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Chapter 19
Motion event descriptions in Tagalog

Abstract: This chapter presents an analysis of descriptions of self-motion events in Tagalog by examining data from Experiment A developed in the NINJAL MEDAL project within Matsumoto's (2017, this volume) typology of path coding. The main finding of this chapter is that Tagalog displays a high degree of intra-linguistic variation in the typology of path-coding positions: Tagalog motion event descriptions can be either head path coding or head-external path coding depending on path types, manner types, and deixis types, with much individual variation. It is further demonstrated that this stochastic nature of path-coding strategies in Tagalog is linked to four factors: the morphosyntactic fluidity of motion expressions, the cross-linguistic tendency of path and manner coding, the manner contingency of path coding, and morphological complexities.

1 Introduction

Tagalog is an Austronesian language of the Philippines. It has received a lot of attention from typologists because of its typologically uncommon features, such as the controversial status of subject (Schachter 1976), a blurred distinction between nouns and verbs (Sasse 1993), and a symmetrical voice system (Himmelmann 2005). Although less attention has been paid in the literature, Tagalog also has an array of important, yet previously understudied, features in the context of the typology of path-coding positions for motion event descriptions (Matsumoto 2017, this volume).[1] First, motion-related roots in Tagalog are precategorial. They

1 In Matsumoto's (2017, this volume) typology, motion event descriptions are analyzed in terms of coding positions of path. The major division is drawn between head path-coding and head-external path-coding types. In the former, path is expressed in the head (main verb) position; in the latter, by contrast, it is encoded in the head-external position, which is either adnominal (positions attached

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are underspecified for lexical categories and always appear with additional morphological modification. In other words, motion-related roots can be employed for deriving both heads (i.e., verbs) and head-external elements (i.e., adnominal/adverbal expressions), but they cannot occur without an affix.[2] For example, the manner root *lakad* 'walking' can be used to derive the verb *l<um>akad* 'walk' and the manner adverbal *pa-lakad* '(while) walking'. Likewise, the path root *pasok* 'entering' can form the verb *p<um>asok* 'enter' and the path adnominal *pa-pasok* 'entering/into'. Morphologically, both are equally derived expressions, and neither of them is unmarked.

This morphological fluidity leads to the second feature of Tagalog motion event descriptions: the syntactic fluidity of path-coding positions. Tagalog represents a prime example of "competition" phenomena: manner, path, and deixis compete for the syntactic positions available for expressing motion events (Matsumoto, this volume). Compare the examples in (1) and (2). Note that heads are indicated in boldface in these examples.

(1) ***L<um>akad*** *na pa-pasok ng kwarto si Ria.*
walk<AV> LK DIR-enter GEN room P.NOM Ria
'Ria **walked** entering/into the room.'

(2) *Pa-lakad na* ***p<um>asok*** *ng kwarto si Ria.*
DIR-walk LK **enter<AV>** GEN room P.NOM Ria
'Ria **entered** the room walking.'

In (1) and (2), the same lexical roots are employed interchangeably in different syntactic positions. In (1), the path concept TO.IN is realized as an adjunct and the manner concept WALK as a main verb. The opposite pattern of encoding is found in (2): the path concept TO.IN is expressed as a main verb, while the manner concept WALK appears as an adjunct. In both examples, the verb with the Actor Voice infix <*um*> functions as the head of the clause, determining the entire temporal interpretation of each description; by contrast, the constituent marked by the prefix *pa-* has head-external status. With respect to coding positions of path, example (1) represents a head-external coding pattern, and example (2), a head path-coding

to a noun, such as case markers, adpositions, and locational nouns) or adverbal (positions modifying a verb, such as adverbs). Importantly, path can be encoded in different positions in a single description. Thus, in the Japanese sentence *Taroo=wa heya=no naka=ni hait-ta.* (lit.) 'Taroo entered (inside) the room', the path concept TO.IN is conveyed both by the main verb *hait-ta* 'entered' and the locational noun *naka* 'inside' simultaneously. See also Matsumoto (this volume).

2 The exception to this generalization is an imperative use of action roots (e.g., *Lakad!* 'Walk!').

pattern. There is no morphosyntactic constraint on choosing one coding pattern over another, where the lexical resources for expressing either of the two semantic components are equally available. What factors, then, determine the coding position of path in this language?

Last, Tagalog does not have morphologically simple lexical roots for expressing deictic motion. It only has the morphologically complex deictic verbs, *p<um>a-rito* 'come, move hither' and *p<um>a-roon* 'go, move thither', which are derived from the *pa*-directional forms of the locative demonstratives *dito* 'here' and *doon* 'there'[3] (see Section 2.2.3), respectively, but the use of such complex verbs is limited to certain formal registers (e.g., Bible translations). This fact might come as a surprise when we consider the important role that deictic verbs play in the languages of East and Southeast Asia, including Ilokano (Ilocano), a close relative of Tagalog (Yamamoto, this volume). It remains to be seen how deictic information is encoded (or not encoded) in motion event descriptions in such a deixis-less language as Tagalog.

From this typological background, this chapter takes an experimental approach to motion event descriptions in Tagalog. More specifically, by examining data from Experiment A developed in the NINJAL Motion Event Descriptions across Languages (MEDAL) project, this chapter presents a typologically informed analysis of linguistic descriptions of self-motion events in Tagalog. The main finding of this chapter is that Tagalog displays a high degree of variation in path-coding positions. Tagalog does not adhere to any one particular coding pattern, and coding patterns for motion event descriptions vary depending on path types, manner types, and deixis types, with much individual variation. It is further argued that this stochastic nature of coding strategies in Tagalog is motivated by four factors: the morphosyntactic fluidity of motion expressions (as described above), the cross-linguistic tendency of path and manner coding (UP and RUN are salient), the manner contingency of path coding (i.e., a strong preference for head path coding when manner is not expressed and a strong dispreference for head path coding when manner is expressed), and morphological complexities.

The rest of this chapter is structured as follows. Section 2 introduces the descriptive background for the study of motion event descriptions in Tagalog. Section 3 introduces the methodology employed for this study. Section 4 provides the results of the experiment, which are analyzed in Section 5. Lastly, Section 6 concludes the chapter.

3 The voiced alveolar stop /d/ optionally undergoes tapping in intervocalic positions. Thus, either *pumarito* or *pumadito* is acceptable.

2 Motion expressions in Tagalog

This section presents some key background information on the study of motion event descriptions in Tagalog. More specifically, it discusses some basic typological characteristics of Tagalog (Section 2.1), introduces the linguistic repertoire that this language has for expressing motion events focusing on their morphosyntactic fluidity (Section 2.2), and describes two major syntactic templates for expressing motion events, namely, Actor Voice constructions and Non-Actor Voice constructions (Section 2.3).

2.1 Typological characteristics

Tagalog is an Austronesian language spoken in the Republic of the Philippines. It is spoken as a regional language in and around the National Capital Region (Metro Manila) and as a lingua franca across the Republic. It is linguistically the same as, but ideologically different from, Filipino, the national language of the Philippines. Because of the American colonialization of the Philippines from 1898 to 1946, Tagalog has been in contact with, and under the strong influence of, American English to the extent that loanwords are pervasive in language uses as basic as motion event descriptions.

Typologically speaking, Tagalog has a verb-initial word order and displays relatively consistent VO word order correlates.[4] Thus, verb-predicate clauses are typically composed of a clause-initial predicate, one or two arguments, and some optional adjuncts, as in (3).

(3) *L<um>abas* *si* *Juan* *sa* *bahay* *kanina.*
exit<AV> P.NOM Juan LOC house a.while.ago
'Juan exited the house a while ago.'

Tagalog and other Philippine-type languages are famous for their voice/valency-marking verb morphology (also known as the "focus system").[5] In this system, verbs are marked by one of the four voice categories, Actor Voice (*-um-*, *mag-*,

4 The Austronesian languages that have the typological characteristics described here are referred to as "symmetrical voice languages" or "Philippine-type languages" (Himmelmann 2005). Precategorial roots are one of the prominent typological features of these languages.

5 Other verb-related grammatical categories are agentivity and aspect, but they are not considered in this chapter.

etc.), Patient Voice (*-in*), Locative Voice (*-an*), and Circumstantial Voice (*i-*),[6] and different voice categories indicate different semantic (macro)roles of the primary grammatical argument of a clause,[7] which is marked in the nominative case. To put it differently, the primary grammatical argument of a clause is marked in two ways. It is marked on nouns with the nominative case and on verbs with a voice affix. For example, in (3), the primary grammatical argument *Juan* is in the nominative case, and its semantic role is indicated by the Actor Voice marker *-um-*. The relevance of these voice affixes to motion event descriptions is discussed in Section 2.3.

Arguments and adjuncts are marked with prenominal particles that encode case (nominative, genitive, and locative), noun class (personal name and common noun) and number (singular and plural) (Table 1). In (3), for example, the argument NP *Juan* 'Juan' is marked by *si* (nominative, personal name, and singular), and the adjunct NP *bahay* 'house' is marked by *sa* (locative and common noun).

Table 1: Prenominal particles in Tagalog.

Case	common noun	personal name (SG)	personal name (PL)
NOM	*ang*	*si*	*sina*
GEN	*ng*	*ni*	*nina*
LOC	*sa*	*kay*	*kina*

Since only three cases are distinguished in Tagalog nouns, each case exhibits a high degree of multifunctionality. The nominative case is employed mainly for coding intransitive subjects and transitive objects; the genitive case is for transitive subjects, possessors, and adjuncts. For example, consider (4), where *Juan* is marked with the genitive *ni* and *kahon* 'box' is marked with the nominative *ang*.

6 Circumstantial Voice (CV) is also referred to as conveyance voice in the literature on western Austronesian languages (see Himmelmann 2005, for example), because CV clauses can sometimes represent a caused-motion event and the primary grammatical argument in such CV clauses has a theme role, as in (4) and (23). In the literature of motion event descriptions, Circumstantial/Conveyance Voice is sometimes analyzed as a voice-framing construction in that "the conveyance voice marker *i-* encodes the idea of a 'transfer of the Figure to the Ground'" (Fortis 2003; Imbert 2012; Vittrant 2015; Fortis and Vittrant 2016). This analysis is not included here, because there is no unique correspondence between Circumstantial Voice *i-* and caused-motion events. CV clauses can represent other events than caused motion; caused-motion events can be expressed by other voice constructions, as in (27).

7 The term "primary grammatical argument" is chosen to avoid the half-century-long contentious debates over subjecthood and ergativity in Philippine languages (Schachter 1976, 1977).

(4) *I-b<in>aba* *ni* *Juan* *ang* *kahon* *sa* *lupa.*
CV-put.down<RL> P.GEN Juan NOM box LOC ground
'Juan put down the box on the ground.'

The locative case has two major functions. First, it can mark NPs that express location, as in (5).

(5) *T<um>akbo* *si* *Maria* *sa* *kwarto.*
run<AV> P.NOM Maria LOC room
'Maria ran inside the room.'

Second, when used with path verbs, the locative case is used for marking a goal, route, or source NP. The specific semantic role of a locative-marked NP is specified by path verbs with which it co-occurs. For example, in (3), the locative-marked NP *bahay* 'house' expresses a source participant of the motion of exiting. In (4), the same case marker is employed for marking a goal participant.

Importantly, when used with manner verbs, locative NPs do not have a goal, route, or source interpretation, but have a locative meaning. Thus, the example in (5) does not have the interpretation that Maria ran into the room. To convey such a path interpretation, *pa*-directionals must be employed, as in (6).

(6) *T<um>akbo* *si* *Maria* *pa-pasok* *sa* *kwarto.*
run<AV> P.NOM Maria DIR-enter LOC room
'Maria ran into the room.'

Pa-directionals are formed by a combination of the prefix *pa-* and a root.[8] They can be used either as adnominals or as adverbals. "Adnominals" and "adverbals" (Wälchli 2009: 5) here are strictly used to refer to two types of head-external elements within Matsumoto's (2017, this volume) typology of path-coding devices for motion event descriptions. Adnominals refer to words, clitics, or affixes that are attached to nouns, including case affixes and adpositions. Thus, in (6), the *pa*-directional form of the path root *pasok* 'enter' is employed to introduce the ground NP *(sa) kwarto* 'room', also conveying the path concept TO.IN. In this specific example, the *pa*-directional *papasok* is the functional equivalent of the English preposition *into*.

8 Note that the label "directional" is used in this paper to refer to forms with the prefix *pa-*. It does not imply that these forms have a directional interpretation. *Pa*-directionals are employed for expressing path (as in (1)) or manner (as in (2)).

Pa-directionals can also be used as adverbals, which refer to words, clitics, or affixes that are attached to verbs, such as adverbs. For example, the *pa*-directional *papasok* can be used as an adverbal, as in (7).

(7) *T<um>akbo si Maria pa-pasok.*
run<AV> P.NOM Maria DIR-enter
'Maria ran in.'

In addition to path and manner roots, the directional prefix *pa-* can be attached to other kinds of bases (Section 2.2). In (8), the noun for a specific commercial establishment is used with the prefix *pa-*.

(8) *T<um>akbo si Maria pa-SM.*
run<AV> P.NOM Maria DIR-SM
'Maria ran towards an SM mall.' (SM is a chain of shopping malls in the Philippines.)

Crucially, the *pa*-directionals in (6), (7), and (8) are not analyzed as heads of subordinate clauses, although they may look similar to gerunds in Romance languages, which function as heads of subordinate clauses. This is because, when used as the head of a clause, a *pa*-directional determines the entire temporal interpretation of the description, expressing incipient aspect, as in (9).

(9) *Pa-pasok si Maria.*
DIR-enter P.NOM Maria
'Maria is about to enter.'

However, such an aspectual interpretation is not obtained when a *pa*-directional is used as an adnominal (as in (6)) or as an adverbal ((7) and (8)). For this reason, *pa*-directionals such as those in (6), (7), and (8) are considered head-external elements rather than heads in this chapter.

Head-external elements for expressing motion in Tagalog include not only case markers and *pa*-directionals but also locational nouns and adverbs. Tagalog has a set of locational nouns, which express geometric features of ground (Section 2.2.1). See *loob* 'inside' in (10), for example.

(10) *Ma-bilis na p<um>asok si Maria sa loob ng eskwelahan.*
ADJ-fast LK enter<AV> P.NOM Maria LOC inside GEN school
'Maria entered the inside of the school fast.'

The term "adverb" is used here to refer to a verb-modifying adjective in a broad sense, as in *mabilis* 'fast, quick' in (10). The linking morpheme (LK) may or may not appear between an adverb and a verb.

Note that there is no grammatical constraint on the position of *pa*-directionals and adverbs in a clause. They can either follow or precede verbs. For example, the *pa*-directional *papasok* appears post-verbally in (6) but pre-verbally in (11).

(11) *Pa-pasok na t<um>akbo si Maria sa kwarto.*
DIR-enter LK run<AV> P.NOM Maria LOC room
'Maria ran into the room.'

There is no noticeable difference in meaning between the two positions, but there is a clear tendency for manner expressions to precede path expressions.

2.2 Morphosyntactic fluidity of motion expressions

As introduced in Section 1, Tagalog and other Philippine-type languages are known for precategorial roots. Lexical roots are "underdetermined in allowing both nominal and verbal derivations" (Himmelmann 2005: 128). Motion-related roots are not exceptions to this generalization. Most motion roots can be used to derive both heads (i.e., main verbs), which determine the temporal interpretation of motion event descriptions, and head-external elements (i.e., adnominals and adverbals), which provide additional information with heads. Examples of such fluid derivational patterns are given in Table 2.

Table 2: Examples of fluid motion roots.[9]

Meaning	Root	Verb (head)	Adnominal/Adverbal (head-external)
Path	*pasok*	*p<um>asok* 'to enter'	*pa-pasok* 'entering, into'
	akyat	*<um>akyat* 'to ascend'	*pa-akyat* 'ascending, up'
	labas	*l<um>abas* 'to exit'	*pa-labas* 'exiting, out of'
			sa labas ng 'out of'

9 This table should not be taken as an exhaustive list of head and head-external expressions of these roots. For example, there is more than one voice form for each root, but only an Actor Voice form is listed here.

Table 2 (continued)

Manner	*lakad*	*l<um>akad* 'to walk'	*pa-lakad* 'walking'
	takbo	*t<um>akbo* 'to run'	*pa-takbo* 'running'
	bilis	*b<um>ilis* 'become quick', *ma-bilis* 'be quick'	*nang/na mabilis* 'quickly'
Deixis	*dito*	*p<um>a-rito* 'come, move hither'	*pa-rito* 'hither' *dito* 'here, hither'
	doon	*p<um>a-roon* 'go, move thither'	*pa-doon* 'thither' *doon* 'there, thither'

Because of this morphosyntactic fluidity of motion expressions, Tagalog motion expressions are flexible. There are few grammatical constraints on whether path, manner, and deixis roots are coded as heads or head-external elements (see Sections 2.2.1, 2.2.2, and 2.2.3, respectively).

2.2.1 Path

Tagalog has a rich inventory of path roots, from which both heads and head-external elements can be derived. There are two major types of path roots. One type of path root can occupy the main verb position when combined with a voice affix but can also appear as a head-external element when employed with a *pa*-directional. Such roots include *pasok* 'enter', *akyat* 'ascend, climb', *daan* 'pass through', and *punta* 'go (without a deictic sense)'. Consider (12) and (13).

(12) *P<um>unta* *ang* *lalaki* *sa* *tindahan*
go<AV> NOM man LOC store
'The man went to the store.'

(13) *Nag-bus* *ang* *lalaki* *pa-punta* *sa* *tindahan.*
AV.RL-take.bus NOM man DIR-go LOC store
'The man took a bus (going) to the store.'

In (12), the head verb *pumunta* 'go' is derived from the root *punta* 'go (without a deictic sense)'. The same root is the base for the head-external element *papunta* 'going to, toward' in (13). Note that *punta* expresses an action of moving toward a specific location without a deictic sense. It is a loanword borrowed from *apuntar* 'to aim, to point at' in Spanish but is completely nativized now.

The other type of path roots can be employed for forming locational expressions as well as verbs and *pa*-directionals. Such roots are often associated with

geometric features of the ground (i.e., conformation [Talmy 2000]): *taas* 'up', *baba* 'down', *tabi* 'side', *ibabaw* 'top, surface', *ilalim* 'bottom', *gitna* 'center', *loob* 'inside', *labas* 'outside', *harap* 'front', and so on. See (14), (15), and (16).

(14) *B<um>aba ako ng hagdan.*
descend<AV> 1SG.NOM GEN stairs
'I descended the stairs.'

(15) *T<um>akbo ako pa-baba (ng hagdan).*
run<AV> 1SG.NOM DIR-descend (GEN stairs)
'I ran down (the stairs).'

(16) *P<um>unta ang aso sa baba ng pader.*
go<AV> NOM dog LOC down GEN wall
'The dog went to the bottom of the wall.'

In (14), the root *baba* forms a verb with the voice infix <*um*>. In (15), the *pa*-directional is derived from the same root. It can work either adnominally with a ground NP or adverbally with an implicit ground. Last, in (16), *baba* 'down, bottom' is employed as a locational expression, specifying a geometric feature of the ground.

2.2.2 Manner

Tagalog also has a large number of manner roots: *lakad* 'walk', *takbo* 'run', *kandirit* 'hop, jump on one foot', *lipad* 'fly', and so on. As is the case with path roots, both head and head-external (adverbal) expressions are derived from manner roots. For example, the verb *kumandirit* 'hop' in (17) and the adverbal *pakandirit* 'hopping' in (18) are derived from the manner root *kandirit*.

(17) *K<um>andrit na pa-labas ng bahay ang bata.*
hop<AV> LK DIR-exit GEN house NOM child
'The child jumped on one foot out of the house.'

(18) *Pa-kandirit na l<um>abas ng bahay ang bata.*
DIR-hop LK exit<AV> GEN house NOM child
'The child exited the house jumping on one foot.'

In addition, the imperfective form of a manner verb can be employed for modifying a path verb, as in (19). Note that the two verbs are connected by the linker, which conveys a simultaneous relationship between the two events in this construction.

(19) *K<um>a~kandrit na l<um>abas ng bahay ang bata.*
RDP<AV>~hop LK exit<AV> GEN house NOM child
'The child exited the house jumping on one foot.'

In (19), the imperfective form of the manner verb *kumakandirit* 'hopping' modifies the path verb *lumabas* 'exited', which is the main verb in this construction. Evidence for analyzing the path verb as a main verb comes from the fact that the perfective interpretation of the entire sentence in (19) is determined by the path verb (perfective aspect) rather than the manner verb (imperfective aspect).

2.2.3 Deixis

Tagalog does not have a simple lexical root specialized for deictic motion (Section 1).[10] Instead, location or motion relative to the speaker's position is expressed by means of demonstratives such as *dito* 'DEM.PROX.LOC, here', *diyan* 'DEM.MED.LOC, there', and *doon* 'DEM.DIST.LOC, there' and by means of personal pronouns (Wälchli 2009: 244). Consider the adverbal deictic expressions in (20) and (21).

(20) *P<um>unta siya {dito /sa akin}.*
go<AV> 3SG.NOM DEM.PROX.LOC LOC 1SG.LOC
'S/he moved here/toward me.'

(21) *L<um>akad siya {pa-rito /pa-punta sa akin}.*
walk<AV> 3SG.NOM DIR-DEM.PROX.LOC DIR-go LOC 1SG.LOC
'S/he walked hither/toward me.'

The example in (20) presents a motion toward the speaker, but this deictic meaning does not come from the verb *pumunta* 'go'. It is underspecified with respect to deixis. Instead, a deictic meaning is conveyed by the locative demonstrative *dito* or the locative personal pronoun *sa akin*. In (21), the *pa*-directional forms (i.e., the

10 The fact that, while it has a rich inventory of path roots (Section 2.2.1), Tagalog does not have simple lexical roots for deixis provides further support for separating deixis from path (Matsumoto, this volume). There is a clear difference between these two semantic components in terms of their lexicalization into verb roots.

pa-form of a demonstrative or the combination of the *pa*-form of *punta* 'go' and *sa akin*) achieve the same function.

Occasionally, the *pa*-directional forms of demonstratives, such as *parito* 'hither', can be used for deriving verbs, as in *p<um>arito* 'come, move hither'. But the use of such verbs is limited to certain formal registers (e.g., Bible translations), and these verbs never appeared in the data examined in this chapter (Section 4; cf. Wälchli 2009: 261).[11]

2.3 Argument structure templates

The complex voice/valency-marking morphology in Tagalog has several important syntactic functions, but we are concerned here with the function of changing argument structure patterns. As far as motion events are concerned, there are two argument structure patterns: Actor Voice (AV) constructions and Non-Actor Voice (NAV) constructions. As the terms suggest, Actor Voice is employed for AV constructions, and Patient Voice, Locative Voice, and Circumstantial Voice for NAV constructions.

In typical cases, the AV constructions are used for self-motion events, and the NAV constructions for caused-motion events, respectively. In the AV constructions, an Actor NP (or an initiator in the causal chain) is marked in the nominative case, as in (22).

(22) *D<um>aan* *ang* *bata* *sa* *bintana.*
pass.through<AV> NOM child LOC window
'The child passed through the window.'

In the NAV constructions, by contrast, an Actor NP receives genitive marking rather than nominative marking, and a Non-Actor NP (or an endpoint in a causal chain) is marked in the nominative case, as in (23).

(23) *I-ni-hagis* *ng* *bata* *ang* *tuwalya* *sa* *akin.*
CV-RL-throw GEN child NOM towel LOC 1SG.LOC
'The child threw the towel to me.'

These AV and NAV constructions can be additionally elaborated by *pa*-directionals. For example, a *pa*-directional is used in the self-motion AV construction in (24) and in the caused-motion NAV construction in (25).

11 This morphological distribution of deixis roots is the same as that of certain path (conformation) roots, such as *loob* 'inside' and *ilalim* 'bottom'.

(24) *L<um>akad ang bata pa-punta sa eskwelahan.*
walk<AV> NOM child DIR-go LOC school
'The child walked (going) to the school.'

(25) *S<in>ipa ng bata ang bola pa-punta sa mukha ko.*
kick<PV.RL> GEN child NOM ball DIR-go LOC face 1SG.GEN
'The child kicked the ball toward my face.'

However, there is no one-to-one correspondence between AV/NAV constructions and event types. A self-motion event such as that in (22) can be represented by a NAV construction like (26). Conversely, a caused-motion event such as that in (25) may be represented by an AV construction, as in (27).

(26) *D<in>aan-an ng bata ang bintana.* (cf. (22))
pass.through<RL>-LV GEN child NOM window
'The child passed through the window.'

(27) *Nag-karga ako ng dayami sa trak.*
AV.RL-load 1SG.NOM GEN hay LOC truck
'I loaded hay onto the truck.'

The example in (26) has much the same meaning as its Actor Voice counterpart in (22). They differ not only in argument structure patterns but also in transitivity parameters (Hopper and Thompson 1980): the agent is more volitional, and the location is more affected, in (26) compared to in (22).[12] In contrast, the example in (27) represents a caused-motion event, but the agent NP rather than the patient NP is marked in the nominative case.

3 Method

This chapter presents the results of Experiment A developed through the NINJAL project on Motion Event Descriptions across Languages (MEDAL). This project features a video-based experimental method: a set of video stimuli is employed to systematically collect production data from native speakers of target languages. Experiment A is designed to investigate interactions among manner, path, and

12 This type of construction is functionally equivalent to locative applicatives of the kind observed in Swahili (Matsumoto and Kahumburu, this volume).

deixis and is targeted not only at self-motion but also at caused and visual motion. The total number of video clips is 52: 30 self-motion events, 19 caused-motion events, and three visual motion events.

This chapter focuses on the results of 27 self-motion video clips ("core clips"; see Matsumoto, this volume).[13] These 27 self-motion video clips depict motion events involving combinations of three types of manner (WALK, RUN, and SKIP), three types of path (TO [the bicycle], TO.IN [the gazebo], and UP [the stairs]), and three types of deixis (TWRD.S "toward the speaker", AWY.FRM.S "away from the speaker", and ORTHOG "orthogonally in front of the speaker"). See Matsumoto (this volume) for details of the experiment.

For the purposes of this chapter, I collected production data from 20 native speakers of Tagalog (16 women and 4 men). All participants were native speakers of Tagalog, and most of them were college students in their twenties. The experiment was conducted in Manila, the Philippines, in 2012–2013. In each experiment session, speakers were asked to describe what they saw in the videos as if they were in the scene portrayed by the video clips. The video clips were presented by means of an experiment kit localized for English rather than Tagalog. This is because, in the Philippines, English is a preferred means of instruction in a university setting and is more commonly used for computer-based tasks like this experiment compared to Tagalog.

Each speaker produced 52 motion event descriptions for 52 video clips, but only the utterances used to describe 27 core self-motion clips were selected for analysis. The analysis in the rest of this chapter considers 540 self-motion event descriptions (i.e., 20 speakers × 3 manners × 3 paths × 3 types of deixis).[14]

4 Results

This section presents the results of Experiment A in Tagalog. Attention is paid to construction types (Section 4.1), frequency of each semantic component (Section 4.2), the meaning of main verbs (Section 4.3), and the coding strategies of path

13 Experiment A includes video clips depicting caused motion and visual motion. Visual motion in Tagalog is briefly analyzed in Matsumoto et al. (2022).

14 Throughout this chapter, the metadata for each motion event description are provided: video clip ID number, participant ID number, and descriptions of each video clip. For instance, "(A22_05; /Run-Up-TwrdS/)" indicates that the response in question was used to describe video clip 22 in Experiment A and was produced by speaker #05, and the scene depicted in this video clip involves the notions RUN, UP, and TWRD.S. Examples with no identifiers are non-experimentally elicited sentences.

(Section 4.4), manner (Section 4.5), and deixis (Section 4.6). A summary of this section is provided in Section 4.7.

4.1 Construction types

Motion events can be described by either simplex, coordinate, or complex constructions. In Tagalog, simplex (monoclausal) construction types are employed for describing the scenes depicted in the video clips most of the time. Consider Figure 1, which presents a matrix of 9 condition pairs defined by manner type and path type, each condition pair divided into bar plots for three deixis types (3 manners × 3 paths × 3 types of deixis; 27 self-motion video clips in total). Each bar presents data for 20 utterances (20 participants' responses to clips depicting combinations of 3 conditions).

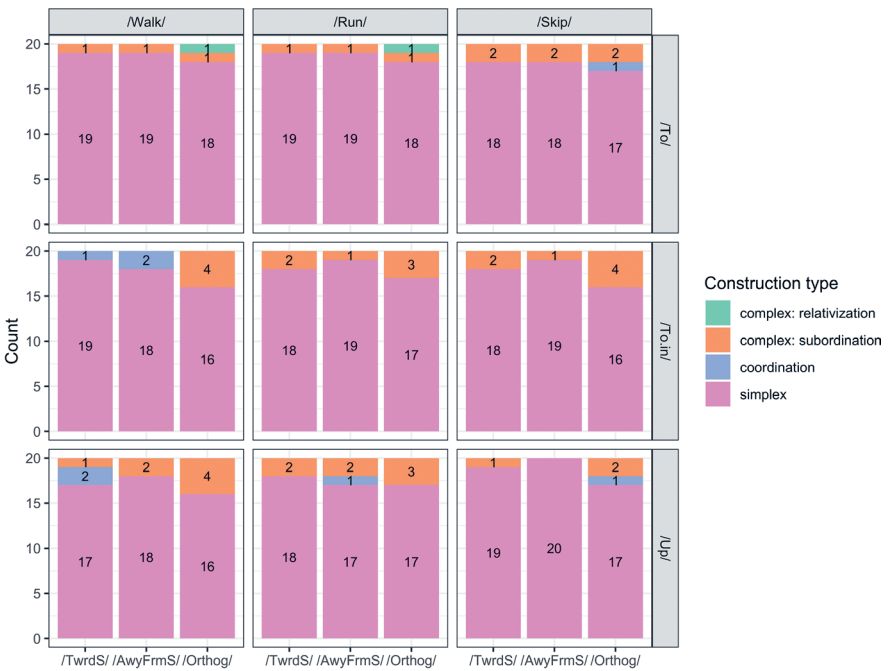

Figure 1: Construction types used in each MPD scene.

As can be seen in Figure 1, simplex construction types of the sort exemplified in (1) and (2) were consistently used across different scenes. Occasionally, coordinate,

relative, and subordinate clauses were used. For example, consider the complex construction in (28).

(28) *T<um>a~takbo siya =ng <um>akyat pa-punta sa akin.*
RDP<AV>~run 3SG.NOM =LK ascend<AV> DIR-go LOC 1SG.LOC
'He ascended toward me while running.' (A22_05; /Run-Up-TwrdS/)

In (28), the subordinating verb *tumatakbo* 'running' modifies the main verb *umakyat* 'ascended' via the linker, which conveys a simultaneous relationship between the two events in this case. A similar construction is shown in (19) in Section 2.2.2. However, the use of this kind of complex sentence is quite rare across descriptions of different video clips. The Tagalog speakers preferred a simplex way of expressing self-motion events, as in the examples in the rest of this section.

4.2 Frequency of manner, path, and deixis

Figure 2 represents frequencies of manner, path, and deixis expressions in descriptions of each video clip. In this figure, expressions of each semantic component were counted regardless of whether they appeared in a head position or in a head-external position. Frequency distributions of the three semantic components of motion according to their coding positions are discussed in Sections 4.4–4.6.

Figure 2 shows that path was very often expressed across the responses, while the expression of manner and deixis largely depended on the motion event type. Tagalog speakers often mentioned different types of paths when they verbalized motion event descriptions depicted in the video clips (18–35 expressions per 20 responses).

By contrast, manner was less frequently coded in the description of the /Walk/ scenes (5–17 expressions per 20 responses) than the /Run/ and /Skip/ scenes (13–23 expressions per 20 responses). This is most probably because WALK is a highly expected manner of motion and the act of walking does not merit verbal elucidation (Section 5.1).

In addition, deixis was rarely expressed except in responses to /TwrdS/ scenes (11–18 expressions per 20 responses). Tagalog speakers expressed deixis primarily when they watched the figure approaching their position in the video clips but rarely expressed deictic directions other than that (1–6 expressions per 20 responses). This tendency itself was widely observed across the languages surveyed in this volume, but it was most evident in Tagalog.

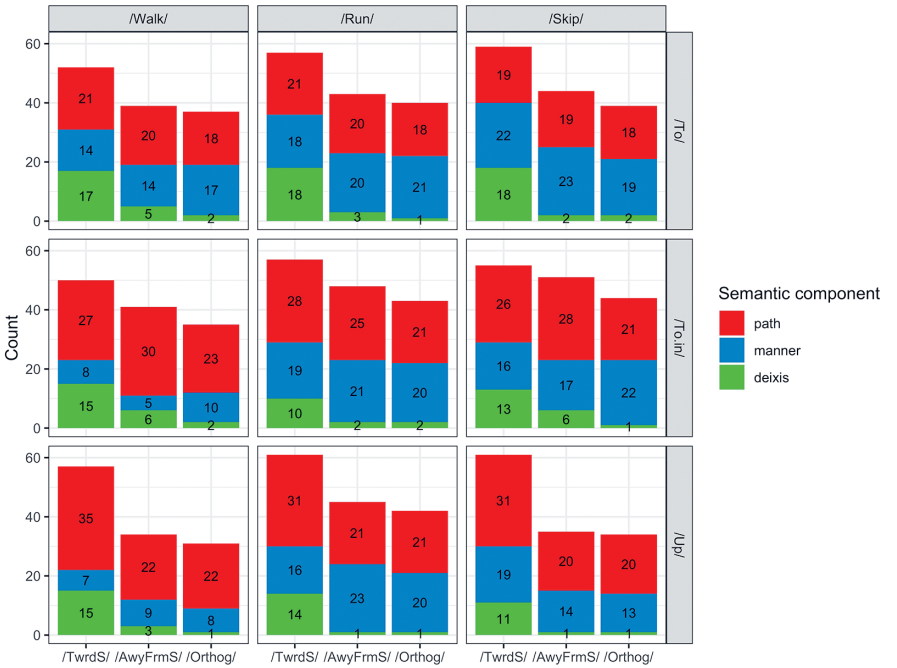

Figure 2: Frequencies of MPD expressions in the descriptions of different clips.

4.3 Meaning of main verbs

Figure 3 represents meanings expressed in the head (main verb) position in the descriptions of the video clips. Note that, in some descriptions, head positions were occupied by verbs of action, such as *huminto* 'stop' and *tumingin* 'stare, look', and that some descriptions are coordinate sentences and include more than one main verb.

Several important observations can be made from the results in Figure 3. First, the overall proportion does not clearly indicate whether Tagalog prefers head path coding or not. For example, the same /Run/ scene was described differently in (29) and (30).

(29) *Pa-takbo=ng* *<in>akyat* *ng* *lalaki* *ang* *hagdanan.*
DIR-run=LK ascend<PV.RL> GEN man NOM stairs
'The man ascended the stairs running.' (A23_11; /Run-Up-AwyFrmS/)

(30) *Ma-bilis na t<um>akbo pa-akyat ng hagdan si Pedro.*
ADJ-fast LK run<AV> DIR-ascend GEN stairs P.NOM Pedro
'Pedro ran fast ascending the stairs.' (A23_13; /Run-Up-AwyFrmS/)

In (29), path is expressed by the main verb *inakyat* 'ascend', and manner by the *pa*-directional *patakbo* 'running'; in (30), by contrast, path is expressed by the *pa*-directional *pa-akyat* 'ascending' and manner by the main verb *tumakbo* 'run'.

Second, the specific types of semantic components depicted in the video clips played a huge role in the choice of a main verb. For manner, RUN was the concept that was most frequently realized as a main verb, followed by SKIP and WALK. For path, UP was more frequently coded in the head position than TO or TO.IN. Last, deixis was never coded by a main verb. Tagalog does have morphologically complex deictic verbs (Section 2.2.3), but such verbs were not attested in the results.

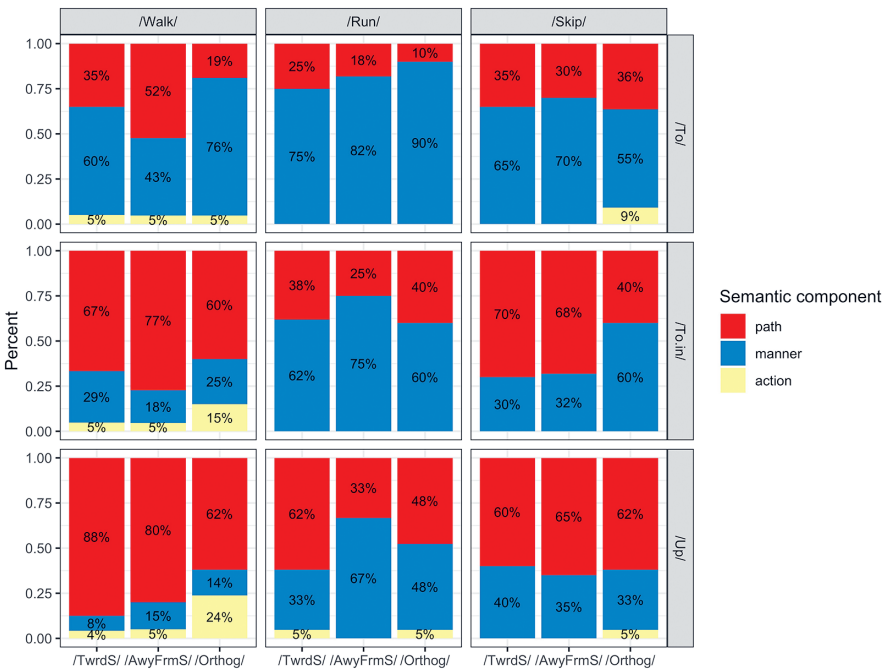

Figure 3: Semantic components in the main verb position.

4.4 Coding strategies of path

Figure 4 represents how path was coded in the descriptions of motion events depicted in each video clip: head, adverbal, or adnominal. In most cases, path was coded either by heads as in (31) or by an adnominal (a head-external element), as in (32).

(31) *Pa-takbo=ng p<um>asok si Pedro sa bahay.*
DIR-run=LK enter<AV> P.NOM Pedro LOC house
'Pedro entered the house running.' (A14_13; /Run-To.in-AwyFrmS/)

(32) *T<um>akbo siya pa-pasok sa pavilion.*
run<AV> 3SG.NOM DIR-enter LOC pavilion
'He ran into the pavilion.' (A14_05; /Run-To.in-AwyFrmS/)

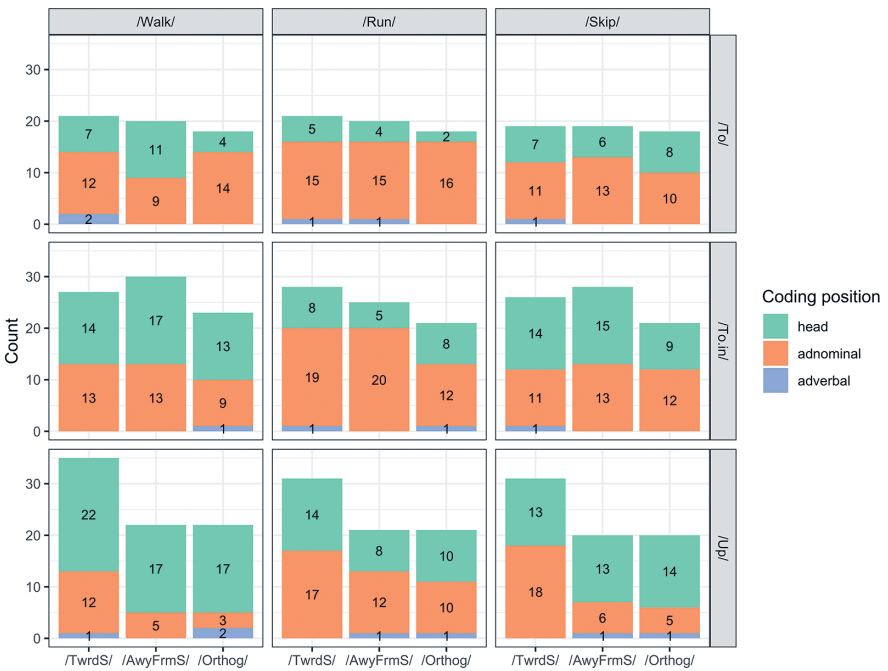

Figure 4: Frequencies of the use of different coding positions of path.

In Figure 4, the total frequency of path expressions for some clips exceeds the number of participants (i.e., 20), because a single motion event description may contain more than one path expression, as in (33), where the path TO.IN is expressed once by the verb *pumasok* 'enter' and again by the locational noun *loob* 'inside'. This type of case also means that a sentence is head path coding and head-external path coding at the same time.

(33) *Ma-saya=ng p<um>asok ang lalaki sa loob ng pavilion.*
ADJ-happy=LK enter<AV> NOM man LOC inside GEN pavilion
'The man entered the inside of the pavilion happily.'
(A18_03; /Skip-To.in-Orthog/)

For the purpose of Figure 4, all the path concepts expressed in the descriptions of each scene were counted. Not only the specific path concept targeted in each video clip (i.e., TO, TO.IN, and UP) but also other path concepts were taken into consideration. For example, consider the response in (34), in which UP was expressed twice and TWRD once.

(34) *<Um>akyat ang aking kaibigan pa-taas ng hagdan*
ascend<AV> NOM 1SG.LOC.LK friend DIR-rise GEN stairs
pa-tungo sa akin.
DIR-go LOC 1SG.LOC
'My friend ascended climbing the stairs (going) toward me.'
(A20_22; /Run-Up-TwrdS/)

The response in (34) contains three path expressions, *umakyat* 'ascend' in the head position and *pataas* 'up/climbing' and *patungo* 'toward/going to' in adnominal positions, all of which were counted in Figure 4.

Importantly, such multiple path coding comes in handy for conveying deictic concepts in Tagalog. Deictic concepts are almost always expressed by demonstrative and personal pronouns in the form of arguments of path verbs or arguments of *pa*-directionals (Section 4.6), and therefore the expression of such concepts frequently leads to the use of a path verb or a path *pa*-directional that otherwise would not be used. As TWRD.S is salient among deictic concepts, this is arguably why the responses to the /TwrdS/ scenes contain more adnominal elements than others (see Section 5.1).

Figure 5 represents the number of path-coding elements per clip. It shows that for each path type, path was usually coded once in an utterance. However, double coding of path, as in (33), occurred frequently in descriptions of /To.in/ and /Up/ path scenes, and /TwrdS/ deixis scenes.

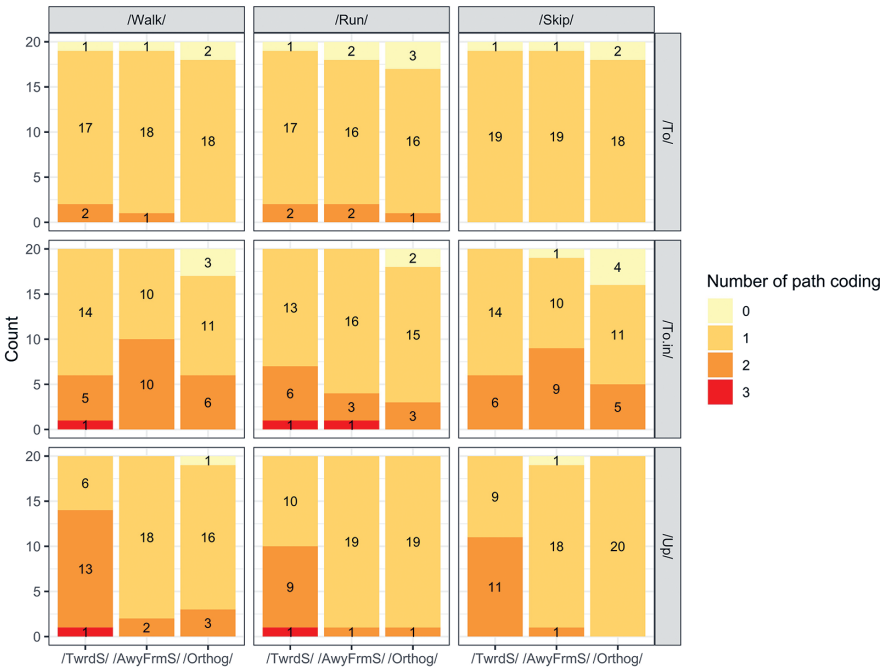

Figure 5: Number of path-coding elements per response.

4.5 Coding strategies of manner

Figure 6 represents how manner was coded in the descriptions of each video clip: head, adverbal, or adnominal. Manner was expressed either by verbs, as in (35), or by adverbals, as in (36) and (37), but it was more frequently coded by the former than by the latter. As already pointed out in Section 4.2, WALK, a highly expected manner of motion, was not as often expressed as RUN or SKIP.

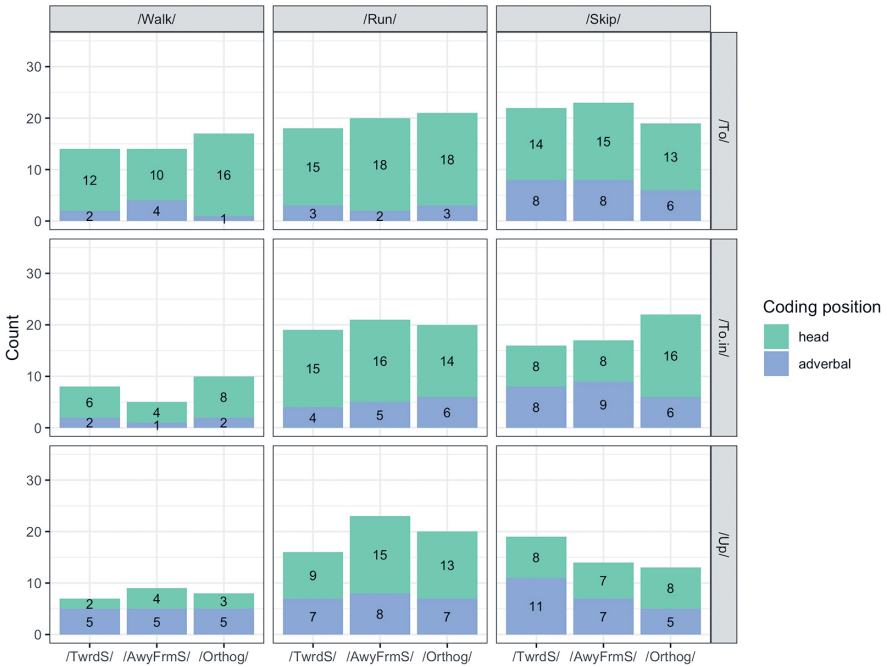

Figure 6: Frequencies of the use of different coding positions of manner.

(35) *T<um>akbo pa-pasok ng pavilion ang lalaki.*
run<AV> DIR-enter GEN pavilion NOM man
'The man ran into the pavilion.' (A14_07; /Run-To.in-AwyFrmS/)

(36) *Pa-talon~talon siya=ng p<um>unta sa akin.*
DIR-jump~jump 3SG.NOM=LK go<AV> LOC 1SG.LOC
'He moved toward me while jumping.' (A07_05; /Skip-To-TwrdS/)

(37) *Ma-saya=ng ni-lapit-an ng kaibigan ko ang bisikleta.*
ADJ-happy=LK RL-approach-LV GEN friend 1SG.GEN NOM bicycle
'My friend approached the bicycle happily.' (A08_10; /Skip-To-AwyFrmS/)

Unlike what is observed in path-coding patterns, multiple coding of manner in a single utterance was rare (Figure 7), but was sporadically observed, as in (38), which contains the manner adverb *mabilis* 'fast' and the manner verb *tumakbo* 'run'.

(38) *Mabilis na t<um>akbo pa-akyat ng hagdan si Pedro.*
fast LK run<AV> DIR-ascend GEN stairs P.NOM Pedro
'Pedro ran fast ascending stairs.' (A23_13; /Run-Up-AwyFrmS/)

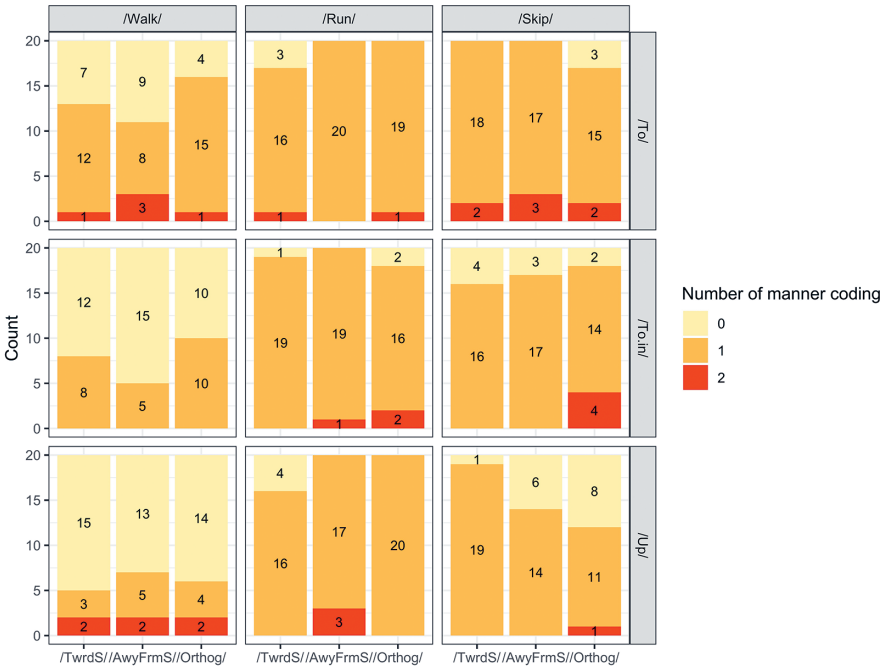

Figure 7: Number of manner-coding elements per response.

4.6 Coding strategies of deixis

Figure 8 represents how deixis was coded in the descriptions of each video clip. Deixis was almost always coded by demonstrative and personal pronouns that occurred as arguments of path verbs, as in (39), or arguments of *pa*-directionals, as in (40). Although available in the lexicon, complex deictic verbs (e.g., *pumarito* 'move hither') were not used.

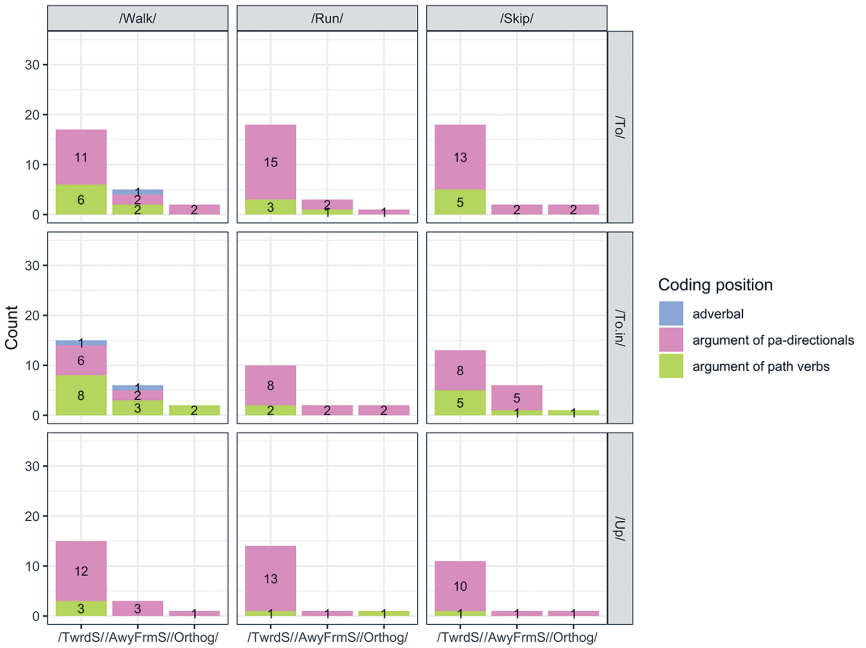

Figure 8: Frequencies of the use of different coding positions of deixis.

(39) *L<um>apit* *sa* *akin* *ang* *kaibigan* *ko.*
approach<AV> LOC 1SG.LOC NOM friend 1SG.GEN
'My friend approached me.' (A01_10; /Walk-To-TwrdS/)

(40) *Nag-lakad* *ang* *aking* *kaibigan* *pa-lapit* *sa* *akin.*
AV.RL-walk NOM 1SG.LOC.LK friend DIR-approach LOC 1SG.LOC
'My friend walked approaching me.' (A01_20; /Walk-To-TwrdS/)

In (39), the deictic expression *sa akin* 'me' appears as an argument of the path verb *lumapit* 'approach'. In (40), the same deictic expression is employed as an argument of the path *pa*-directional *palapit* 'approaching'. In either case, the deictic expression representing a deictic center (i.e., either a demonstrative or a personal pronoun) is employed in combination with the path expression (i.e., a *pa*-directional or a path verb).[15]

15 This means that, in Tagalog, there is no single morpheme for expressing "dynamic deixis" (Lamarre et al. 2022; cf. Matsumoto et al. 2022) and such information is only conveyed by a combination of a deictic expression and a path expression (Yo Matsumoto, pers. comm.).

As pointed out in Section 4.2, deixis was frequently expressed only in the descriptions of /TwrdS/ scenes. Indeed, the responses in (39) and (40) were used for describing /TwrdS/ scenes. In some rare cases, however, deixis in /Orthog/ and /AwyFrmS/ scenes was overtly expressed, as in (41) and (42), respectively.

(41) *Nag-i~skip* *siya* *pa-punta* *doon* *sa* *bike.*
AV.RL-RDP~skip 3SG.NOM DIR-go DEM.DIST.LOC LOC bike
'He is skipping going there to the bike.' (A09_06; /Skip-To-Orthog/)

(42) *P<um>asok* *siya* *sa* *pavilion* *pa~pa-layo* *sa* *akin.*
enter<AV> 3SG.NOM LOC pavilion DIR~RDP-go.away LOC 1SG.LOC
'He entered the pavilion going away from me'
(A17_14; /Skip-To.in-AwyFrmS/)

In (41), the fact that the motion is neither toward nor away from the speaker is indicated by the demonstrative *doon* 'there'. In (42), motion away from the speaker is conveyed by the *pa*-directional expression *papalayo sa akin* 'moving away from me'.

4.7 Summary

This section presented the results of the NINJAL MEDAL Experiment A for Tagalog. It has shown that (i) the Tagalog speakers almost always used simplex construction types for the descriptions of the video clips, (ii) manner and path were both frequently expressed, but deixis was not, (iii) the main verb position was occupied by either a manner verb or a path verb depending on the manner and path types, while deixis was never expressed in that position, and (iv) manner and path were coded in both head and head-external positions, with deixis being coded only head-externally.

5 General discussion

In this section, I discuss three typological issues regarding Tagalog motion event descriptions, focusing on descriptions of self-motion events: the position of Tagalog in the typology of path-coding positions (Section 5.1), individual differences (Section 5.2), the manner contingency of path coding (Section 5.3), and the morphological complexity of motion expressions (Section 5.4).

5.1 Typology of path-coding position

This section examines the position of Tagalog in the typology of path-coding positions. In this typology, motion event descriptions are analyzed in terms of where in a sentence path is coded. A major distinction is drawn between a head path-coding pattern, where path is expressed by the main verb, and a head-external coding pattern, where path is realized by either an adnominal or an adverbal element (Matsumoto 2017, this volume). Crucially, this distinction is not subsumed under the Talmyan typology of conceptual integration (Talmy 2000), which focuses on simplex sentences in which both path and manner are expressed.[16]

The most important finding of this study is that Tagalog exhibits a high degree of intra-linguistic variation in path-coding position. Tagalog does not adhere to any one particular coding pattern, with tendencies in path-coding position depending on path types, manner types, and deixis types, with much individual variation.[17] To investigate the effects of these parameters, mixed-effects logistic regression modeling was undertaken. Head path-coding and head-external path-coding patterns are discussed in Sections 5.1.1 and 5.1.2, respectively.

5.1.1 Head path coding

Mixed-effects logistic regression was undertaken to determine path types, manner types, and deixis types that increased the likelihood of head path coding in the results presented in Section 4. Modeling was carried out using R (R Core Team 2023) and the lme4 package (Bates et al. 2015). As this modeling requires the dependent variable to be binary, path-coding patterns were recategorized as either "path is coded in the head" or "path is not coded in the head". In this coding scheme, responses were regarded as "path is coded in the head" if path was coded only in the head or in the head as well as in a head-external element, and responses were regarded as "path is not coded in the head" if it was expressed in a head-external element only or was not expressed at all. I created a mixed logistic regression

16 Within the Talmyan framework of event integration, Huang and Tanangkingsing (2005: 337) claim that Tagalog is a "pure verb-framing" language on the basis of frequency counts of frog stories.

17 The Tagalog system should be distinguished from a split system of conflation, in which languages employ different patterns for different types of events (Talmy 2000: 64ff). In Spanish, a verb-framing construction is employed for boundary-crossing paths, but a satellite-framing one for other paths (Aske 1989).

model, fitting path-coding positions ("coded in the head" or "not coded in the head") as a function of path types, manner types, and deixis types of video clips with a varying intercept for individual speakers.

Table 3 shows that path types, manner types, and deixis types of video clips influence path coding in descriptions of self-motion events. In particular, path is a very strong predictor of head path coding in Tagalog. There was a reliable effect of /To.in/ and /Up/. The predicted probability of observing a head path-coding pattern is 0.35 in descriptions of /To/ scenes but 0.72 and 0.85 in descriptions of /To.in/ and /Up/, respectively. In other words, the path types UP, TO.IN, and TO show tendencies for head coding decreasing in this order. Interestingly, this pattern is also attested in other languages examined in this volume (see other chapters in this volume). For this reason, this is considered here to be a reflection of a cross-linguistic tendency of path coding.

Table 3: Mixed-effects logistic regression of the effects of video clip types in head path coding.

	Estimate	Std. error	Z-value	*p*-value	Sig.
(Intercept)	–0.5926	0.4286	1.383	0.1667	
Path types					
/To/ (reference level)					
/To.in/	1.5708	0.2778	5.654	1.57e-08	***
/Up/	2.3925	0.2977	8.037	9.19e-16	***
Manner types					
/Walk/ (reference level)					
/Run/	–1.9154	0.2874	–6.664	2.67e-11	***
/Skip/	–0.7354	0.2676	–2.748	0.0060	**
Deixis types					
/Orthog/ (reference level)					
/AwyFrmS/	0.2856	0.2669	1.070	0.2846	
/TwrdS/	0.5362	0.2685	1.997	0.0458	*

'Sig.' refers to statistical significance, where * = p < 0.05; ** = p < 0.01; *** = p < 0.001.

Manner types also play a significant role in influencing path-coding patterns. The predicated probability of head path coding is 0.35 for /Walk/ scenes but 0.07 and 0.20 for /Run/ and /Skip/ scenes, respectively. The Manner types WALK, SKIP, and RUN show tendencies for head coding decreasing in this order. This pattern, which was also observed in other languages investigated in this volume, can be ascribed to the extra-linguistic knowledge that walking is the most unmarked manner of motion for human beings. Tagalog speakers did not bother to code such a highly expected manner of motion in their descriptions, allowing them to instead express path in the head position.

Interestingly, /TwrdS/ scenes had a statistically significant effect of increasing the likelihood of head path coding. The effect of /TwrdS/ is statistically significant and positive (beta = 0.54, 95% CI [9.94e-03, 1.06], p = 0.046). This means that, in these scenes, Tagalog speakers chose to use path verbs more often. This is because, as we observed in Section 4.6, deictic concepts are almost always expressed by demonstrative and personal pronouns in the form of arguments of path verbs or arguments of *pa*-directionals. Descriptions of /TwrdS/ scenes often lead to an increased use of path verbs in the head (and *pa*-directionals in a head-external position; see Section 5.1.2). In this way, deixis types influence path-coding positions. Although deictic expressions themselves were not frequently employed in the results of the experiment, the deictic concept TWRD.S plays a certain role in determining how to express motion events in Tagalog.

5.1.2 Head-external path coding

The same type of mixed-effects logistic regression modeling was undertaken to investigate path types, manner types, and deixis types that increased the likelihood of head-external path coding in the results presented in Section 4. Again, as this modeling requires the dependent variable to be binary, path-coding patterns were recategorized as either "path is coded in a head-external element" or "path is not coded in a head-external element". In this coding scheme, responses were regarded as "path is coded in a head-external element" if path was coded only in a head-external element or in a head-external element as well as in the head, and responses were regarded as "path is not coded in a head-external element" if it was expressed in the head only or was not expressed at all. I created a mixed logistic regression model, fitting path-coding positions ("coded in a head-external element" or "not coded in a head-external element") as a function of path types, manner types, and deixis types of video clips with a varying intercept for individual speakers. The effects of video clip types on head-external path coding are summarized in Table 4.

Table 4 shows that there were reliable effects of /Up/, /Run/, and /TwrdS/ on head-external path coding in the results of the experiment. On the one hand, the effect of /Up/ was statistically significant and negative (beta = -0.87, 95% CI [-1.35, -0.39], p < .001). This means that head-external path coding tends to be avoided in descriptions of /Up/ scenes. This is understandable from the above-mentioned cross-linguistic tendency for the path UP to be coded in the main verb position rather than in head-external positions (Section 5.1.1).

On the other hand, /Run/ and /TwrdS/ increased the likelihood of head-external path coding for the same reasons as we have already discussed with regard to head path coding in Section 5.1.1. The manner RUN can be considered the most salient

of the manners examined in this experiment. It is more likely to be coded in the main verb position, which forces path to be coded in head-external positions (e.g., *pa*-directionals).

By contrast, descriptions of the TWRD.S concept require the use of demonstrative and personal pronouns in the form of arguments of path verbs or arguments of *pa*-directionals, thus often resulting in an increased use of *pa*-directionals (i.e., head-external path-coding elements) as well as path verbs.

Table 4: Mixed-effects logistic regression of the effects of video clip types in head-external path coding.

	Estimate	Std. error	Z-value	*p*-value	Sig.
(Intercept)	0.10607	0.33056	0.321	0.74831	
Path types					
/To/ (reference level)					
/To.in/	–0.33023	0.24490	–1.348	0.17753	
/Up/	–0.86963	0.24472	–3.554	0.00038	***
Manner types					
/Walk/ (reference level)					
/Run/	1.17960	0.25107	4.698	2.62e-06	***
/Skip/	0.16513	0.23408	0.705	0.48053	
Deixis types					
/Orthog/ (reference level)					
/AwyFrmS/	0.08498	0.23737	0.358	0.72034	
/TwrdS/	0.73826	0.24572	3.004	0.00266	**

'Sig.' refers to statistical significance, where * = p < 0.05; ** = p < 0.01; *** = p < 0.001.

5.2 Individual differences

In Section 5.1, it was argued that the position of Tagalog in the typology of path-coding positions is variable. It varies according to path type, manner type, and deixis type. In addition, there is variation among speakers regarding path-coding positions. In this experiment, different speakers chose head path coding with different frequencies, as shown in Figure 9. For instance, Speaker 3 consistently coded path in the head position. By contrast, Speakers 4 and 7 both excluded path from the head position 23 times in their respective responses to 27 video clips. Other speakers expressed path in the head position with varying degrees of preference. Individual variation is also observed regarding head-external path-coding patterns, as in Figure 10.

This variation is totally understandable considering the morphosyntactic fluidity of motion expressions in Tagalog (Section 2.2). In this language, both head- and head-external path-coding patterns are equally grammatical and readily available for describing different kinds of motion events. In other words, there is no grammatical factor for choosing one construction over another, resulting in such between-speaker differences. Thus, it may appear that Tagalog speakers did not have a consistently preferred strategy between head path coding and head-external path coding for expressing the motion events depicted in the video clips in this experiment. See Montero-Melis (2021) for the role of differences among speakers in describing motion events.

A natural question to ask is whether the effect of path type, manner type, and deixis type still holds after controlling for preferences of individual participants. In order to see if these effects remain evident, I included speaker variation as random effect in the models I created in Sections 5.1.1 and 5.1.2. The models tell us that, despite the variation observed between speakers, the effects of the video clip types are statistically significant.

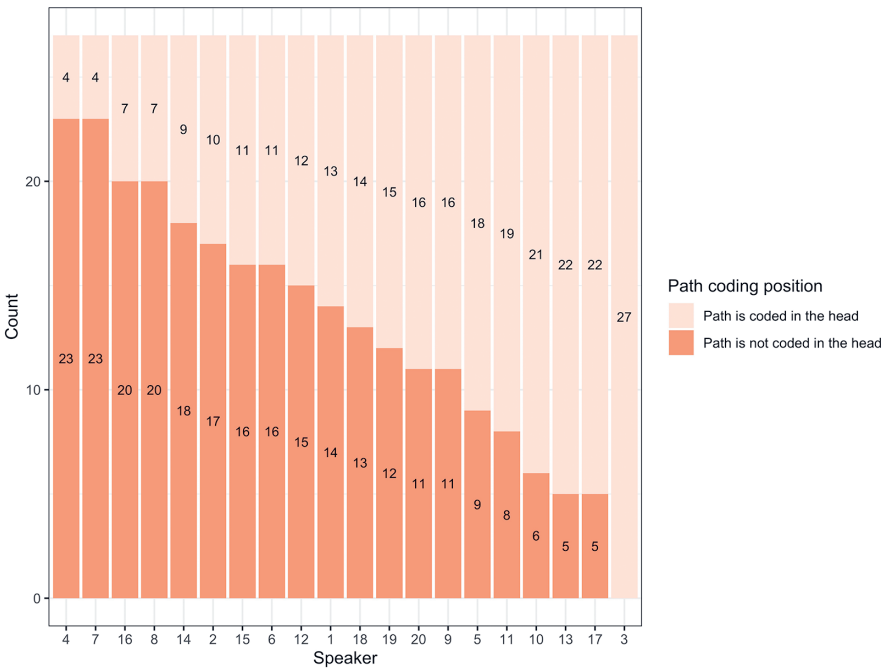

Figure 9: Path-coding position broken down by speakers (head path coding).

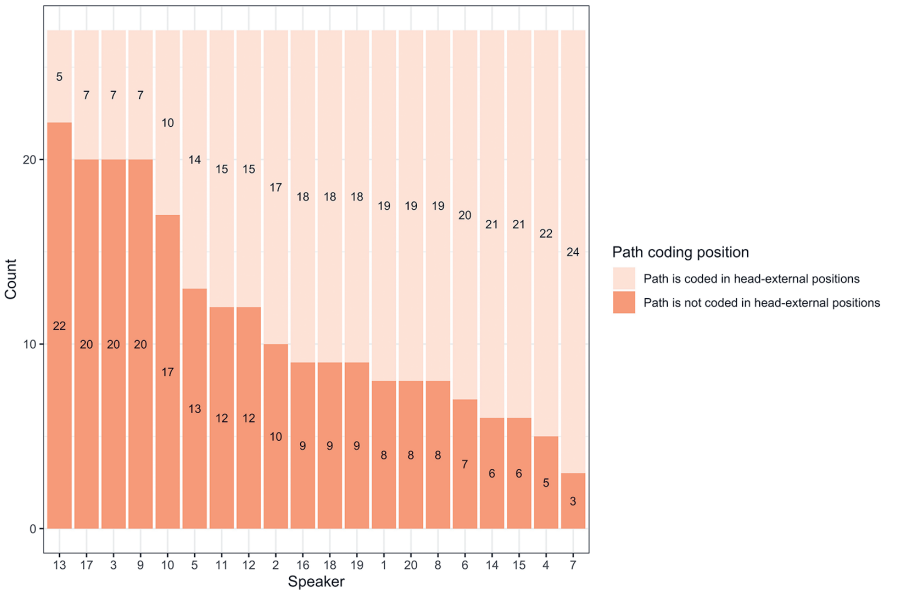

Figure 10: Path-coding position broken down by speakers (head-external path coding).

5.3 Manner contingency of path coding

Another important finding in the results of the experiment is that Tagalog exhibits what I call the manner contingency of path coding. This refers to the observation that the position of path coding is contingent on the availability of manner within the same clause: head coding of path is strongly preferred when there is no manner expression in the same sentence but is dispreferred when manner is expressed within the same sentence.[18] To illustrate, consider the examples in (43) and (44), which were used to describe the same video clip.

(43) *P<um>asok* *siya* *sa* *pavilion.*
enter<AV> 3SG.NOM LOC pavilion
'She entered the pavilion.' (A12_05; /Walk-To.in-Orthog/)

18 Matsumoto and Kahumburu (this volume) report that Swahili also exhibits what I call the manner contingency of path coding. This suggests that this feature is not a language-specific idiosyncrasy but can possibly be a cross-linguistic tendency.

(44) *Nag-lakad ang babae pa-pasok sa silungan.*
AV.RL-walk NOM woman DIR-enter LOC gazebo
'The woman walked into the gazebo.' (A12_11; /Walk-To.in-Orthog/)

The path base *pasok* occupies the main verb position when manner is not expressed in (43). In contrast, it appears as a *pa*-directional when manner is expressed in the main verb position in (44).

Figure 11[19] presents the frequencies of head path-coding patterns correlating with the availability of manner expressions within the same clause. In Figure 11, the position of path coding and availability of a clause-mate manner expression are presented relative to all combinations of manners and paths. It can be observed in every panel that patterns without head path coding ("not coded in the head") were preferred in the presence of clause-mate expressions of manner, while patterns with head path coding ("coded in the head") were almost invariably employed in

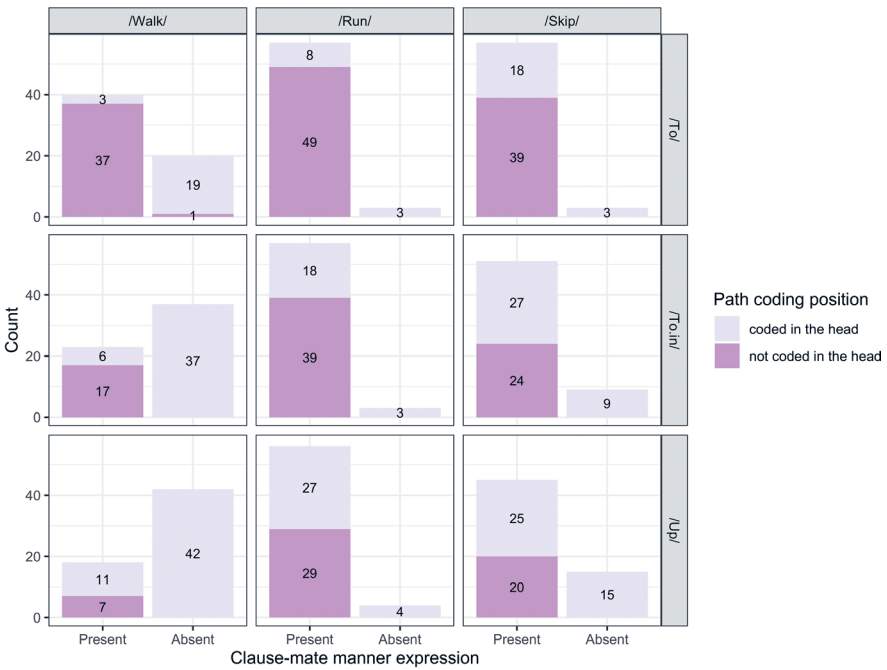

Figure 11: Manner contingency of path coding.

19 Note that we are only concerned with the distinction between head path coding patterns ("coded in the head") and the other patterns ("not coded in the head"). The latter category includes responses that lack a path expression in addition to responses only with a head-external path element.

the absence of a clause-mate manner expression. This tendency remains mostly constant across different path types and manner types.

5.4 Deixis and morphological complexity

In the results of the experiment, deixis was only frequently expressed in the descriptions of the /TwrdS/ scenes and was rarely expressed in descriptions of other scenes (Section 4.2).[20] When deixis was expressed, it was by means of demonstrative and personal pronouns as arguments of path verbs and *pa*-directionals (Section 4.6). In other words, deixis tends to be expressed in head-external positions when it involves movement toward the speaker. This observation makes Tagalog stand in contrast to other languages of Asia, such as Chinese, Japanese, Korean, Mongolian, Newar, and Thai, in which deixis is often coded by main verbs. Tagalog is also different from Ilokano, another Philippine-type language, which allows for a limited yet established use of deictic verbs (Yamamoto, this volume).

Certainly, this result can be correlated with the lack of morphologically simple deictic verbs (Section 1). Although such verbs are almost universal in the languages examined in this volume, Tagalog lacks them. The rare use of deictic expressions is understood to reflect a poor linguistic repertoire that this language has for this semantic component. Considering the well-known fact that certain languages (e.g., Russian) have only a few path verbs in their lexicon and prefer a head-external path-coding pattern (Matsumoto, this volume), it may not be surprising at all that Tagalog does not have a morphologically simple deictic verb and only allows head-external coding of deixis.

In addition to the absence of simple deictic verbs in the lexical inventory, another factor to consider in accounting for the low frequency of deictic expressions could be the morphological complexity of relevant expressions. As discussed in Section 2.2.3, Tagalog does have morphologically complex deictic verbs (e.g., *p<um>a-rito* 'come, move hither' and *p<um>a-roon* 'go, move tither'). These verbs could have been used instead of demonstrative or personal pronouns with path verbs/*pa*-directionals in the /TwrdS/ context, but such verbs were never attested in the results of the experiment. I suggest that this is at least partially because of morphological complexity. Tagalog speakers did not bother to use

20 Wälchli (2009: 261) reports that *p<um>arito* 'come, move toward here' is a low frequency verb in his study on motion event descriptions in Bible translations.

morphologically complex deictic expressions when simpler path and manner verbs were available.

This analysis can be supported by data of certain types of path expressions involving conformation (Section 2.2.1). For example, while *loob* 'inside' can be used as an adnominal element by itself, it can also be employed to derive the *pa*-directional *pa-loob* '(to the) inside' and the morphologically complex verb *p<um>a-loob* 'enter'. Among these expressions, it was the construction employing the noun *loob* that was often employed. In contrast, the *pa*-directional *paloob* appeared only twice and the verb *pumaloob* never occurred in the results of the experiment. This may suggest that in the experimental context, the use of morphologically complex forms was dispreferred when simplex forms are available.

Thus, the rare use of deictic expressions in Tagalog can be considered to involve an interplay of the language-particular features of the linguistic repertoire and the tendency to avoid morphologically complex expressions in the speech genre elicited in the experiment.

6 Conclusions

This chapter presented a typologically informed analysis of descriptions of self-motion events in Tagalog by examining data from Experiment A developed in the NINJAL MEDAL project. The main finding of this chapter is that Tagalog displays a high degree of intra-linguistic variation in the typology of path-coding positions: Tagalog motion event descriptions can be either head path coding or head-external path coding depending on path types, manner types, and deixis types, with much individual variation.

It was further argued that this stochastic nature of path-coding strategies in Tagalog is related to several factors: the morphosyntactic fluidity of motion expressions, the cross-linguistic tendency of path and manner coding, the manner contingency of path, and the morphological complexity of motion expressions.

Abbreviations

1	first person
3	third person
ADJ	adjective
AV	actor voice
CV	circumstantial voice

DEM	demonstrative
DIR	directional
DIST	distal
GEN	genitive
LK	linker
LOC	locative
LV	locative voice
MED	medial
NAV	non-actor voice
NOM	nominative
P	personal name
PL	plural
PROX	proximal
PV	patient voice
RDP	reduplication
RL	realis
SG	singular

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