lexicalised as two main verbs (Chen and Guo 2009).

- (4) *ta* *pao-jin* *le* *shangdian*
 3SG run-enter PST store
 'S/he ran into the store.'

With respect to different properties (e.g. number of Grounds allowed per Motion verb, type and frequency of Motion verb use, etc.), verb serialising languages can either exhibit S-framed patterns, V-framed patterns, or neither, leading researchers to suggest that they belong to a class of their own (Chen and Guo 2009; see also Ameka and Essegbey (2013) for an analysis of three verb serialising languages: Ewe, Akan (Kwa languages spoken in West Africa), and Sranan (a Caribbean creole language spoken in Suriname)). To accommodate these languages, Slobin (2004) proposed a third class of "equipollently-framed" patterns.

Languages that typically exhibit S-framed patterns can also make use of V-framed patterns depending on the context, and vice versa. It has been discussed in previous studies (e.g. Beavers et al. 2010, Slobin 2000) that a language's preferred encoding options are restricted by morphosyntactic complexity and by limits in the lexical inventory. For example, it is more unmarked in English to use the canonical S-framed patterns (e.g. *John ran into the store*) than to use Path verbs as consistent with V-framed patterns (e.g. *John entered the store running*). This is because it presents an additional "cost," and thus greater morphosyntactic complexity, to express the optional Manner adverbial (e.g. *running*). Moreover, languages with S-framed patterns tend to have more Manner verbs in their inventories than languages with V-framed patterns, which lends further support to the use of encoding preferences that fully exploit the available options in a language (Slobin 2000).

Given the body of work that has disputed Talmy's (1985) two-way classification, it seems more worthwhile to provide a descriptive account of the attested lexicalisation patterns in a language rather than assigning a single label. After all, a language's most frequent encoding options may be misconstrued as constraints for a particular typological categorisation. The other, more marked expressions of Motion that are equally grammatical might be obscured by such a classification (Beavers et al. 2010). To avoid these restrictions, the analyses undertaken in this study will not attempt to pinpoint the position of Apurimac Quechua along the continuum of typologically varied languages. The observed encoding

options will be presented and described, thereby accounting for intra-linguistic variation in the available and attested patterns.

1.2 Research questions and hypotheses

The overarching goal of this work was to document the morphosyntactic and semantic resources employed by Apurimac Quechua to encode Motion. Several simple Motion events, such as the one in (5), were first elicited in order to obtain preliminary observations on the most canonical patterns in the language.

- (5) *Killa phawa-sqa chay pampa-pi*
 Killa fly-PST DET field-on
 ‘Killa ran across the field.’

From (5), it appears that Apurimac Quechua expresses simple Path constructions (i.e. those that have one Ground element) via an S-framed pattern with a Manner verb and a postpositional satellite. Of interest is a comment made by the consultant that there is no Quechuan word for the verb ‘to run;’ instead, speakers either use the verb *phawar* ‘to fly’ or describe the action of ‘walking’ with an adverb of degree, as in *supayta purisqa* ‘very + walk.’ Observations regarding lexical restrictions in expressing Paths are important for determining the available strategies that speakers can use to convey information about Motion in instances where a direct translation to the target language is not possible.

The above observations led to the following broad research question: **(I)** *How does Apurimac Quechua encode (Paths of) Motion?* The initial hypothesis was that Apurimac Quechua, like English, characteristically expresses Motion with S-framed patterns; specifically, Manner is encoded in the main verb while Path is encoded in a postpositional satellite. The results will describe the “colloquial, frequent, and pervasive” lexicalisation patterns as per Talmy’s (1985) work, leaving the more marked methods of encoding Motion to be addressed by the other research questions.

To account for other available encoding options in the language, a second research question was proposed: **(II)** *Do the lexicalisation patterns change with respect to changes in parameters (e.g. human vs. non-human Grounds, number of Grounds allowed per Motion verb, centrifugal vs. centripetal Deictic centres)?* This was motivated by examples such as the following from Vuillermet and Kopecka (2019): Ese Ejja (a Tacanan language spoken in Bolivia and Peru) uses two allative suffixes, *-ke* and *-yasijje*, to describe Motion towards a human Ground versus a non-human Ground, respectively. It was predicted that different parameters do not affect the lexicalisation patterns in Motion events.

Lastly, the observation regarding the use of the verb *phawar* ‘to fly’ to overcome the absence of a word for the targeted Motion event (i.e. *ran*) led to the final research question: **(III)** *What are the lexical restrictions and corresponding repair strategies in expressing Paths of motion?* Following from previous elicitation sessions with the consultant and from prior work (Vuillermet and Kopecka 2019), lexical restrictions were hypothesised to be overcome by the use of compounds, loanwords, or related words.

2. Materials and methods

All data for this study were elicited from the consultant, YM, who is a native speaker of Apurimac Quechua.

2.1 *Trajectoire* video stimuli

Trajectoire is a methodological tool developed by Ishibashi et al. (2006) to facilitate the elicitation of Paths of motion with dynamic video stimuli¹. It consists of short video clips that approximate naturalistic settings and that vary in several parameters such as Figure, Ground, Path, Manner, and Deixis (Vuillermet and Kopecka 2019). Based on the provided spreadsheet of schematic descriptions, specific clips were selected that would target systematic changes in parameters and allow for a description of any corresponding changes to the lexicalisation patterns. After each clip was presented, the consultant was asked to describe the Motion event with the guiding question, “What happened in this clip?”

2.2 Questionnaire

Describing motion events requires an understanding of the different semantic domains of the verbs. As such, a lexical typological questionnaire was adapted from Wilkins et al. (1998) to elicit translations of Motion expressions². The questionnaire included a list of Motion verbs, examples of intra-linguistic variation with respect to the grammatical marking of different parameters, and descriptions of cross-linguistic restrictions regarding the encoding of Motion. This information was used to construct sentences for the elicitations, and it forms the primary motivation for some of the data in this study (e.g. Ground restrictions and Associated Motion events).

3. Results

3.1 Standard “satellite-framed” patterns

Sentences (6) and (7) show the same S-framed patterns as in (5), where Manner is encoded in the main verb (e.g. *urmar-* ‘fall’ in (6) and *ripu-* ‘move’ in (7)) while Path is encoded as a postpositional satellite (e.g. *-man* ‘to’ in (6) and *-manta* ‘from’ in (7)). These examples align with the hypothesis for research question (I) in showing that the more unmarked and frequent method of encoding Motion involves an S-framed lexicalisation pattern. In these and all subsequent examples, morphemes are repeated in the glossing line if their meanings are unclear; future adaptations of this work will attempt to fill in the missing translations.

- (6) *Killa urmar-pa-sqa chay mayu-man*
 Killa fall-pa-PST DEM river-to
 ‘Killa fell into the river.’

¹ The *Trajectoire* protocol and stimuli can be found here: <http://tulquest.huma-num.fr/en/node/132>

² The questionnaire can be found here: https://www.eva.mpg.de/lingua/tools-at-lingboard/questionnaire/australian-languages_description.php

- (7) *Killa ripu-sqa Calcauso-manta*
 Killa move-PST Calcauso-from
 ‘Killa moved away from Calcauso.’

3.2 Restrictions on number of Grounds per Motion verb

Wilkins et al.’s (1998) questionnaire includes a comment on restrictions in some languages on the number of Grounds permitted per Motion verb. In contrast to S-framed patterns that can string several Grounds onto a single Motion verb, languages with V-framed patterns, as well as languages with serial verb constructions, prefer to associate fewer Ground elements per Motion verb (Ameka and Essegbey 2013, Chen and Guo 2009, Slobin 2004).

Through the elicited translation in (8), this restriction on Grounds was examined in Apurimac Quechua. It seems that having two Grounds (e.g. *llaqta* ‘village’ and *yachay wasi* ‘school’) for one Motion verb (e.g. *apamu-* ‘bring’) does not pose a problem for the expression. A separate postpositional satellite encoding Path is attached to each of the two Grounds. More complex constructions (e.g. with three or more Grounds per Motion verb) were not elicited and remain to be investigated in future work.

- (8) *Killa apamu-sqa papa-ta llaqta-manta yachay wasi-man*
 Killa bring-PST potato-ACC village-from knowledge house-to
 ‘Killa brought the potatoes from the village to the school.’

3.3 Human vs. non-human Grounds

Various parameters were systematically changed to determine if there would be any corresponding changes to the lexicalisation patterns. The motivation for varying human versus non-human Grounds came from the observation that separate allative suffixes are used in Ese Ejja to describe Motion with these two types of Grounds (see section 1.2).

The pairs of elicited translations in (9) and (10) involve the same Figure, Manner, and Path, and only differ in reference to a human Ground (e.g. *wawa* ‘baby’ in (9)) versus a non-human Ground (e.g. *hatun wasi* ‘skyscraper’ in (10)). Except for the Grounds that were systematically changed, the translations were otherwise identical – both events were expressed with Manner in the main verb (e.g. *laqp’i-* ‘crawl’) and Path in the postpositional satellite (e.g. *-kama* ‘until’). Unlike Ese Ejja, there appears to be only one marker for expressing Motion with different types of Grounds in Apurimac Quechua.

- (9) *Killa laqp’i-yku-cha-sqa chay wawa-kama*
 Killa crawl-INT-cha-PST DET baby-until
 ‘Killa crawled to the baby.’
- (10) *Killa laqp’i-yku-cha-sqa chay hatun wasi-kama*
 Killa crawl-INT-cha-PST DET big house-until
 ‘Killa crawled to the skyscraper.’

Including the word *skyscraper* was intentional because it was predicted that there would be no equivalent word in Quechua. Indeed, the consultant resorted to a compounding strategy of using *hatun wasi* ‘big + house’ to express this unfamiliar word.

3.4 Associated Motion contexts

Associated Motion (AM) systems were first studied in Australian Aboriginal languages (Koch 1984) and have since been further extended to languages such as Araona, Cavineña, Ese Ejja, Reyesano, and Tacana (five Tacanan languages) by Guillaume (2013), among other researchers. This category involves the use of grammatical markers that attach to non-Motion verbs (e.g. *cry* and *sing*) as they occur in the context of some Motion.

In Apurimac Quechua, an AM event such as *Killa cried all the way home* is expressed with the literal translation, *Killa went all the way home by crying*. The non-Motion verb (e.g. *waq'ay-* 'cry') is encoded as an adjunct with the gerundive suffix *-kuspa*, and it can either occur before the main verb *ri-* 'go' (as in (11)) or after (as in (12)).

(11) *Killa waq'ay-kuspa ri-sqa tukuy ñan-ta wasi-n-kama*
 Killa cry-GER go-PST all path-ACC home-n-until
 'Killa cried all the way home.'

(12) *Killa ri-sqa takiy-kuspa lliu ñan-ta yachay wasi-kama*
 Killa go-PST sing-GER all path-ACC knowledge house-until
 'Killa sang all the way to school.'

There is no specific marker to encode this type of AM event in Apurimac Quechua. The strategy appears to require the use of a main Deictic verb such as *ri-* 'go' and a postpositional Path satellite (e.g. *-kama* 'until'), while the non-Motion verb is attached as a gerundive adjunct to indicate the Manner of motion.

Guillaume (2013) briefly discusses a claim that the Quechua suffix *-mu* has a polysemous function as an AM marker (when attached to non-Motion verbs) and as a directional marker (when attached to Motion verbs). As an AM marker, *-mu* carries translocative readings and implies that the action occurs elsewhere from the speech act (Manley and Muntendam 2015). Although AM systems are cross-linguistically rare and can be quite complex, future work could investigate other AM events in Apurimac Quechua such as those that encode prior, concurrent, or subsequent motion (i.e. non-Motion events that occur before, during, or after the action of the Motion verb) (Koch 1984).

3.5 Lexical strategies

The examples in this section exemplify lexicalisation patterns that do not fully align with the S-framed patterns observed thus far. These exceptions to the most frequently employed encoding options in the language affirm the goal to simply describe the observed patterns rather than assigning them to a particular type.

Sentences (13) and (14) were offered by the consultant in response to the same video clip, which showed three women walking across a bridge. (13) shows a standard S-framed pattern (i.e. Manner verb *puri-* 'walk' + Path satellite *-pi* 'on'). However, the second iteration in (14) contained a Path verb *pasa-* 'pass' without a postpositional satellite. Rather than an S-framed pattern, the construction in (14) resembles a V-framed pattern minus the

optional Manner adverbial – the verb *pasa-* ‘pass’ is used transitively and takes a direct object *chaka* ‘bridge,’ which bears the Accusative Case marker *-ta*.

(13) *pay-kuna puri-yku-cha-rqa chay chaka-pi*
 3SG-PL walk-INT-cha-rqa DET bridge-on
 ‘They walked on the bridge.’

(14) *pay-kuna pasa-yku-cha-rqa chay chaka-ta*
 3SG-PL pass-INT-cha-rqa DET bridge-ACC
 (*lit.*) ‘They passed the bridge.’

Comparing this to the intended target construction, *They walked across the bridge*, it is reasonable to assume that Apurimac Quechua lacks an equivalent for the English Path verb *cross*; otherwise, the consultant might have produced a sentence with a V-framed pattern, such as *They crossed the bridge (by walking)*. The repair strategy is to use the related Path verb *pasa-* ‘pass,’ instead, and optionally modify the Manner of ‘passing’ with an adjunct.

Similarly, the sentence in (15) was elicited as a translation for the intended target *Killa crawled past the dog*. The resulting construction resembles a V-framed pattern, translating literally to *Killa passed the dog (by crawling)*, where the Path verb *pasar-* ‘pass’ is used transitively and takes *allqu* ‘dog’ as its direct object. This implies that the lexical inventory also lacks an equivalent for the English Path *past*; otherwise, it might have been produced as a postpositional satellite to the available Manner verb *crawl*.

(15) *Killa (laqp’iy-kuspa) pasar-pan chay allqu-ta*
 Killa (crawl-GER) pass-pan DET dog-ACC
 (*lit.*) ‘Killa passed the dog (by crawling).’

This pattern of using a transitive Path verb is not attested in (16), where the main verb *puri-* ‘walk’ encodes Manner of motion. Although this may seem to resemble an S-framed pattern, note that there is no Path satellite corresponding to the English preposition *up*. Since the Manner verb *puri-* ‘walk’ is used transitively and takes *chacana* ‘ladder’ as its direct object, the sentence translates literally as *Killa walked the ladder* (cf. the intended target *Killa went up the stairs*).

(16) *Killa puri-rpa-sqa chay chacana-ta*
 Killa walk-rpa-PST DEM ladder-ACC
 ‘Killa went up the stairs.’

YM expressed that there is no Quechuan equivalent for *stairs*, hence the strategy of using the related word *chacana* ‘ladder,’ instead.

3.6 Deixis

The two clips that were selected from the *Trajectoire* stimuli to investigate Deixis (see Figure 1) depicted the same Motion event (e.g. *Killa walked out of the cave*) but differed in that the Motion either occurred towards or away from the deictic centre (i.e. the camera).

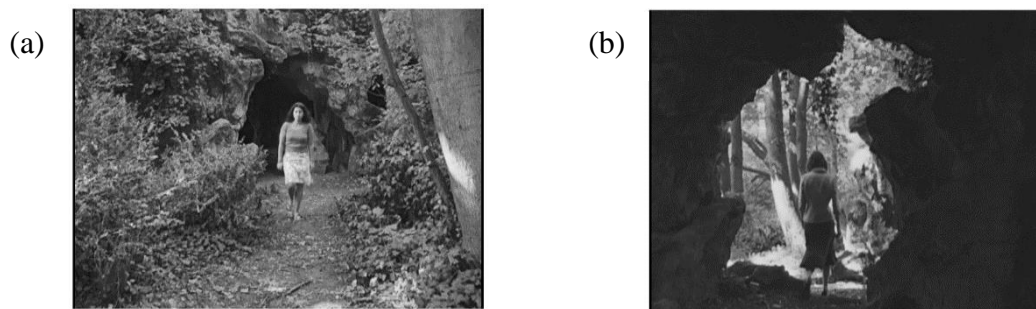


Figure 1. The intended target construction was *Killa walked out of the cave* for both video clips. **(a)** corresponds to the elicited sentence in (17) and shows the Motion happening from the front, towards the deictic centre (i.e. the camera). **(b)** corresponds to the elicited sentence in (18) and shows the Motion happening from the back, away from the deictic centre.

Vuillermet and Kopecka (2019) cite an example from East Futunan (a Polynesian language spoken on Futuna Island) where separate morphemes are used to encode Centrifugal Deixis (i.e. Motion away from a deictic centre) versus Centripetal Deixis (i.e. Motion towards a deictic centre). This was tested with the consultant, who provided two different verb constructions for each of the events in (17) and (18). In the otherwise identical sentences, the only differences are the suffixes attached to the main Path verb *lluqsi-* ‘exit.’

Sentence (17) involves the suffix *-mu* which was previously mentioned in section 3.4; it is glossed here as CISlocative (as consistent with Manley and Muntendam (2015); cf. the suffix *-yku* glossed as INTensifier in (9), (10), (13), and (14), which encodes Motion inward or toward an entity). *-mu* is a directional and a deictic morpheme that is interpreted in relation to the speaker’s perceptual field (Manley and Muntendam 2015). When attached to a Motion verb (except for the intransitive *ri-* ‘go’), *-mu* has a bi-locational quality in expressing that the Motion originated elsewhere and emerges toward the speaker (van de Kerke and Muysken 1990).

(17) *Killa lluqsi-mu-chan chay mach’ay-manta*
 Killa exit-CIS-chan DET cave-from
 ‘Killa exited the cave.’ (front)

(18) *Killa lluqsir-parin chay mach’ay-manta*
 Killa exit-parin DET cave-from
 ‘Killa exited the cave.’ (back)

The consultant explained that the suffix *-parin* in (18) can also be used when the speaker is recounting a story. It seems unlikely that *-parin* here conveys the opposite deictic meaning of *-mu*. In Manley and Muntendam’s (2015) summary of deictic and directional morphemes in Quechua, there is no correlate for expressing Motion away from a speaker.

4. Remaining questions

Evidently, there are many other types of Motion events besides the ones elicited in this study. It would be interesting to examine the cross-linguistic variation in encoding Motion and how the patterns might be lexicalised in Quechua. For example, verbs in Atsugewi (a Hokan language of northern California) can conflate Motion with the Figure through different verb roots: the root *-lup-* describes the movement or location of “a small shiny spherical object (e.g. a round candy, an eyeball, a hailstone)” (Talmy 1985). A comparable verb in English is *rain*, which describes the Motion of rain – such equivalent verbs could also be elicited in Quechua.

Numerous studies have compared the use of S-framed versus V-framed patterns in written narratives (e.g. Chen and Guo 2009, Slobin 2004). Although the results have generally mirrored those found from spontaneous oral narrations in the corresponding languages, it is hypothesised that writers of different languages might be more expressive when encoding their characters’ movements in novels. Alternatively, another method is to elicit narrations from a wordless picture book, such as the “Frog Stories” compared across typologically different languages, as summarised in Slobin (2004).

Moreover, much of the intra-linguistic variation arises due to speaker preferences in different pragmatic contexts (Beavers et al. 2010). Cultural factors have also been shown to predispose speakers to pay more attention to certain components. For example, speakers of Arrernte (an Arandic language spoken in Australia) direct more emphasis to Path details, which is reflected in the importance of journeys in Australian Aboriginal culture (Slobin 2004). Evaluating such preferences in Quechua could not only provide further descriptions of the various encoding options of Motion events but could also give insight into aspects of Quechuan culture.

5. Conclusion

This work has provided preliminary descriptions of the yet unstudied ways in which Apurimac Quechua expresses Path of motion, and Motion events more generally. It has not endeavoured to confine the language to one of the previously established typological categories (i.e. satellite-, verb-, and equipollently- framed lexicalisation patterns). Rather, the analyses undertaken here have provided a descriptive account of the various methods that are employed in Apurimac Quechua to encode different types of Motion events.

With respect to systematic changes in parameters, Associated Motion events, and the linguistic strategies used to overcome lexical restrictions, it can be tentatively inferred that Apurimac Quechua, like English, exhibits canonical S-framed patterns for describing simple Motion events (see research question (I)). When the target construction or Motion verb is not available in the lexical inventory, V-framed patterns can be used instead. The lexicalisation patterns can change with changes in parameters (see research question (II)); specifically, there is a distinct marker for encoding Centripetal Deixis. Some common repair strategies (see research question (III)) employed by the consultant include: (i) the use of semantically related words or compounds to express unfamiliar terms or words with no real lexical equivalent in Apurimac Quechua; (ii) the use of an optional gerund to express Manner of motion when the main verb is not a Manner verb; and (iii) the use of a

transitive verb that takes a direct object instead of encoding Path as a postpositional satellite.

Motion events are very pervasive and thus have received considerable attention in cross-linguistic research. The lexicalisation of the same basic elements of a single Motion event can be realised differently both within the same language and across different languages. This work has described only some of the ways in which Apurimac Quechua encodes certain types of Motion events, leaving the more complex topics of intra-linguistic variation to be documented in future research.

Glossing abbreviations

3	Third person	GER	Gerund
ACC	Accusative Case	INT	Intensifier
CIS	Cislocative	PL	Plural
DEM	Demonstrative	PST	Past
DET	Determiner	SG	Singular

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