

Patrick Nuhn

**Ay-Inversion in Tagalog**

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Patrick Nuhn

# Ay-Inversion in Tagalog

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# List of Abbreviations

<b>AFD</b>	actual focus domain
<b>AVM</b>	attribute value matrix
<b>CG</b>	common ground
<b>CSP</b>	case particle
<b>DCA</b>	direct core argument
<b>GCG</b>	general common ground
<b>ICG</b>	immediate common ground
<b>LDP</b>	left detached position
<b>NMR</b>	non-macro-role argument
<b>NP</b>	noun phrase
<b>NPFP</b>	noun phrase final position
<b>NPIP</b>	noun phrase initial position
<b>OFD</b>	obligatory focus domain
<b>PFD</b>	potential focus domain
<b>PoCS</b>	Post-Core Slot
<b>PP</b>	prepositional phrase
<b>PrCS</b>	Pre-Core Slot
<b>PSA</b>	privileged syntactic argument
<b>QUD</b>	question under discussion
<b>RDP</b>	right detached position
<b>RP</b>	reference phrase
<b>RRG</b>	Role and Reference Grammar
<b>SAP</b>	speech-act-participant



# List of Glosses

ABIL	abilitative
ACC	accusative
ACT	actor
APPL	applicative
AV	actor voice
Q	question marker
CAUS <sub>PA</sub>	causative prefix <i>pa-</i>
CAUS <sub>KA</sub>	causative voice (prefix <i>ka-</i> with undergoer-voice prefix <i>i-</i> )
COMP	complementizer
CNJ	conjunctive mood
CONJ	conjunction
DAT	dative
HSY	hearsay
DEM	demonstrative
DIR	directional
DIST	distal
DR	different referent
EXCL	exclusive
EXIST	existential, “there is”
GEN	genitive
GER	gerund
HON	honorific
INCL	inclusive
INF	infinitive
INT	intensive
INV	inversion marker
IPFV	imperfective
LK	linker
MED	medial
N	non-
NEG	negation
NOM	nominative
NPI	negative polarity item
OBV	obviative
PL	plural
PROX	proximal
PST	past

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PTCL	particle
RLS	realis
RPFV	recent perfective
SEQ	sequential
SG	singular
SOC	social verb
SR	same referent
STAT	stative
STEM	addition to stem ( <i>pag-</i> , <i>pang-</i> , <i>ka-</i> etc.)
SUBL	sublative
TOP	topic
UG	undergoer
UV	undergoer voice

# 1 Introduction

In this dissertation, we will explore several aspects of the interface between morphosyntax and information structure in Tagalog, in which the so-called *ay*-inversion construction (Schachter and Otones 1972:485–493) will play a central role. This construction involves a left-displaced constituent that is set off from the remainder of the sentence by the inversion marker *ay* and has been said to mark the displaced element as topical, although cases have been noted where the fronted element was in focus ( $\approx$  new information) (Kroeger 1991:67; Latrouite and Riestler 2018:268). We will begin here with a brief overview of some essential points of Tagalog grammar before giving an overview of the goals and the structure of this dissertation in section 1.2.

## 1.1 Tagalog Essentials

Tagalog is an Austronesian language, more specifically a Western Malayo-Polynesian language, that is native to the Philippines. It has around 24 million native speakers (Simons and Fennig 2018) world wide with the highest density in the Metro-Manila area located around the Philippines' Capital, Manila, on its northern Island Luzon. The language presumably originated in the eastern Visayas or northeast Mindanao (see map in Fig. 1.1<sup>1</sup>), but Tagalog speakers had settled in Luzon by the time the Spanish arrived in the Philippines in 1521 (Schachter and Reid 2008). In 1937 Tagalog was adopted as the national language of the Philippines for several reasons (Aspillera 2007): First, it was the language of the economic center of the country, Manila, and was also the most widely spoken and understood language in the Philippines. Furthermore, it also had the richest literary tradition among the Philippine languages and was considered the language of the 1896 revolution. The national language was renamed to *Pilipino* in 1959 and *Filipino* in 1987 in an attempt to give it a national rather than an ethnic connotation. The '*f*' in *Filipino* also reflected the 'universalist approach' (Gonzalez 1998:487-488) to establishing a national language by including loanwords from English and Spanish as well as vocabulary items from other Philippine languages, and with that also enlarging the phoneme inventory: /f/ was not originally a Tagalog phoneme and to this day is not found in native Tagalog words, while it has phoneme status in other languages spoken in Luzon and of course in English and

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<sup>1</sup> Source: [https://commons.wikimedia.org/w/index.php?title=File:Map\\_of\\_the\\_Philippines\\_Demis.png&oldid=457796978](https://commons.wikimedia.org/w/index.php?title=File:Map_of_the_Philippines_Demis.png&oldid=457796978), last visited on 2021-07-27. Public domain, labels added by author.



**Fig. 1.1:** Map of the Philippines

Spanish. “Under the name of *Filipino*, *Tagalog* is now taught in schools throughout the Philippines”, as Schachter and Reid (2008:833) put it, which underlines how close Tagalog and Filipino are. Glottolog (Hammarström et al. 2020) even lists *Filipino* as an alternative name for *Tagalog*.

### 1.1.1 Phonology and Writing System

Tagalog’s sound system is typical for Western Austronesian languages<sup>2</sup>. With its 16 consonants and 5 vowels, it has a fairly simple sound inventory with a simple

---

<sup>2</sup> See Himmelmann (2005) for a typological overview of the western (i. e. non-Oceanic) Austronesian languages.

syllable structure to match. The modern writing system is fairly straightforward as it is largely phonemic.

### 1.1.1.1 Consonant Inventory

The consonant phonemes found in Tagalog are listed in Table 1.1 together with their orthographic representations. The bilabial, dental<sup>3</sup> and velar stops come in voiceless/voiced pairs and each have a matching nasal. The voiceless stops are generally not aspirated. Two aspects of pronunciation that can be particularly challenging for language learners are word-initial velar nasals, as in /ŋajon/ ‘now’, or word-final glottal stops as in the following minimal pair:

(1) **Ramos and Cena (1990:2)**

/ba:taʔ/ ↔ /ba:tah/  
 child          bathrobe

Both word-final /h/ and /ʔ/ are often dropped if they are not at the end of a phonological phrase. Only ʔ is replaced by compensatory lengthening of the preceding vowel, thus upholding the contrast between the two phonemes.

According to Schachter and Reid (2008:25), [d] and [r] were probably allophones of a single phoneme in previous stages of the language. Now, they are both independent phonemes in their own right with minimal pairs such as

**Tab. 1.1:** Consonant inventory of Tagalog as discussed by Schachter and Reid (2008:835)

	bilabial	alveolar/dental	palatal	velar	glottal
<b>plosive</b>	p b ⟨p, b⟩	t̪ d̪ ⟨t, d⟩		k g ⟨k, g⟩	ʔ ⟨-, ∅⟩
<b>nasal</b>	m ⟨m⟩	n ⟨n⟩		ŋ ⟨ng⟩	
<b>fricative</b>	(f v) ⟨f, v⟩	s ⟨s⟩			h ⟨h, ∅⟩
<b>affricate</b>		(tʃ dʒ) ⟨ts, dy⟩			
<b>tap</b>		r ⟨r⟩			
<b>approximant</b>	w ⟨w⟩	l ⟨l⟩	j ⟨y⟩		

<sup>3</sup> Notice that /t/ and /d/ are dental rather than alveolar.

/maramda:min/ ‘sensitive’ and /madamda:min/ ‘moving’. However, intervocalic /d/ often becomes [r] – sometimes the change is obligatory, sometimes optional and sometimes d is obligatorily retained.

The bilabial fricatives [f] and [v] and the affricates [tʃ] and [dʒ], though fairly common, are not generally accepted as Tagalog phonemes because they do not occur in native Tagalog words (Schachter and Reid 2008:834).

### 1.1.1.2 Vowel Inventory

The five vowels of contemporary Tagalog are shown in Table 1.2 together with the seven diphthongs. The vowel system developed from a three-vowel system, in which [i] and [e] were allophones of a single phoneme, as were [u] and [o] (Schachter and Otones 1972:8). Now they have become phonemes that distinguish not only loanwords but even minimal pairs of native vocabulary:

(2) **Schachter and Reid (2008:834)**

/ʔi:wan/ ↔ /ʔe:wan/  
to leave      to not know

There is, however, still a considerable amount of alternation between the mid and the high vowels. Mid vowels are often raised to high vowels in non-phrase-final positions or when preceding certain suffixes. In word-final syllables at the end of a phonological phrase, /i/ is often realized as [e].

### 1.1.1.3 Stress vs. Vowel Length

There is a close relationship in Tagalog between vowel length and stress with disagreeing analyses whether the language has phonemic length or stress. Assuming vowel length is phonemic, then all phonemically long vowels are stressed (Schachter and Reid 2008:835). Conversely, if one assumes that stress is the contrastive feature, then all stressed syllables have long vowels unless they are word-final (Ramos and Cena 1990:11). Since neither stress nor vowel length is normally

**Tab. 1.2:** Vowel and diphthong inventory of Tagalog (Schachter and Otones 1972:6,14–15)

monophthongs			diphthongs			
	front	back	fronting		backing	
high	i	u	ɨ	ɨ	ɨ	high
mid	e	o	eɨ	oɨ	eɨ	mid
low		a	aɨ	aɨ		low



represented orthographically and they play no significant role in this thesis, we will not go into further details. For an in depth discussion, see e. g. Schachter and Otones (1972:15–17, 55–56), Ramos and Cena (1990:11-12), Schachter and Reid (2008), and references therein.

#### 1.1.1.4 Writing System

As mentioned above, the Tagalog writing system is largely phonemic with most phonemes represented by a single grapheme as shown in Table 1.1 for the consonants. The vowels are written as ⟨*a, e, i, o, u*⟩, respectively, and the diphthongs as a combination of a vowel and one of the glides ⟨*y, w*⟩. Only the affricates and the velar nasal are represented by digraphs. The only two phonemes that are not consistently represented are /h/ and the glottal stop /ʔ/ – the latter is actually not directly represented at all. In word-final position, neither /h/ nor /ʔ/ are represented orthographically. Thus, both words in example (1) are spelled ⟨*bata*⟩ and the intended meaning and with it the correct pronunciation must be derived from context. Word-initial and intervocalic glottal stops are not represented at all. Thus, words that are spelled with an initial vowel, always begin in a glottal stop and words spelled with adjacent vowels are pronounced with an intervening glottal stop. Thus, ⟨*aso*⟩ ‘dog’ is pronounced [ʔa:soh] with an initial glottal stop, and ⟨*maaari*⟩ ‘possible’ is pronounced [maʔaʔariʔ] with glottal stops intervening between each pair of vowels. If a stem-initial glottal stop is preceded by a prefix that ends in a consonant, a hyphen is used to indicate the morpheme boundary and show that there is a stem-initial /ʔ/ to be pronounced:

(3) **Ramos and Cena (1990:2)**

⟨ <i>maginaw</i> ⟩	↔	⟨ <i>mag-inaw</i> ⟩
/ma.gi.naw/		/mag.ʔi.naw/
chilly, cold		to soak in

In ⟨*maginaw*⟩ we have the stative prefix *ma-* before the root word /*ginaʊ*/ ‘chill’. The hyphen in ⟨*mag-inaw*⟩ alerts the reader that the root word is /ʔinaʊ/ ‘soak’ and the ⟨*g*⟩ is actually part of the prefix.

One more notable exception from the otherwise fairly consistent spelling are two function words: the first is the plural marker spelled ⟨*mga*⟩, which is a proclitic that is pronounced /maŋa/ and the second is the genitive case marker ⟨*ng*⟩, also proclitic, which is pronounced /naŋ/.

### 1.1.2 Basic Sentence Structures

Tagalog is quite uncontroversially a predicate-initial language. Schachter and Reid (2008:837) clarify that this is meant both in terms of frequency and markedness: “*in the most common and basic type of clause, words or phrases that express predicates precede words or phrases that express arguments.*” The following examples show a few simple Tagalog sentence structures:

(4) **adapted from Ramos and Cena (1990:25–38)**

- |                                                                                                     |   |                                   |                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------------------------------------|---|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>a. <i>Ngumiti</i><br/>smiled<br/><i>Maganda</i><br/>beautiful<br/><i>Doktor</i><br/>doctor</p>   | } | <p><i>si=Sue.</i><br/>NOM=Sue</p> | <p>d. <i>Umuulan.</i><br/>raining<br/>It is raining.<br/>e. <i>Si=Sue ang=ngumiti.</i><br/>NOM=Sue NOM=smiled<br/>The one who smiled was Sue.<br/>f. <i>Nahulog ang=nasa=kusina.</i><br/>fell NOM=be.at=kitchen<br/>The one in the kitchen fell.</p> |
| <p>Sue smiled / is beautiful / a doctor.</p>                                                        |   |                                   |                                                                                                                                                                                                                                                      |
| <p>b. <i>Nasa=kusina ang=relo.</i><br/>be.at=kitchen NOM=clock<br/>The clock is in the kitchen.</p> |   |                                   |                                                                                                                                                                                                                                                      |
| <p>c. <i>Bumili si=Sue ng=saging.</i><br/>bought NOM=Sue GEN=banana<br/>Sue bought a banana.</p>    |   |                                   |                                                                                                                                                                                                                                                      |

As demonstrated in (a), not only verbs can function as predicates in Tagalog and no copula or auxiliary is required. In (b), we have a construction used in Tagalog to specify the location of an entity using what Schachter and Otones (1972:254) calls a *locative adjective phrase* as a predicate. Example (c) shows a transitive construction. The order of the post-verbal arguments is relatively free<sup>4</sup>, although a tendency for the nominative-argument to appear last, is noted (Schachter and Reid 2008:837, Billings 2005). Two explanations that have been offered for deviations from this pattern are 1. optional clisis of an nominative-marked actor (Billings 2005) due to its topicality, and 2. a preference to realize a contrasted or focal phrase at the end of the sentence for prosodic reasons (Kaufman 2005).

In (d), we see an intransitive verb used by itself as a full sentence. Unlike English, Tagalog does not use expletive pronouns in such constructions. Finally,

<sup>4</sup> The exception of course being arguments coded by clitic pronouns (see below).

comparing (e) and (f) to (a) and (c), reveals that the expressions that appeared as predicates before, are now used as referring expressions by simply adding a case marker. This is only one example of how Tagalog sometimes blurs the line between the classical lexical categories. In fact, it is debated whether there is a meaningful distinction between nouns and verbs at all (see Himmelmann 2008 for a detailed discussion). Thus, when I discuss what would normally be called ‘nominal’ and ‘verbal’ morphology in the following two sections, I will use the more general term ‘referring expression’ in place of ‘noun’. Following Himmelmann’s (2008:26) suggestion, I will continue to use the term ‘verb’, but with the clarification that it is meant in the sense of Himmelmann’s V-word or voice-marked word.

### 1.1.3 Morphology for Referring Expressions

For referring expressions, Tagalog has a three-way case distinction which is marked using the case-marker proclitics shown in Table 1.3. A separate set of case-markers (shown in the second and third column of Tab. 1.3) is used before personal nouns, i. e. names of human beings or pets, certain kinship terms and occupations (Schachter and Otnes 1972:87–94).

Tab. 1.3: Overview of Tagalog case markers

	common nouns	personal nouns (SG)	personal nouns (PL)
<b>nominative</b>	<i>ang=</i>	<i>si=</i>	<i>sina=</i>
<b>genitive</b>	<i>ng=</i>	<i>ni=</i>	<i>nina=</i>
<b>dative</b>	<i>sa=</i>	<i>kay=</i>	<i>kina=</i>

This set of case markers includes a number distinction with separate forms for singular and plural. This is absent from the regular case markers *ang*, *ng*, and *sa*, which are used for common nouns. Plural marking is often optional, but can be made explicit with the plural marker *mga*, which is sandwiched between the case marker and the referring expression.

Different labels are used within the literature for the three cases: supporters of the ergative-analysis of the Tagalog alignment system label the cases as *absolute*, *ergative*, and *dative/locative* (e. g. Nolasco 2005; Schachter and Reid 2008; Nagaya 2012), others use *subject*, *non-subject*, and *oblique* (Dery 2007). We will use the labels *nominative*, *genitive*, and *dative* here, following Kroeger (1991) and Latrouite (2011).

The personal pronouns also come in three case forms, which are shown in Table 1.4. The nominative pronouns can occur independently or as second position clitics. The corresponding forms are homophonous except for the second person singular *ikaw*, which becomes *ka* when used as a clitic.

**Tab. 1.4:** Overview of Tagalog pronouns

	nominative indep.	nominative clitic	genitive clitic	dative indep.
1SG	<i>ako</i>	<i>=ako</i>	<i>=ko</i>	<i>akin</i>
2SG	<i>ikaw</i>	<i>=ka</i>	<i>=mo</i>	<i>iyong</i>
3SG	<i>siya</i>	<i>=siya</i>	<i>=niya</i>	<i>kanya</i>
1PL.INCL	<i>tayo</i>	<i>=tayo</i>	<i>=natin</i>	<i>atin</i>
1PL.EXCL	<i>kami</i>	<i>=kami</i>	<i>=namin</i>	<i>amin</i>
2PL	<i>kayo</i>	<i>=kayo</i>	<i>=ninyo</i>	<i>inyong</i>
3PL	<i>silang</i>	<i>=silang</i>	<i>=nila</i>	<i>kanila</i>

The genitive pronouns are always clitics. When they are used to indicate possession, they cliticize to the referring expression denoting the possessum. When the clitic pronouns are used as arguments, they occur in the second position of the clause. There, they have a fixed order:

(5) **Schachter and Otones (1972:184,412)**

monosyllabic > non-pronominal > disyllabic  
pronouns > clitics > pronouns

Monosyllabic pronouns precede disyllabic ones and the other second position clitics are sandwiched in between. These include discourse particles and honorifics. An overview is given in chapter 5 (see Table 5.1), where we will revisit the subject of where clitics appear. There is also a portmanteau form *=kita*, which occurs in place of the combination *\*=ko=ka* ‘=1SG.GEN=2SG.NOM’.

The dative pronouns are special in that they usually occur in combination with the case marker *sa*, while the other pronouns are not compatible with their respective case markers. The bare dative pronouns, i. e. without the case marker *sa*, can also be used to mark possession, thus ‘my pencil’ can be both

(6) **Schachter and Otones (1972:136)**

*lapis=ko* or *akin-g lapis*  
pencil=1SG.GEN 1SG.DAT-LK pencil  
my pencil

In contrast to the genitive pronouns, however, the dative pronouns must precede the referring expression they modify. The *-g* glossed ‘LK’ in the example above is an allomorph of the linker *na*, which occurs between modifier and modificatum. When the preceding word ends in /n, h, ʔ/ (the latter two represented orthographically as a word-final vowel), the linker takes the form /-ŋ/ and replaces the word-final consonant. Other modifiers, such as adjectives or relative clauses, can precede or follow the expressions they modify (Schachter and Otnes 1972:122–123) – unlike the possessive construction, without change in form:

- (7) *ang=malaki-ŋ bahay* or *ang=bahay na malaki*  
 NOM=big-LK house NOM=house LK big  
 the big house
- (8) *ang=[binili=ko-ŋ] bahay* or *ang=bahay na*  
 NOM=bought.UV=1SG.GEN-LK house NOM=house LK  
 [binili=ko]  
 bought.UV=1SG.GEN  
 the house that I bought

Notice how the linker occurs between the modifier and the noun *bahay* ‘house’ independent of their order. Following *malaki* ‘big’ and the pronoun *ko*, it takes the form /-ŋ/ and attaches to the clitic pronoun *ko* ‘1SG.GEN’, while the allomorph *na* appears after *bahay* ‘house’. Besides *na*, Tagalog has another linker *nang*, a homophone of the case marker *ng*, which introduces adverbial modifiers.

Tagalog has three series of demonstrative pronouns, shown in Table 1.5, that function quite similar to the Japanese system. The proximal series denotes referents near the speaker, the medial series referents near the addressee, and the distal series is used for referents that are far away from both speaker and addressee.

**Tab. 1.5:** Tagalog demonstrative pronouns

	nominative	genitive	dative
<b>proximal</b>	<i>ito</i>	<i>nito</i>	<i>dito</i>
<b>medial</b>	<i>iyang</i>	<i>niyang</i>	<i>diyang</i>
<b>distal</b>	<i>iyon</i>	<i>niyon</i>	<i>doon</i>

A fourth series *ire*, *nire*, *dine* is mentioned by Schachter and Otnes (1972:91–92). Though already falling out of use at the time, they were used by some speakers for referents in direct contact to the speaker’s body, while others used them interchangeably with the proximal demonstratives.

The nominative demonstratives can also be used as demonstrative modifiers in combination with the linker. They can precede or follow the expression they modify:

- (9) **Schachter and Otones (1972:120)**
- a. *Mahal ang=damit na ito.*  
 expensive NOM=dress LK DEM.PROX.NOM  
 THIS dress is expensive.
- b. *Mahal ito-ng damit.*  
 expensive DEM.PROX.NOM-LK dress  
 This DRESS is expensive.

As indicated by the use of small caps, the two word orders differ slightly in meaning. The version in (a) the demonstrative has a contrastive sense as though the speaker would follow up with “...*but that dress is cheap.*”, while contrast is on the dress in (b) suggesting a continuation like “...*but that hat is cheap.*”

#### 1.1.4 Verbal Morphology

##### 1.1.4.1 Voice

One of the most prominent features of Philippine-type languages in general and Tagalog in particular is the elaborate voice system. A voice affix on the verb cross-references the semantic role of the *ang*-marked, i. e. nominative-marked, argument. With its five basic voice affixes – *m*<sup>-5</sup>, *<um>*, *-in*, *i-*, *-an* – the voice system can target a variety of arguments as shown in the following examples:

- (10) **Foley and Van Valin (1984:63)**
- a. *B<um>ili ng=isda sa=bata ang=lalaki.*  
 <AV.RLS>buy GEN=fish DAT=child NOM=man  
 The man bought some fish from the child.
- b. *B<in>ili-∅ ng=lalaki sa=bata ang=isda.*  
 <RLS>buy-UV<sub>in</sub> GEN=man DAT=child NOM=fish  
 The man bought the fish from the boy.

---

5 We count *m*- following Schachter and Reid (2008). Klimenko and Endriga (2016:485) or De Guzman (1978) don't count *m*- as a separate voice marker because they analyze it as the result of a contraction process of the infix *<um>* with stem forming affixes, such as *pag-* and *pang-*:

*p<um>ag-* → *mag-*  
*p<um>ang-* → *mang-*

- c. *B<in>ilh-an ng=lalaki ng=isda ang=bata.*  
 <RLS>buy-UV<sub>an</sub> GEN=man GEN=fish NOM=child  
 The man bought some fish from the child.

While the propositional content of the sentence stays (nearly) identical, each of the examples above has a different *ang*-marked argument: the actor<sup>6</sup> in (a), the theme in (b), and the source in (c). Additionally, the basic voice affixes can be combined with other affixes to create even more voice forms that target non-core arguments:

(11) **Schachter and Otones (1972:310, 321)**

- a. *I-pag-lu~luto=ko ng=pagkain si=Maria*  
 UV<sub>i</sub>-STEM-IPFV~cook=1SG.GEN GEN=food NOM=Maria  
 I will cook some food for Maria.
- b. *I-p<in>am-pa~pa-tulog ng=duktor ng=pasyente*  
 UV<sub>i</sub>-<RLS>STEM-IPFV~CAUS<sub>PA</sub>-sleep GEN=doctor GEN=patient  
*ang=gamot.*  
 NOM=drug  
 The doctor is putting a patient to sleep with the drug.

Here, we targeted the beneficiary (a) and an instrument in (b). Notice, however, that in addition to the voice prefix *i-* mentioned above, we have the prefixes *pag-* and *pang-* that give us the desired voice forms in combination. Example (b) also features Tagalog's causative prefix *pa-*, which raises the verbs valency by adding a core argument coding the causer.

The infix <*um*> cross-references an *ang*-marked actor and will be glossed as 'AV'. Notice that it is always an infix, even if it appears to be prefixed when the verb it is affixed to is spelled with an initial vowel as in

(12) 'to leave':

<*alis*> → <*umalis*>  
 /ʔalis/      /ʔ(um)alis/

Since the root *alis* actually begins with an unwritten glottal stop, the resulting form is actually /ʔ(um)alis/. We will, however, adhere to standard Tagalog orthography and write <*um*>*alis*, i. e. without representing the glottal stop, in slight deviation from the Leipzig glossing rules.

The other three affixes, *-in*, *i-*, and *-an*, cross reference different types of undergoers and will on occasion be referred to collectively as 'the undergoer-voice

<sup>6</sup> Definitions of the macroroles *actor* and *undergoer* will be given in chapter 2.

affixes'. The suffix *-in* often occurs when the *ang*-marked undergoer is a genuine patient that is strongly affected by the event denoted by the verb and undergoes a change of state, e. g. *patay-in* 'to kill':

(13) **The Hunger Games (Reyes 2012b:305)**

*P(in)atay-∅=ko=siya.*  
 ⟨RLS⟩kill-UV<sub>in</sub>=1SG.GEN=3SG.NOM  
 I killed him.

Incremental themes are also often targeted using the *-in* suffix, as in *sulat-in* 'to write'. For this reason it is often called patient voice (PV) or sometimes theme voice (TV). The prefix *i-*, on the other hand, is commonly found to cross-reference the theme argument of transfer verbs such as *i-bigay* 'to give' or other theme arguments whose location is affected but not the inner structure (e. g. *i-tapon* 'to throw'):

(14) **The Hunger Games: *Catching Fire* (Reyes 2012a:153)**

*I-b(in)igay=ko sa=kanila ang=lahat ng=pagkain.*  
 UV<sub>i</sub>-⟨RLS⟩give=1SG.GEN DAT=3PL.DAT NOM=all GEN=food  
 I gave them all the food.

In the literature, it is thus often glossed as conveyance voice (CV). Finally, the suffix *-an* typically targets goal or source arguments, such as *binilh-an* 'to buy from' in example (10), or undergoers whose surface is affected but not the inner structure, such as *punas-an* 'to wipe' in the following example:

(15) **The Hunger Games: *Catching Fire* (Reyes 2012a:185)**

...*habang p(in)u-punas-an=ko ang=ilong=ko.*  
 while ⟨RLS⟩IPFV~wipe-UV<sub>an</sub>=1SG.GEN NOM=nose=1SG.GEN  
 ... while I wipe my nose.

A common gloss for *-an* is thus location voice 'LV' or goal voice 'GV'. We will gloss all four affixes as UV combined with a subscript *i*, *in*, or *an* to distinguish them.

As already mentioned when discussing the glosses for the case markers, the nature of Tagalog's alignment system is still a source of disagreement. Proponents of an ergative analysis (e. g. De Guzman 1978; Nolasco 2005; Nagaya 2012) take undergoer voice to be the basic form of transitive verbs and view the actor voice forms as a type of antipassive or intransitive version of the verb. According to Schachter and Reid (2008) the supporters of the ergative analysis outnumber supporters of other analyses – at least, that was the case in 2008. Nevertheless, there are opponents that reject the ergative hypothesis (e. g. Kroeger 1991) and propose an accusative analysis (Rackowski 2002) or a distinct category called



*symmetric voice language* (see e. g. Himmelmann 2005:112–114). Latrouite (2011) notes that the number of supporters of the latter hypothesis is growing. In addition to morphosyntactic evidence for this analysis, Sauppe (2017:205) uses pupillary response curves to show that, unlike for German active and passive, Tagalog’s actor and undergoer voice show “*no evidence of asymmetrical changes in cognitive load during the planning and production of different voice types*”, thus adding to the plausibility of the symmetric voice hypothesis.

Another question that immediately comes to mind in light of this complex voice system is which criteria play a role in selecting the appropriate voice affix. Foley and Van Valin (1984:139–140) name definiteness of the undergoer argument as a decisive factor:

If a patient or undergoer is definite, then it must be in focus [ $\approx$  the nominative marked argument]. Non-patient/undergoers which are not in focus may be interpreted as definite or indefinite.

(Foley and Van Valin 1984:139–140)

Indeed, we have already seen this rule in action in example (10) – notice that the *ng*-marked undergoer *isda* ‘fish’ in (10a) is interpreted as indefinite, while it is interpreted as definite in (b) where it is *ang*-marked. Latrouite (2011; 2016), however, argues that, while definiteness, in her terminology a type of referential prominence, can be an important factor in voice selection, it can be overridden by event-structural and information-structural prominence. She proposes that the argument that gets nominative marking and is cross-referenced on the verb is the one that is more prominent according to the following three criteria ranked in the order given below:

(16) **Latrouite (2016:312)**

information-structural prominence	>	event-structural prominence	>	referential prominence
--------------------------------------	---	--------------------------------	---	---------------------------

Event-structural prominence describes a semantic property of the verb being inherently oriented towards one of the participants. A verb such as *to kill*, for example, is inherently oriented towards the undergoer, who undergoes a change of state and can afterwards be assumed to be dead. In contrast, it says very little about the actor, whose exact actions remain underspecified. Verbs in the imperfective aspect are an example of inherent actor orientation since they express an ongoing or repeated action on the part of the actor. Since the process is still ongoing or a repeated process, this also implies less affectedness on the part of the undergoer. Such event-structural considerations can override referential prominence and can in turn be overridden by information-structural prominence. Latrouite (2011) leaves the exact meaning of information-structural prominence somewhat vague.

Later, Latrouite (2016) takes information-structural prominence to mean focality in case of the actor; Latrouite and Riester (2018) then generalizes this idea by suggesting information-structural prominence to mean deviation from the default information-structural values, which they propose to be *topic* for the actor and *focus* for the undergoer<sup>7</sup>. Thus, a specific or definite undergoer *can* occur with an actor-voice verb under certain circumstances. Often, due to differential object marking, it will be *sa-* instead of *ng-*marked (see Latrouite 2016 for examples and a detailed discussion).

Syntactic constructions can also impose restrictions on voice selection. Relative clauses are a well known example of this – not only in Tagalog but in other western Austronesian languages, as well (Himmelman 2005:161–163).

(17) **Foley and Van Valin (1984:141–142)**

- a. *isda-ng [i-b<in>igay ng=lalaki sa=bata \_NOM]*  
 fish-LK UV<sub>i</sub>-<RLS>give GEN=man DAT=child  
 the fish which was given to the child by the man
- b. *bata-ng [b<in>igy-an ng=lalaki ng=isda \_NOM]*  
 child-LK <RLS>give-UV<sub>an</sub> GEN=man GEN=fish  
 the child which was given fish by the man
- c. \* *isda-ng [nag-bigay ang=lalaki \_GEN sa=bata]*  
 fish-LK AV.RLS-give NOM=man DAT=child
- d. \* *isda-ng [b<in>igy-an ng=lalaki \_GEN ang=bata]*  
 fish-LK <RLS>give-UV<sub>an</sub> GEN=man NOM=child

Relative clauses contain an obligatory ‘gap’ that is interpreted as coreferential with the head noun. This gap, represented by an underscore in the examples above, must correspond to the argument that is cross-referenced by the voice marker on the verb, i. e. the gap must correspond to the verb’s nominative argument. Since the fish is the intended theme argument of the relative-clause predicate, and the child is the intended goal argument, the conveyance-voice prefix *i-* must be chosen in (a), and the goal-voice suffix *-an* in (b). Choosing any other voice form is ungrammatical as shown in (c) and (d).

Peripheral voice forms like the ones shown above in (11) are much less understood. Based on a small pilot study, Nuhn (2017) suggests that peripheral voice forms are preferable when the targeted referent is prementioned in the immediately preceding context. For the causative voice, marked by *i-ka-*, he also notes that most uses in his small corpus study involve roots denoting emotional states. Klimenko

<sup>7</sup> See chapter 2 for definitions of these terms.

and Endriga (2016) find that, more generally, verbs with similar semantics, based on intuitively defined semantic classes, have a tendency to form similar voice paradigms.

#### 1.1.4.2 Aspect and Modality

Tagalog verbs are commonly said to be inflected for three ‘aspects’: *perfective*, *imperfective*, and *contemplated* (e. g. Schachter and Otones 1972; Ramos and Cena 1990). Schachter and Otones (1972) characterizes these forms in the following way:

The perfective aspect characterizes an event as completed, the imperfective as not completed but begun, and the contemplated as not begun.

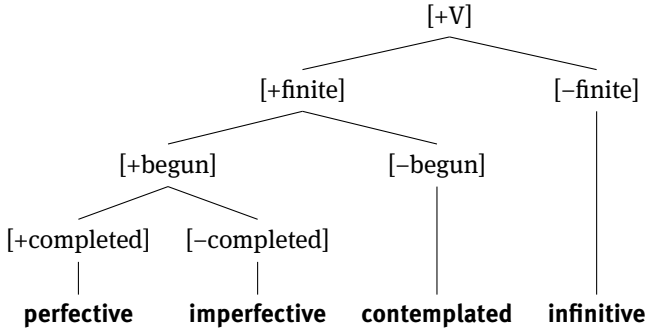
(Schachter and Otones 1972:66)

De Guzman (1978) describes this using the two binary features [ $\pm$ begun] and [ $\pm$ completed], which result in the three aspects as shown in Table 1.6. The combination [ $-$ begun,  $+$ completed] is greyed out in the table since it makes little sense semantically. Morphologically, however, it is possible and the form is commonly referred to as the infinitive, which is used in imperatives and hortatives or as a citation form in dictionaries. Figure 1.2 shows a visualization of the aspect system in tree form singling out the infinitive form using a third binary feature [ $\pm$ finite].

**Tab. 1.6:** Tagalog aspects in terms of binary features (based on De Guzman 1978)

	[+completed]	[−completed]	root	
[+begun]	<b>perfective</b>	<b>imperfective</b>		
⟨um⟩	<i>s⟨um⟩ulat</i>	<i>s⟨um⟩u~sulat</i>	<i>sulat</i>	‘write’
m-	<i>nagluto</i>	<i>naglu~luto</i>	<i>luto</i>	‘cook’
-in	<i>t⟨in⟩apos-∅</i>	<i>t⟨in⟩atapos-∅</i>	<i>tapos</i>	‘finish’
i-	<i>ib⟨in⟩igay</i>	<i>ib⟨in⟩i~bigay</i>	<i>bigay</i>	‘give’
-an	<i>w⟨in⟩alisan</i>	<i>w⟨in⟩a~walisan</i>	<i>walis</i>	‘sweep’
[−begun]	<b>infinitive</b>	<b>contemplated</b>		
⟨um⟩	<i>s⟨um⟩ulat</i>	<i>s⟨∅⟩u~sulat</i>	<i>sulat</i>	‘write’
m-	<i>magluto</i>	<i>maglu~luto</i>	<i>luto</i>	‘cook’
-in	<i>tapusin</i>	<i>ta~tapusin</i>	<i>tapos</i>	‘finish’
i-	<i>ibigay</i>	<i>ibi~bigay</i>	<i>bigay</i>	‘give’
-an	<i>walisan</i>	<i>wa~walisan</i>	<i>walis</i>	‘sweep’

Table 1.6 shows nicely that all forms in the [ $-$ completed] column exhibit CV-reduplication of the root word independent of the voice markers; the [ $+$ completed]



**Fig. 1.2:** Visualization of Tagalog's aspect and mood morphology in tree form (based on De Guzman 1978:142)

forms, on the other hand remain unmarked. We will follow the common practice of glossing the CV-reduplication as imperfective (IPFV). Notice that the voice infix  $\langle um \rangle$  is absent from the contemplated form.

The  $[\pm\text{begun}]$  distinction presents us with a less homogeneous case. The undergoer voice affixes all have an infix  $\langle in \rangle$  in the  $[\text{+begun}]$  row, which is absent from the  $[\text{-begun}]$  forms. Additionally, the voice suffix  $-in$  is absent from these forms. Following Kroeger (1991) and Latrouite (2011), we will gloss the infix  $\langle in \rangle$ <sup>8</sup> as realis (RLS). The nasal prefix  $m-$ , on the other hand, changes to  $n-$  and verbs with the voice infix  $\langle um \rangle$  have no overt realis marking at all. According to Reid (1992:81–83), these too carried the infix  $\langle in \rangle$  in earlier stages of the language, but it eventually merged with the infix  $\langle um \rangle$  or the surrounding prefix, in this example *mag-*:

(18) **Reid (1992:67,81–83)**

- a.  $*m\langle in \rangle ag-$  > *nag-*
- b.  $*\langle um-in \rangle$  >  $*\langle umm \rangle$  >  $\langle um \rangle$

We will gloss the change of the nasal prefix  $m-$  to  $n-$  by appending ‘.RLS’ to the gloss of the prefix. For the infix  $\langle um \rangle$ , it is necessary to distinguish two versions of the infix: one with and one without the realis infix  $\langle in \rangle$  merged into it. We gloss these with  $\langle AV.RLS \rangle$  and  $\langle AV \rangle$ , respectively.

Finally, Tagalog has abilitative verb forms which are marked by the prefix *maka-* and its undergoer-voice counterpart *ma-*. Ramos and Cena (1990:93) uses

<sup>8</sup> In certain cases, the infix  $\langle in \rangle$  changes to the prefix *ni-*: optionally for verb roots beginning with /l, r, w, j/ and obligatorily for verb roots beginning with /h, ʔ/ in combination with the voice affix  $i-$  ‘ $uv_i$ ’ (Schachter and Otones 1972:364–365).

the terms *abilitative* or *aptative*, Schachter and Otnes (1972:331) refers to these forms as “*ability/involuntary action verb formations*” since they can express both being able to do something as well as doing something involuntarily:

(19) *P(in)unit-∅=niya ang=papel.*  
 ⟨RLS⟩tear-UV<sub>in</sub>=3SG.GEN NOM=paper  
 She tore the (piece of) paper apart.

(20) *Na-punit-∅=niya ang=papel.*  
 ABIL.RLS-tear-UV<sub>in</sub>=3SG.GEN NOM=paper  
 She was able to tear the paper apart. *or* She unintentionally tore the paper apart.

While in (19), the actor is typically understood to have torn the piece of paper apart intentionally, example (20) is ambiguous between expressing that the actor tore the paper apart unintentionally or that the actor is capable of doing so. We will gloss these forms as *abilitative* (ABIL).

### 1.1.5 Inversion Constructions

In addition to the predicate-initial structures we have already seen Tagalog offers a number of inversion or fronting constructions<sup>9</sup> that allow arguments, adverbials, or adjuncts to appear before the predicate. This section will provide a brief overview. More details will be provided in the chapters for which they are relevant. We will use the following two example sentences for illustration:

(21) *B(um)ili ng=isda ang=bata (kahapon).*  
 ⟨AV.RLS⟩buy GEN=fish NOM=child yesterday  
 The child bought a fish yesterday.

(22) *B(in)ili-∅ ng=bata ang=isda.*  
 ⟨RLS⟩buy-UV<sub>in</sub> GEN=child NOM=fish  
 The child bought the fish.

With (21), we have an actor-voice construction with a transitive verb, followed by its two arguments, and the equivalent undergoer-voice version in (22). When necessary, we will include the adverbial *kahapon* ‘yesterday’, which appears sentence-finally in our example but could also appear right after the predicate or the first argument without any change in meaning (Schachter and Otnes 1972:436).

<sup>9</sup> In the context of these constructions we use “fronting” and “inversion” interchangeably to mean “displaced to initial position”. It is not meant to imply any kind of movement.

### 1.1.5.1 *ay*-Inversion

In an *ay*-inversion, a constituent – often an argument or an adverbial – appears sentence-initially and is set off from the remainder of the clause by the inversion marker *ay*. In our example sentences, we could apply this to the adverbial *kahapon* with the following result:

(23) ***ay*-inversion (adverbial)**

*Kahapon ay b(um)ili ng=isda ang=bata.*  
 yesterday INV ⟨AV.RLS⟩ GEN=fish NOM=child  
 Yesterday, the child bought a fish.

Similarly, the *ang*-marked argument of any predicate can be *ay*-fronted. Additionally, transitive undergoer-voice verbs allow *ay*-inversion of the *ng*-marked actor argument. Thus, the actor argument of (23) can be *ay*-fronted as well as either argument of the undergoer-voice version (22):

(24) ***ay*-inversion (actor voice)**

*Ang=bata ay b(um)ili ng=isda.*  
 NOM=child INV ⟨AV.RLS⟩ buy GEN=fish  
 The child, he bought a fish yesterday.

(25) ***ay*-inversion (undergoer voice)**

- a. *Ang=isda ay b(in)ili-∅ ng=bata.*  
 NOM=fish INV ⟨RLS⟩ buy-UV<sub>in</sub> GEN=child  
 The fish, the child bought (it).
- b. *Ang=bata ay b(in)ili-∅ ang=isda.*  
 NOM=child INV ⟨RLS⟩ buy-UV<sub>in</sub> NOM=fish  
 The child bought the fish.

Notice that in (25b), the fronted actor is *ang*-marked, i. e. receives nominative case marking, although it is genitive marked when it appears in-situ as in (22). The argument cross-referenced by the voice-marker on the verb is, however, still the *ang*-marked argument that appears in-situ, in this case *ang=isda* ‘NOM=fish’.

The inversion marker *ay* is often preceded by a pause and can be omitted in certain cases. Schachter and Otanes (1972:485) say that *ay*-inversion is characteristic of formal language but doesn’t lead to any difference in meaning. Some take *ay* to be a topic marker as implied by the translations given above, although Kroeger (1991:67), Latrouite and Riester (2018), and Latrouite and Van Valin (2020) also report cases, in which the fronted element is focal rather than topical. A more detailed data-oriented discussion of the constituents that can be *ay*-fronted as well as the information-structural implications can be found in chapters 4 and 5.

### 1.1.5.2 *ang*-Inversion

The *ang*-inversion is another information-structurally marked construction that, among other things, conveys contrastive narrow focus:

(26) ***ang*-inversion (actor voice)**

*Ang=bata ang=b(um)ili ng=isda.*  
 NOM=child NOM=(AV.RLS)buy GEN=fish  
 It was the child who bought fish.

(27) ***ang*-inversion (undergoer voice)**

*Ang=isda ang=b(in)ili-∅ GEN=bata.*  
 NOM=fish NOM=(RLS)buy-UV<sub>in</sub> GEN=child  
 It was the fish that the child bought.

The fronted constituents in (26) and (27) are the nominative arguments of the predicates in (21) and (22), respectively. The verb together with the remaining argument is turned into a referring expression by the addition of the case marker *ang*. The translation of the examples using *it*-clefts is an attempt to capture that the construction actually equates to referring expressions: the fronted argument (*ang=bata* ‘the boy’) acts in (26) as the predicate and takes the second *ang*-phrase (*ang=bumili ng=isda* ‘the one who bought a fish’) as its argument. The fronted argument must correspond to the argument that is cross-referenced on the verb, thus the following is ungrammatical:

(28) \* *Ng=isda ang=b(um)ili ang=bata.*  
 GEN=fish NOM=(AV.RLS) NOM=child  
*intended:* It was fish that the child bought.

Even changing the case marker of the fronted argument to *ang* (in analogy to (25b)) does not result in a grammatical construction.

As mentioned, the fronted arguments are in narrow contrastive focus in this construction. Thus, (26) could be continued as ‘*It was the child who bought a fish, and not the man.*’, while (27) could be continued as ‘*It was a fish that the child bought and not a mango.*’ According to Schachter and Otnes (1972:529–531), they can also be used in response to a *wh*-question. As we will discuss in chapter 7, however, our data indicate that a different construction, reversed *ang*-inversion, is preferred in this context.

### 1.1.5.3 Adjunct Inversion

The final inversion construction we will discuss at this point is adjunct/oblique inversion (Latrouite and Van Valin 2020), adjunct fronting (Kroeger 1991:41), or emphatic inversion (Schachter and Otnes 1972:496). It is similar to *ang*-inversion in

its information-structural function as a focus construction, but it targets adverbials and oblique arguments:

(29) **adjunct inversion**

*Kahapon b(um)ili ng=isda ang=bata.*  
 yesterday (AV.RLS)buy GEN=fish NOM=child  
 It was yesterday that the child bought fish.

In our case the fronted adverbial *kahapon* ‘yesterday’ is in narrow focus. At first glance, (29) closely resembles (23), especially if one bears in mind that *ay* can often be replaced by a pause. The difference between the two is more obvious when a clitic pronoun is involved:

(30) **adjunct inversion with clitic pronoun**

*Kahapon=siya b(um)ili ng=isda.*  
 yesterday=3SG.NOM (AV.RLS)buy GEN=fish  
 It was yesterday that she bought fish.

(31) **left dislocated adverbial**

*Kahapon, b(um)ili=siya ng=isda.*  
 yesterday (AV.RLS)buy=3SG.NOM GEN=fish  
 Yesterday, she bought fish.

In the adjunct inversion in (30), the fronted adverbial serves as the host for the clitic pronoun. This distinguishes it from (31), where the left-dislocated adverbial is separated by a pause (as indicated by the comma) and the pronoun cliticizes to the predicate.

Like *ang*-inversion, this construction is found in the context of a correction or in response to a *wh*-question.

## 1.2 Structure and Goals of this Dissertation

As mentioned in the introduction to this chapter, we will be exploring phenomena at the interface of morphosyntax and information structure. It will thus come as little surprise that the information-structurally marked inversion constructions will play a central role in many parts of the dissertation. The goal of this work is to provide additional data on how the inversion constructions are used (and not used) in Tagalog and to point out uses that have thus far received little or no attention in the literature. These goals will be supplemented by quantitative data based on case studies that may serve as the foundation for more detailed future investigations using larger data sets.



After this brief introduction to the essentials of Tagalog grammar, chapter 2 will give an overview of the Role and Reference Grammar framework, which provides the basis for the syntactic analyses as well as the definitions for information-structural notions discussed in subsequent chapters. In chapter 3, we will then discuss the various data sources that were used. A large portion of this chapter is dedicated to the materials and procedures used to elicit spoken data in the field and how they were transcribed, glossed and stored.

Chapter 4 will present a survey of how *ay*-inversion is used in our data. We will present quantitative data on the frequency with which different kinds of constituents are targeted by *ay*-inversion. As we do so, we will pay attention to the syntactic and information-structural environments in which *ay*-inversion occurs and investigate to what extent this matches hypotheses and predictions made about this construction in the literature.

Next, we will turn to the description of the inversion constructions in Role and Reference Grammar in chapter 5. We will begin with an overview of the analyses offered in the literature. Then, focusing again on *ay*-inversion, we will attempt to tackle some problematic cases from our data based on the syntactic analysis by Latrouite and Van Valin (2020). Finally, we will turn to the information-structure projection and explore how the use of focus-sensitive particles in combination with *ay*-inversion can be modeled building on Balogh's (2020) account of focus-sensitive particles in Hungarian and English.

In chapter 6, we will explore a topic that is cross-linguistically tightly entwined with information structure: reference tracking. After an overview of the mechanisms used in Tagalog, we will discuss a frame-based model of discourse proposed by Balogh (2018) and apply it to our Tagalog data. The frame-based approach captures aspects of reference tracking and could be integrated into Role and Reference Grammar via the formalization by Osswald and Kallmeyer (2018), which uses frames in the semantic representation.

In the second part of chapter 6, starting in section 6.5, we will present a pilot study on our data that aims to assess the role topic marking using *ay*-inversion plays in reference tracking: Nagaya (2006b) proposes that third-person pronouns are used to code third-person topic referents in Tagalog in a similar way zero marking is used for this purpose in languages such as Japanese or Hungarian. This raises the question whether topic marking via *ay*-inversion plays a similar role in establishing the referent of third-person personal pronouns as topic marking in Japanese or Hungarian does to establish the referent that is subsequently coded by zeros. In this context, we will describe how our data was annotated using RefInd (Schiborr, Schnell, and Thiele 2018), GRAID (Haig and Schnell 2014), and RefLex (Riester and Baumann 2017). We will then present quantitative data that suggest

that *ay*-inversion marks a different type of topic than the topic coded by personal pronouns.

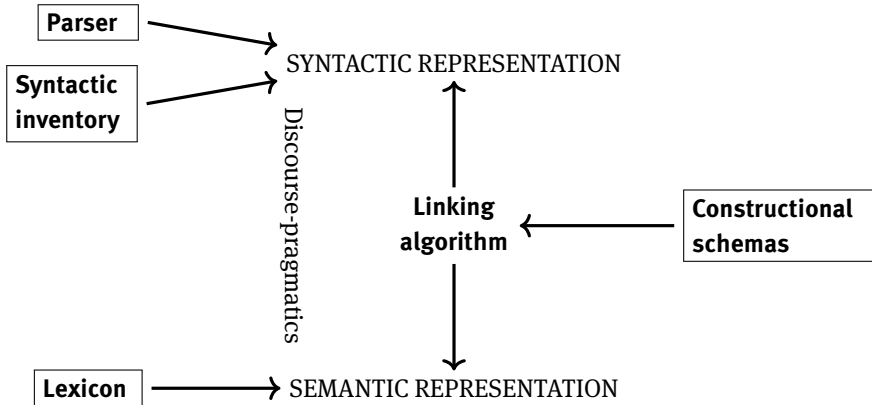
Finally, chapter 7 concludes the main section of this dissertation with current data on reversed *ang*-inversion, a construction that combines *ang*-inversion and *ay*-inversion. Parts of this study have already been published (see Nuhn 2019), but here we will discuss an extended and more detailed version of the translation study.

The dissertation ends with an overview of the presented findings in chapter 8.

## 2 Introduction to Role and Reference Grammar

The roots of RRG lie in the 1970s when the framework started out as an attempt to answer the questions “ 1. *what would linguistic theory look like if it were based on the analysis of languages with diverse structures, such as Lakhota, Tagalog and Dyirbal, rather than on the analysis of English?*, and 2. *how can the interaction of syntax, semantics and pragmatics in different grammatical systems best be captured and explained?* ” (Van Valin 2005:1). This typologically centered approach taking the properties of diverse languages into account has grown into a framework well adapted to dealing with ‘exotic’ languages, particularly Tagalog, which was specifically mentioned in the questions from which the framework was born. It also played a central role in *Functional Syntax and Universal Grammar* (Foley and Van Valin 1984), the first comprehensive RRG ‘textbook’. This brief introduction is based on the two more recent books *Syntax: Structure, meaning, and function* (Van Valin and LaPolla 1997) and *Exploring the syntax-semantics interface* (Van Valin 2005).

Figure 2.1 shows the general organization of RRG. The remainder of this chapter basically constitutes a tour of this organizational scheme. We will begin in section 2.1 with the representation of syntactic structure in RRG. As many theories do, RRG uses trees to represent syntactic structures. Unlike other theories though, RRG does not require binary branching, forbid crossing branches, nor does it assume a derivation process involving movement. Rather, language specific syntactic templates are stored in a syntactic inventory and can be combined to form the structure of a full sentence. Next, we will turn to the semantic representation in section 2.2, where we will discuss both the ‘classical’ approach as well as a more recent frame-based approach (Osswald and Kallmeyer 2018). The two representations are connected in both directions by the linking algorithm. Linking from semantics to syntax can be understood as the process of language production: The ingredients for the semantic representation are retrieved from the lexicon. The linking algorithm then provides systematic rules to select appropriate syntactic templates and apply language-specific constructional schemas to finally result in the syntactic representation of a grammatically sound sentence. Similarly, the opposite direction can be taken to represent speech comprehension. A sentence is translated into a syntactic representation by the parser and further into a semantic representation via the linking algorithm. In this process, discourse-pragmatics play an important and highly language-dependent role. Finally, in section 2.6, we will turn to RRG’s third major representation: the information structure projection. We will begin with the definition of the information-structural primitives *topic* and



**Fig. 2.1:** The basic architecture and organization of the RRG-framework (Recreated from Van Valin 2005:134, Fig. 5.4)

*focus* and then see how they are represented in RRG's focus projection, or as it has more recently been referred to, the information-structure projection (Balogh 2020).

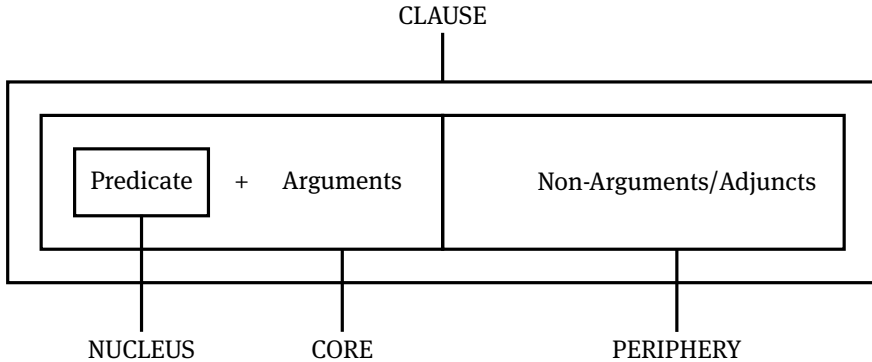
## 2.1 Syntactic Representation

Van Valin (2005:3) lays out the following two general requirements the theory of clause structure in RRG aims to meet in order to live up to its typological motivation:

1. A theory of clause structure should capture all of the universal features of clauses without imposing features on languages in which there is no evidence for them.
2. A theory should represent comparable structures in different languages in comparable ways.

(Van Valin 2005:3)

This goal is particularly challenging as the desired theory of clause structure must be equally applicable to languages with fixed and free word order, head-marking and dependent-marking languages, configurational and non-configurational languages – in each case without positing structures for which there is no evidence and without positing an underlying structure or a movement based derivation process.



**Fig. 2.2:** Visualization of the universal oppositions underlying clause structure and the resulting layered structure of the clause (Van Valin 2005:4)

### 2.1.1 The Layered Structure of the Clause

The layered structure of the clause is a central concept in RRG’s account of clause structure. It is motivated by two fundamental contrasts that are universal to all human languages:

1. predicating vs. non-predicating elements
2. arguments (of the predicate) vs. non-arguments

These give rise to the layered structure shown in Figure 2.2. The contrast between predicating and non-predicating elements singles out the nucleus which contains the predicate of the clause. The contrast between arguments and non-arguments separates the predicate’s arguments from the remaining material of the clause. The predicate, i. e. the nucleus, together with its arguments constitute the core, while the non-arguments form the periphery. Together nucleus, core and periphery form the clause.

As a simple example, consider the following English sentence:

$$(32) \quad \left[ \left[ [Pedro]^{ARG} [ate]^{NUC} [a\ watermelon]^{ARG} \right]^{CORE} [in\ the\ kitchen.]^{PERIPHERY} \right]$$

The predicate *ate* forms the nucleus of the clause and together with its two arguments *Pedro* and *a watermelon* the core. The adjunct *in the kitchen* is not an argument of the predicate and is thus belongs to the periphery.

Note that this definition of the syntactic units is semantically motivated and does not depend on the linear order of the phrases within the clause or dominance relations within the syntactic tree structure, we will discuss in the following section. Thus, if a language allows this, the units can in principle occur in any order:

## (33) Russian

- a. [Пѣмр]<sup>CORE</sup> [ел]<sup>NUC</sup> [арбуз]<sup>CORE</sup> [в кухне.]<sup>PERIPHERY</sup>  
*P'otr jel arbuz v kuxn'e*  
 Pyotr ate watermelon in kitchen
- b. [Ел]<sup>NUC</sup> [Пѣмр]<sup>CORE</sup> [в кухне.]<sup>PERIPHERY</sup> [арбуз.]<sup>CORE</sup>  
*jel P'otr v kuxn'e arbuz*  
 ate Pyotr in kitchen watermelon
- c. [Арбуз]<sup>CORE</sup> [в кухне.]<sup>PERIPHERY</sup> [Пѣмр]<sup>CORE</sup> [ел.]<sup>NUC</sup>  
*arbuz v kuxn'e P'otr jel*  
 watermelon in kitchen Pyotr ate

Russian is fairly free in terms of word order and allows many different linearizations of a given sentence. Due to the semantic motivation of the layered structure of the clause, this has no influence on the membership of an XP to its clause layer. On the other hand, it is also worth remarking that the correspondence between the syntactic units (i. e. nucleus and core) and the semantic notions that motivated their definitions (i. e. predicate and (semantic) argument) is not absolute: a nucleus may very well consist of a verb and an incorporated noun; an expletive, such as *it* in *it is raining* is part of the core despite not being a semantic argument, and the *by*-phrase in an English passive construction is in the periphery and not part of the core despite being a semantic argument of the verb.

## 2.1.2 The Constituent Projection

The syntactic structure of example (32) can be visualized using a tree diagram called the *constituent projection* as shown in Figure 2.3. The layered structure of the clause is reflected in the CLAUSE, CORE, and NUC(LEUS) nodes in the tree that dominate each other in that order. Above the CLAUSE node we find a SENTENCE node, which we will need later on to represent sentence-internal elements that are external to the clause, such as the left-detached elements or coordinated clauses. The periphery is not dominated by any of the nodes of the main tree. Instead, it stands on its own with an arrow indicating the level of the clause that it modifies, in this case the core.

In addition to these universal aspects of clause structure, RRG also posits four syntactic positions that are not assumed to be universal. The first is the Pre-Core Slot (PrCS). As the name suggests, it precedes the core and is a daughter of the clause node. The PrCS typically houses *wh*-question words in languages in which they do not appear *in-situ* or the fronted element in the following sentence:

[*Bean Soup*]<sup>PrCS</sup> *I can't stand.*

The constituent projection of an English example based on example (32) featuring a *wh*-question in the PrCS is shown in Figure 2.4. Some languages, particularly verb-final ones, also feature an analogous Post-Core Slot (PoCS) that follows the core.

Finally, RRG assumes the existence of a left detached position (LDP) and right detached position (RDP) that house sentence-initial or respectively sentence-final elements set off by a pause. Both positions are daughters of the SENTENCE node reflecting that they are assumed to be clause-external positions. They are often populated by adverbials, but also referring expressions that are usually taken up clause-internally by a resumptive pronoun. English has both of these positions as shown by the following examples:

(34) **Van Valin (2005:6)**

- a. [*As for John<sub>i</sub>*]<sup>LDP</sup>, *I haven't seen him<sub>i</sub> in a couple of weeks.*
- b. *I know them<sub>i</sub>, [these boys]*<sup>RDP</sup>.

Notice the resumptive pronouns in both examples that are coreferential with the left and right detached expressions, as indicated by the subscripts. The pause that sets the left and right-detached elements off from the remainder of the clause is typical for these positions, not only in English.

While the PrCS and PoCS are taken to be unique, cross-linguistic evidence suggests that it should be possible to have multiple LDPs (Matić, Putten, and Hammon 2016), an observation which is also relevant to Tagalog (Latrouite and Van Valin 2020), as we will see in some more detail in chapter 5.

Figure 2.5 shows a ‘maximal’ RRG-template including all syntactic positions posited in the framework. As mentioned, not every language will have all of these positions as indicated by the parentheses. Furthermore, the order of the core arguments and the nucleus are subject to cross-linguistic variation and finally, the predicate is by no means restricted to verbal predicates. Particularly in Tagalog, as we will see, the function of predicate is not limited to any fixed lexical category.

### 2.1.3 The Operator Projection

Besides the constituent projection, RRG posits an operator projection that captures operators occurring in the sentence and their respective scopes. These operators code various grammatical information such as aspect, modality, tense, and negation. Figure 2.5 shows an overview of the operators present in the RRG framework and which layer of the clause they operate on, Table 2.1 shows an overview of some frequently occurring Tagalog operators and how they are realized. Illocutionary Force and Negation are taken to be universal since any language must be able

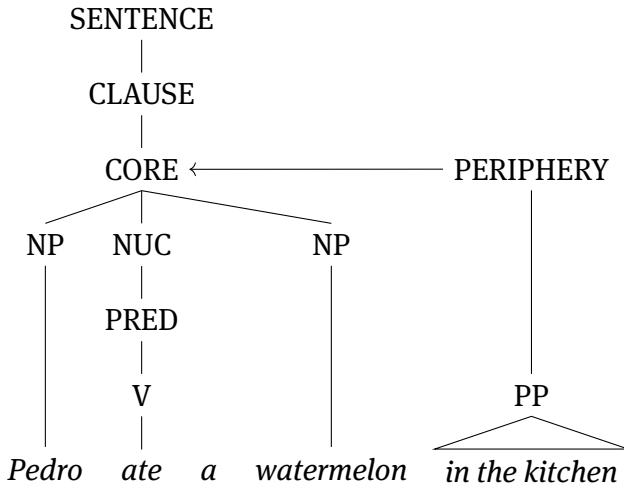


Fig. 2.3: Constituent projection of example (32)

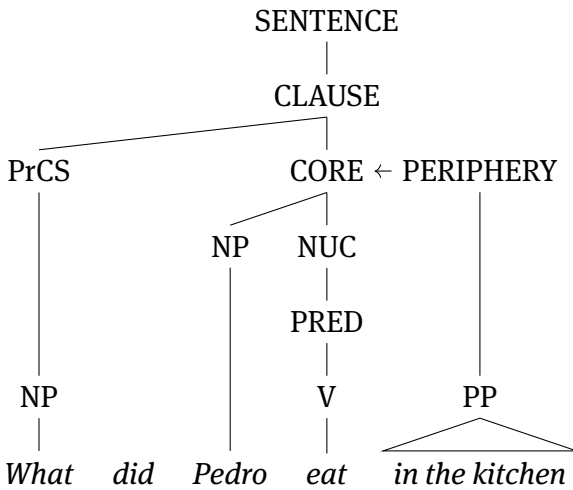
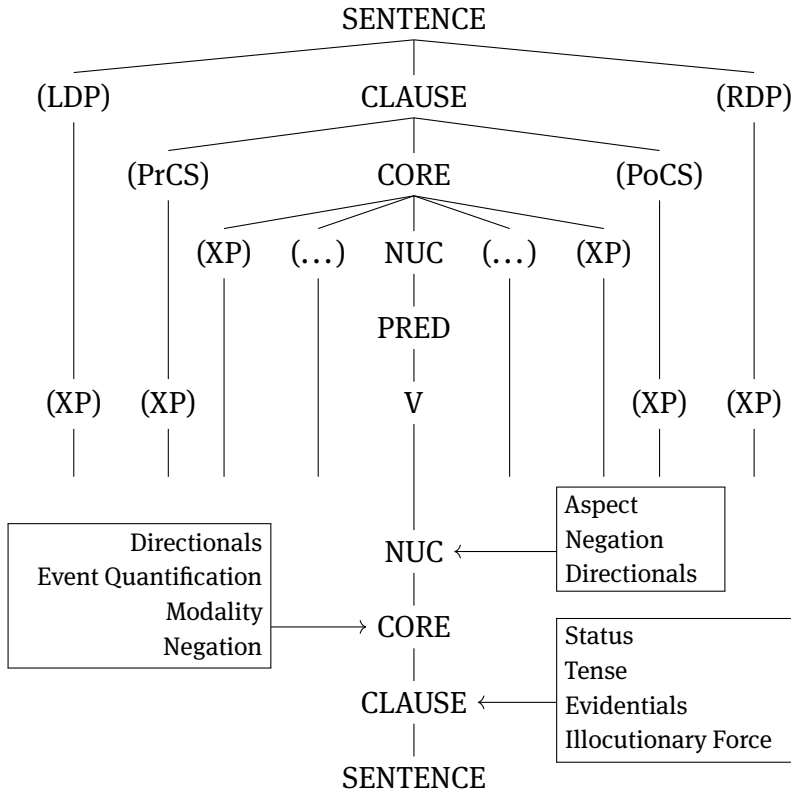


Fig. 2.4: An example of a *wh*-word in the PrCS: The constituent projection of a *wh*-question based on ex. (32)





**Fig. 2.5:** ‘Maximal template’ showing all syntactic positions and operators with their respective scopes (Van Valin 2005:12)

to distinguish a question from an assertion and form negations. The presence or absence of all the other operators is language specific.

For further illustration let us examine two examples. Figure 2.6 shows the example already seen in Figure 2.4, this time including the operator projection. Figure 2.7 shows the syntactic and operator projection of the following Tagalog example:

(35) **Tagalog**

*K(um)a~kain=ba si=Pedro ng=pakwan sa=kusina?*  
 <AV.RLS>IPFV~eat=Q NOM=Pedro GEN=watermelon DAT=kitchen  
 Is Pedro eating a watermelon in the kitchen?

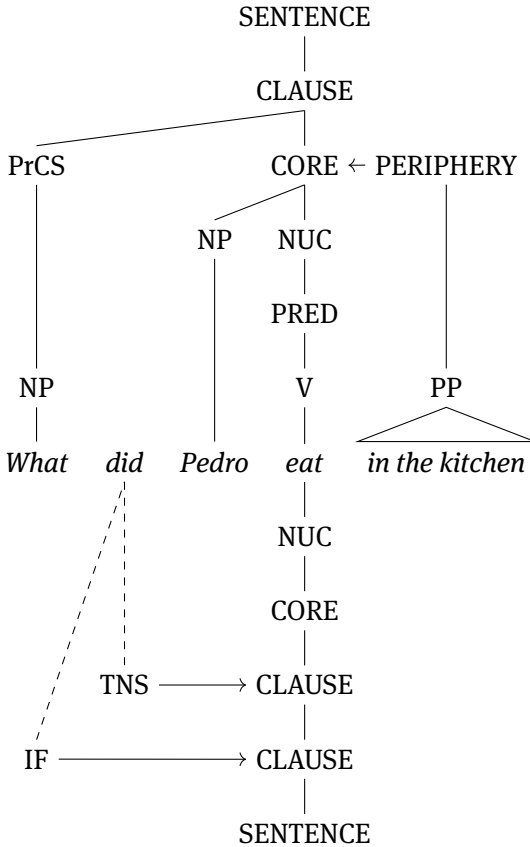
Tab. 2.1: Overview of some frequent Tagalog operators

Category	Value	Realization in Tagalog	
<b>Nuclear Operators</b>			
Aspect	imperfective	CV~	CV-reduplication
Aspect	recent perfective	ka-CV~	prefix + reduplication
<b>Core Operators</b>			
Modality	abilitative	<i>ma(ka)-</i>	prefix
Modality	ability/permission	<i>puwede</i> ‘can’	pseudoverb
Modality	obligation	<i>dapat</i> ‘should’	pseudoverb
Modality	obligation	<i>kailangan</i> ‘must’	pseudoverb
Modality	⋮	⋮	⋮
<b>Clause Operators</b>			
Status	realis	<i>&lt;in&gt;/n-</i>	infix/prefix
Status	possibility	<i>=yata</i>	second pos. clitic
Status	optative	<i>=sana/nawa</i>	second pos. clitic
Evidential	hearsay	<i>=daw/raw</i>	second pos. clitic
Illocutionary Force	question marker	<i>=ba</i>	second pos. clitic
<b>Occurring at multiple levels</b>			
Negation	general negation	<i>hindi</i> ‘no(t)’	
Negation	negated imperative	<i>huwag</i> ‘do not!’	
Negation	negated existential	<i>wala</i> ‘there is no(ne)’	

The operator projection is drawn below the constituent projection and the two are connected through the nucleus, below which we find nodes for each layer of the clause mirroring the structure in the constituent projection above. The operators themselves are represented below the the words that code them with arrows indicating the syntactic unit they modify. In the English example in Figure 2.6, we see the tense operator, TNS, and the illocutionary force operator, IF, both attached to the word *did*, because it acts as a tense carrier and at the same time the inversion marks the sentence as a question.

In the Tagalog example in Figure 2.7, we have an overt illocutionary force marker, the question marker *ba*. The CV-reduplication on the verb marks imperfective aspect, which is a nuclear operator represented by the ASP node. The infix *<um>* besides marking actor voice, also functions as a status marker, STAT, and indicates realis.

Unlike the order of elements in the constituent projection, which is subject to cross-linguistic variation, RRG makes a very strong prediction about the order of operators within a clause: their relative order is taken to reflect their scopes. That is, before the predicate, clause-level operators precede core operators which in



**Fig. 2.6:** Syntactic projection shown in Figure 2.4, this time including the operator projection

turn precede nuclear operators. Conversely, after the predicate, nuclear operators precede core operators which precede clause operators. (Operators that occur on different sides of the nucleus, e. g. ASP and IF in Fig. 2.7, are not compared in this prediction.) To date, there are very few counter-examples for this generalization (p. c. Van Valin).

### 2.1.4 The Structure of Complex Sentences

To describe the syntax of natural language, it is necessary to be able to tackle more complex sentences, as well. Traditional syntactic theories usually assume two linkage or *nexus* types: coordination and subordination. RRG, however, additionally

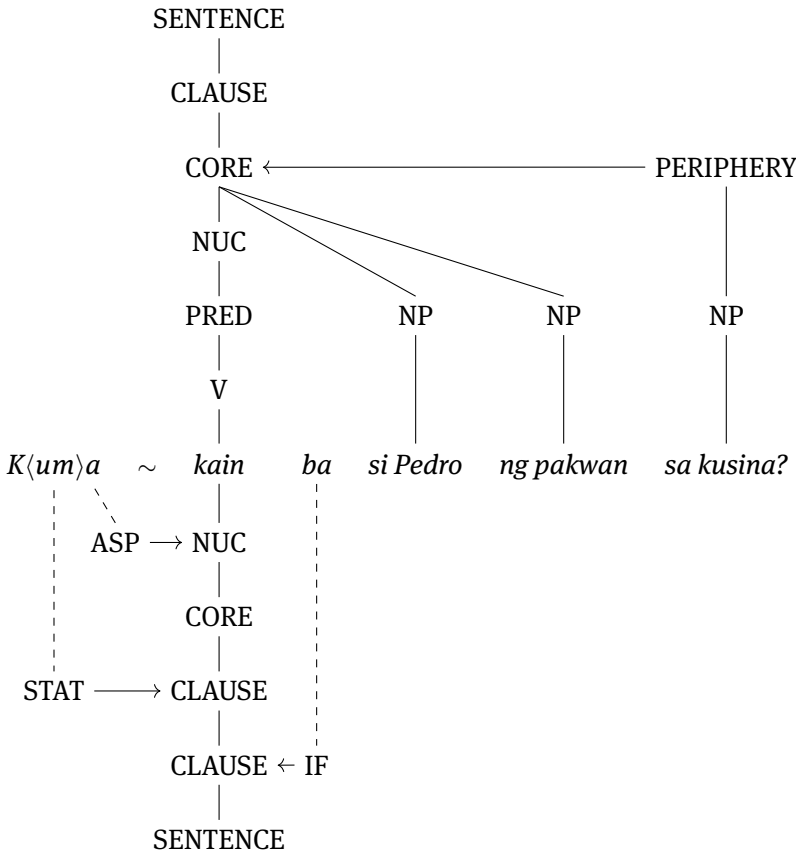


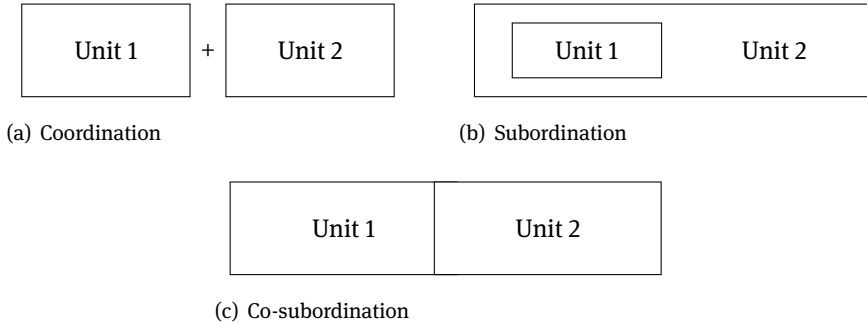
Fig. 2.7: Syntactic and operator projection of example (35)

posits a third nexus type, *co-subordination*. These three nexus types are visualized in Figure 2.8. In general, each of these nexus types can occur at every level of the clause:

(36) **Van Valin (2005:188)**

- a. [CORE... [NUC... ] ··· + ... [NUC... ] ...] **nuclear juncture**
- b. [CLAUSE... [CORE... ] ··· + ... [CORE... ] ...] **core juncture**
- c. [SENTENCE... [CLAUSE... ] ··· + ... [CLAUSE... ] ...] **clause juncture**

In coordination, two units of equal status are joined without any syntactic dependency on one another. In subordination, on the other hand, the second unit is embedded in the first – in the case of subordinate clauses, one might think of



**Fig. 2.8:** Nexus types in RRG (Van Valin 2005:188)

complement clauses or adverbial subordinate clauses (Van Valin 2005:183). Co-subordination is similar to coordination with the crucial difference that the two junctives share operators at the level of juncture.

The default case is the linkage of two units of the same level, i. e. two clauses, two cores, or two nuclei. A noteworthy exception is the asymmetric linkage of clauses. This involves the embedding of a clause in a smaller unit, e. g. a core where it functions as a core argument (Van Valin 2005:198-200).

### 2.1.5 More Layered Structures

Noun phrases and predicative adpositional phrases also have a layered structure consisting of a core and a nucleus below the NP or PP layer (Van Valin 2005:21–30). For the adpositional phrases RRG makes a distinction between predicative and non-predicative adpositions. The former contribute substantive semantic information to the clause, while the latter are in effect free-morphemic case markers that belong to a core-argument. An example for a predicative adposition is the preposition *in* found in the PP *in the kitchen* from example (32). The preposition *to*, in contrast, that marks the indirect object of a transfer verb (*Pedro gave the book to Flor.*), is an example of a non-predicative preposition. As shown in Figure 2.9, only predicative adpositions are assumed to have a layered structure.

The layered structure of the NP is even more elaborate, as shown in Figure 2.10. NPs can have peripheries modifying all three levels: the NP (non-restrictive modifiers), the core<sub>N</sub> (setting PPs), and the nucleus<sub>N</sub> (restrictive modifiers). Preceding and following the core<sub>N</sub> are an optional noun phrase initial position (NPIP) and a noun phrase final position (NPPF), which are not present in all languages. English, for example, has an NPIP, which houses possessive pronouns and demonstratives.

Additionally, NPs show structure on the operator projection, as well, featuring operators at each level. The only nuclear<sub>N</sub>-level modifier is the so-called *nominal aspect*, i. e. operators pertaining to the mass-count distinction, as well as classifiers in classifier languages. Number, quantifiers, and negation target the core level and finally, definiteness and deixis (demonstratives) the NP-level.

As hinted earlier, the nucleus is not restricted to any particular lexical category. While the examples discussed in the previous sections all featured a verbal nucleus, adjectives, adpositional phrases and noun phrases can also form the nucleus of a clause. To a certain extent, the same is true for the nucleus<sub>N</sub> of NPs as well. Consider the following Tagalog sentences that were constructed in analogy to the Nootka data discussed by Van Valin (2005:28):

- |                                                                                                                                                                         |                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <p>(37) <i>Na-tu~tulog ang=lalaki.</i><br/>         STAT.RLS.-IPFV~sleep NOM=man<br/>         The man is sleeping.</p>                                                  | <p>(40) <i>Malaki ang=lalaki.</i><br/>         large NOM=man<br/>         The man is large.</p>       |
| <p>(38) <i>Ang=lalaki</i><br/>         NOM=man<br/> <i>ang=na-tu~tulog.</i><br/>         NOM=RLS.STAT.RLS-IPFV~sleep<br/>         The one who is sleeping is a man.</p> | <p>(41) <i>Lalaki ang=malaki.</i><br/>         man NOM=large<br/>         The large one is a man.</p> |
| <p>(39) <i>Lalaki=siya.</i><br/>         man=3SG.NOM<br/>         He is a man.</p>                                                                                      |                                                                                                       |

This flexibility in terms of what can function as the nucleus of the referring expressions suggests that the label NP, while adequate in English, is not appropriate for all languages. Thus, RRG has adopted the more general label RP for reference phrase instead. We will use RP from here on out when discussing Tagalog examples.

## 2.2 Semantic Representation

### 2.2.1 The Predicate

As in the syntactic representation, the predicate also plays a very central role in the semantic representation in RRG. When assigning a logical representation to a sentence, RRG uses a lexical decomposition system to adequately capture the properties of different types of predicates. The decomposition system is based on

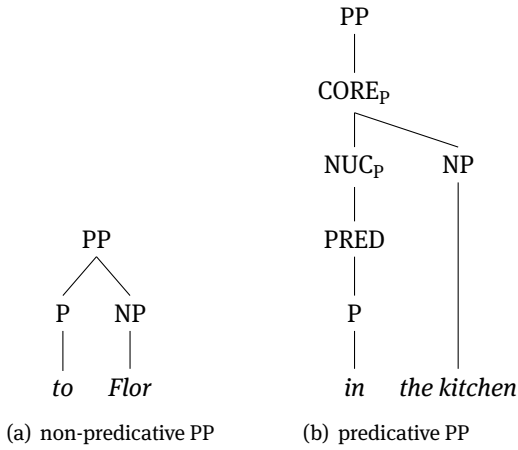


Fig. 2.9: English predicative and non-predicative PP (Van Valin 2005:23)

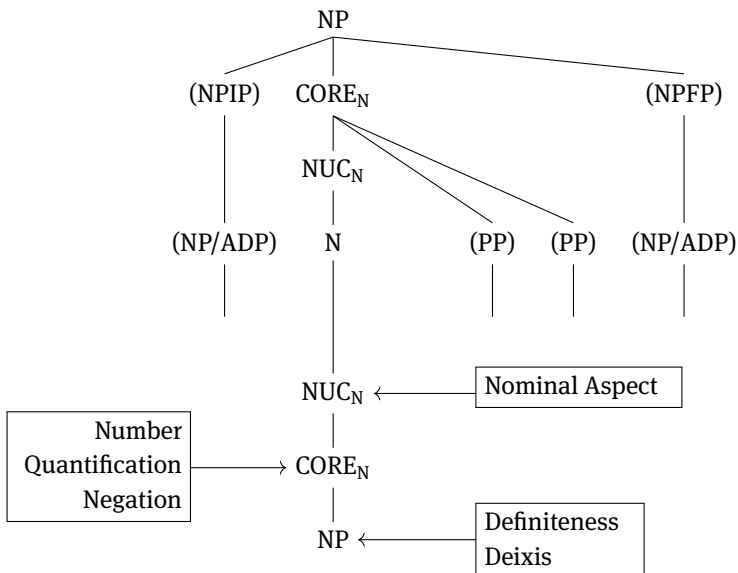


Fig. 2.10: The layered structure of the NP (Van Valin 2005:25)

the *Aktionsart*-classification introduced by Vendler (1967) and uses a modified version of the notation introduced by Dowty (1979).

The original *Aktionsart* classes introduced by Vendler are: *states*, *activities*, *achievements*, and *accomplishments*. Additionally, RRG includes the class of *semelfactives*, *active accomplishments*, which are telic versions of activities, as well as *causative* versions of all the previous classes. A succinct way to characterize the basic (i. e. non-causative) *Aktionsart* classes is to use the following features:

**[±static]** Distinguishes predicates that code “a ‘happening’ from those which code a ‘non-happening’” (Van Valin 2005:33).

**Test:** Can it be used felicitously in response to *What is happening/what happened?*

(42) *What happened?*

- a. *I shot the sheriff.* ∼ ‘shoot’ is [–static]
- b. # *The car is red.* ∼ ‘be red’ is [+static]

**[±dynamic]** Characterizes the predicate regarding the involvement of action.

**Test:** Predicate can be modified by adverbs like *violently*, *vigorously*, *actively*, *strongly*, and *energetically* (Van Valin 2005:33).

- (43) a. *Chris danced vigorously/actively/energetically.* ∼ ‘dance’ is [+dynamic]
- b. *Pat knew the reason \*vigorously/\*energetically.* ∼ ‘know’ is [–dynamic]

**[±telic]** Distinguishes events or states of affairs have an inherent endpoint (telic) from those that do not (atelic).

**[±punctual]** Distinguishes events or states of affairs that take place over an extended period of time from those that are instantaneous or take place at a single point in time.

Table 2.2 shows an overview of the *Aktionsart*-classes and their respective values in terms of these four features. Van Valin (2005:35–42) describes a variety of tests that

**Tab. 2.2:** Characterization of the basic *Aktionsart*-classes (Van Valin 2005:33)

Class	static	dynamic	telic	punctual
State	+	–	–	–
Activity	–	+	–	–
Achievement	–	–	+	+
Semelfactive	–	±	–	+
Accomplishment	–	–	+	–
Active accomplishment	–	+	+	–



can be used to identify the correct value of these features and thus the appropriate class for a given predicate. As the descriptions above may suggest, these tests often involve whether or not the predicate in question can be combined with specific adverbial modifiers or aspectual morphology. Since such a detailed description is beyond the scope of this chapter, the examples shown in Table 2.3 should suffice to make the classes more tangible.

The logical structures of states and activities are taken to be basic in the sense that they do not require additional operators. States are simply represented as **predicate'**( $x, (y)$ ), while activities have the form **do'**( $x, [\text{predicate}'(x, (y))]$ ).

(44) *The car is red.*  $\rightsquigarrow$  **red'**(car)

(45) *The soldiers marched.*  $\rightsquigarrow$  **do'**(soldiers, [**march'**(soldiers)])

Predicates of the remaining classes can be formed from states and/or activities using combinations of the following operators and possibly the connective & 'and then'.

**INGR** ingressive, punctual change of state

**BECOME** gradual process leading to a change of state

**SEML** semelfactive

**CAUSE** causation

For some languages whose morphology reflect this, it is useful to further decompose BECOME to a process operator, PROC, in combination with INGR. Furthermore, it may be appropriate to make finer distinctions regarding types of causation, e. g. by introducing a special operator LET for *permissive* causality. The *Aktionsart* classes can thus be lexically decomposed and represented in the following way:

<b>State</b>	<b>predicate'</b> ( $x, (y)$ )
<b>Activity</b>	<b>do'</b> ( $x, [\text{predicate}'(x, (y))]$ )
<b>Achievement</b>	INGR <b>predicate'</b> ( $x, (y)$ ) or INGR <b>do'</b> ( $x, [\text{predicate}'(x, (y))]$ )
<b>Semelfactive</b>	SEML <b>predicate'</b> ( $x, (y)$ ) or SEML <b>do'</b> ( $x, [\text{predicate}'(x, (y))]$ )
<b>Accomplishment</b>	BECOME <b>predicate'</b> ( $x, (y)$ ) or BECOME <b>do'</b> ( $x, [\text{predicate}'(x, (y))]$ )
<b>Active Accompl.</b>	<b>do'</b> ( $x, [\text{predicate}'_1(x, (y))]$ ) & INGR <b>predicate'</b> <sub>2</sub> ( $(x), (y), (z)$ )

Predicates of the causative classes have the form  $\alpha$  CAUSE  $\beta$  where  $\alpha$  and  $\beta$  can be logical structures of any type, but it is the type of  $\beta$  that determines the class of the predicate, i. e. if  $\beta$  is the logical structure of an achievement, then  $\alpha$  CAUSE  $\beta$  is the logical structure of a causative achievement. Concrete examples for each of the discussed predicate classes are shown in Table 2.3.

Tab. 2.3: Examples (taken or adapted from Van Valin (2005:34–47)) for RRG's verb classes

Class	non-Causative	Causative
<b>State</b>	The boy is <i>afraid</i> . <b>feel'</b> (boy, [ <b>afraid'</b> ])	The dog <i>frightens</i> the boy. <b>[do'</b> (dog, ∅)] CAUSE [ <b>feel'</b> (boy, [ <b>afraid'</b> ])]
<b>Activity</b>	The soldiers <i>marched</i> (in the park). <b>do'</b> (soldiers, [ <b>march'</b> (soldiers)])	The sergeant <i>marched</i> the soldiers (in the park). <b>[do'</b> (sergeant, ∅)] CAUSE [ <b>do'</b> (soldiers, [ <b>march'</b> (soldiers)])]
<b>Achievement</b>	The balloon <i>popped</i> . INGR <b>popped'</b> (balloon)	The cat <i>popped</i> the balloon. <b>[do'</b> (cat, ∅)] CAUSE [INGR <b>popped'</b> (balloon)]
<b>Semelfactive</b>	The pencil <i>tapped</i> on the table. SEMI <b>do'</b> (pencil, <b>tap'</b> (pencil, table))	The teacher <i>tapped</i> the pencil on the table. <b>[do'</b> (teacher, ∅)] CAUSE [SEMI <b>do'</b> (pencil, <b>tap'</b> (pencil, table))]
<b>Accomplishment</b>	The ice <i>melted</i> . BECOME <b>melted'</b> (ice)	The heat <i>melted</i> the ice. <b>[do'</b> (heat, ∅)] CAUSE [BECOME [ <b>melted'</b> (ice)]]
<b>Active Accomplishment</b>	The soldiers <i>marched</i> to the park. <b>do'</b> (soldiers, [ <b>march'</b> (soldiers)]) & INGR <b>be-at'</b> (park, soldiers)	The sergeant <i>marched</i> the soldiers to the park. <b>[do'</b> (sergeant, ∅)] CAUSE [ <b>do'</b> (soldiers, [ <b>march'</b> (soldiers)]) & INGR <b>be-at'</b> (park, soldiers)]

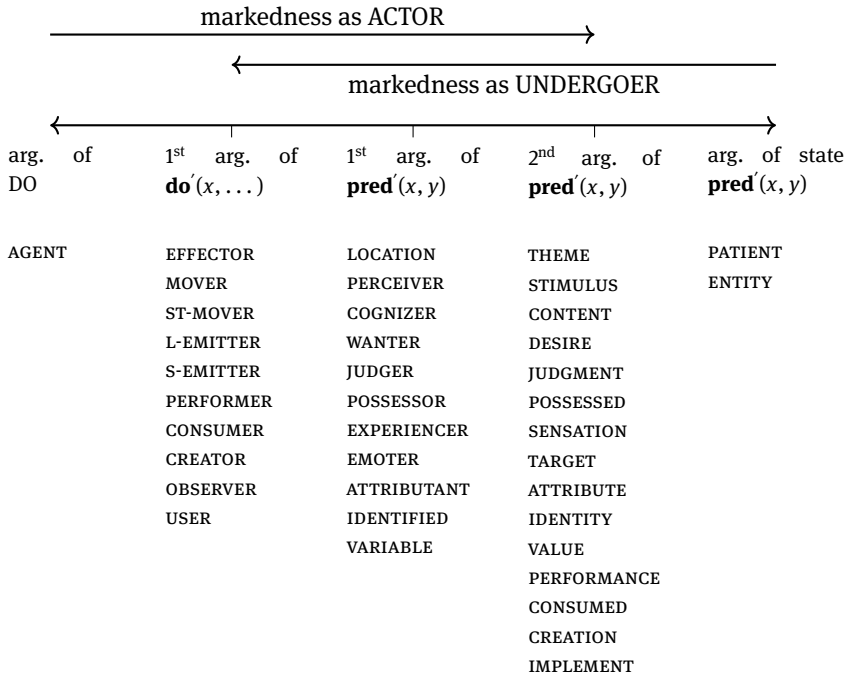


Fig. 2.11: Thematic Relations and Actor-Undergoer Hierarchy (Van Valin 2005:58, 61)

### 2.2.2 Macroroles and Transitivity in Role and Reference Grammar

After discussing the representation of the predicate, let us now turn to the subject of semantic roles, or how the predicate relates to its arguments semantically. This is considered in RRG on two levels of generalization: the level of thematic relations and the level of semantic macroroles.

RRG posits a fairly large number of thematic roles, which are defined by Van Valin (2005:55) in terms of the logical structures and the positions of the arguments in them. These are sufficient to determine the thematic relations of arguments in more complex logical structures, because the thematic relations of arguments remain unchanged when predicates are combined using the operators INGR, BECOME, SEML, and CAUSE. Figure 2.11 shows an overview of these thematic relations grouped according to the positions in which they occur within logical structures. The AGENT is particularly noteworthy in this Figure as the argument of DO, which we have not discussed yet. This operator signals lexicalized agency in logical structures. For instance, the English verb *murder* describes an action committed

intentionally and volitionally, which distinguishes it from the verb *kill* (Van Valin 2005:56). This explains why the following sentences are odd with *murder*, but fine with *kill*:

(46) **Van Valin (2005:56)**

- a. \* *The man accidentally murdered his neighbor.*
- b. *The man accidentally killed his neighbor.*

(47) **Van Valin (2005:56)**

- a. \* *A branch that fell from Pat's tree murdered his neighbor.*
- b. *A branch that fell from Pat's tree killed his neighbor.*

Adverbs such as *accidentally* that contradict the property of AGENTS to act intentionally and volitionally and are thus incompatible with *murder*. Similarly inanimate entities, such as the *branch* in (47), are precluded from being AGENTS. In the logical structures of the two verbs, this is reflected in the presence of DO in *murder* and its absence in *kill*:

**kill**      [do'(x, ∅)] CAUSE [BECOME **dead'**(y)]

**murder** DO (x, [[do'(x, ∅)] CAUSE [BECOME **dead'**(y)]])

A ∅ is used as the second argument of **do'** to indicate that the exact action performed by *x* to trigger the causation is underspecified in the lexical entry of the verbs *kill* and *murder*. Although the type of lexicalized agency we see here is not very common in English, there are other languages, such as Japanese, in which it is much more common (Van Valin 2005:57 citing Hasegawa 1996).

The second abstraction level of semantic roles that are relevant to RRG are the semantic macroroles *actor* and *undergoer*. They generally correspond to the most agent-like and most patient-like argument of a transitive predication. As shown in Figure 2.11, this translates to the argument positions in the logical structure of a transitive predicate in the following way: the least marked macrorole assignment is for the right-most argument to be the actor and the left-most argument the undergoer. The single argument of an intransitive verb can be either an actor or an undergoer. Marked macrorole assignments, however, are possible:

(48) **Van Valin (2005:61)**

- a. [do'(Pat, ∅)] CAUSE [BECOME **have'**(Chris, book)]
- b. *Pat<sub>actor</sub> gave the book<sub>undergoer</sub> to Chris.*
- c. *Pat<sub>actor</sub> gave Chris<sub>undergoer</sub> the book.*

*Pat* is the left-most argument in the logical structure and the actor in both versions. The right-most argument *book*, however, is only the undergoer in (b). In (c), *da-*

*tive* shift allows *Chris*, the first argument of **have'**, to be assigned the macrorole undergoer instead.

The notion of macroroles brings with it the notion of macrorole transitivity or *M*-transitivity, meaning the number of macroroles a predicate assigns. Since there are only two macroroles and each can only be assigned once, the *M*-transitivity of a predicate can be *atransitive* (assigns 0 macroroles), *intransitive* (assigns 1 macrorole), or *transitive* (assigns 2 macroroles). In most cases the *M*-transitivity of a predicate can be determined from its logical structure. If it has more than two arguments, it will typically assign two macroroles and the actor-undergoer hierarchy determines the unmarked macrorole assignment. If a predicate has only one argument, it will usually assign one macrorole: actor if an activity predicate, i. e. **do'**, is involved and undergoer otherwise.

It is worth noting that *M*-transitivity does not always coincide with the semantic valency of a predicate. Obviously, ditransitives are an example of this, since their semantic valency is three, but they still only assign two macroroles, as we have seen in example (48). Another class of examples are activity verbs with a non-referential second argument such as *drink* in the following example:

- (49) **Van Valin and LaPolla (1997:111)**  
*Carl drank beer.*

*Beer* is not considered an undergoer here, because it does not refer to a specific entity. Rather, the sentence could be paraphrased as *Carl engaged in the activity of beer-drinking* or *Carl beer-drank*. And indeed, many languages use noun-incorporation to express this idea and don't realize the second argument in such a case an independent noun phrase. The situation changes, when the second argument is referential. We then shift from an activity reading to an active accomplishment. This is also reflected in the logical structures:

- (50) **Van Valin and LaPolla (1997:111) / Van Valin (2005:47)**  
 a. *Carl drank beer.*  
**do'**(Carl, [**drink'**(Carl, beer)])  
 b. *Carl drank a beer.*  
**do'**(Carl, [**drink'**(Carl, beer)]) & INGR **consumed'**(beer)

One way to think of this is that the second appearance of 'beer' as the argument of **consumed'** is what gives it the status of an undergoer in (b), while the use shown in (a) is *M*-intransitive. The most compelling cross-linguistic evidence for this analysis is probably the observation that in ergative languages, the actor gets absolutive case in the activity case (a), but the case marking shifts to ergative for the active accomplishment case (b). In other words, version (a) is also treated as intransitive in terms of case marking in these languages.

### 2.3 Syntactic Relations in Role and Reference Grammar

One of the things that sets RRG apart from ‘mainstream’ syntactic theories is that it does not posit universal syntactic relations such as subject and direct/indirect object. Instead RRG recognizes *one* syntactic relation, the privileged syntactic argument (PSA), which is characterized by Van Valin (2005:94) as follows:

In all languages there are syntactic constructions in which there are restrictions on the NPs and PPs (arguments and non-arguments) that can be involved in them; these restrictions define a privileged syntagmatic function with respect to that construction.

A crucial point of RRG’s PSA concept is that it is construction specific. So, while other theories may speak of the ‘Tagalog subject’, there is no such thing as *the* ‘Tagalog PSA’. When talking about a PSA, it is necessary to specify both the language and the specific construction with respect to which the PSA is defined.

There are languages, such as Acehnese (Van Valin 2005:90–94), in which all necessary restrictions can be formulated in terms of semantic macroroles or core-argument status. In such languages, therefore, it makes no sense to posit the existence of syntactic relations since either the semantic relations are sufficient to formulate the constraint, or, in cases where all core arguments can be involved, we have a complete neutralization of semantic roles without any restriction, in which case none of the arguments can be thought of as ‘privileged’. Thus, for it to make sense to posit a syntactic relation, we must have a *restricted neutralisation* of semantic roles.

To illustrate these ideas, let us discuss a simple example from English. Consider the following data:

(51) **Van Valin (2005:95–96)**

	Controller	Pivot
a. <i>Chris<sub>i</sub> slapped Pat<sub>j</sub> and then _<sub>i</sub> ran away.</i>	actor	actor
b. <i>*Chris<sub>i</sub> slapped Pat<sub>j</sub> and then _<sub>j</sub> ran away.</i>	undergoer	actor
c. <i>Pat<sub>i</sub> was slapped by Chris<sub>j</sub> and then _<sub>i/*j</sub> ran away.</i>	undergoer	actor
d. <i>Chris ran up to the table and _ slapped Pat.</i>	actor	actor
e. <i>*Chris<sub>i</sub> ran up to the table and Pat slapped _<sub>i</sub>.</i>	actor	undergoer
f. <i>Chris ran up to the table and _ was slapped by Pat.</i>	actor	undergoer

Each of the sentences is made up of two coordinated clauses, where the second clause is missing an argument indicated by an underscore. In each case, the missing argument in the second clause, which we will call the *pivot*, is interpreted as coreferential with an argument of the previous clause, which we will call the *controller*. The macroroles of both controller and pivot are listed after each of the example sentences.

Clearly, there is a restriction on which arguments can act as controller and pivot since (b) and (e) are ungrammatical. However, it is also clear that semantic macroroles are not the way to capture this restriction: undergoers can act as controllers as shown in (c) and they can also act as pivots as shown in (f). To accurately capture what is going on, some reference to syntax is needed. Notice also that we are looking for two PSAs here: one in the first clause (the controller) and one in the second clause (the pivot).

Let us, therefore, re-examine the data in (51) by using the following functions to label controller and pivot in each case instead of using semantic macroroles:

- A<sub>T</sub>** actor of a transitive, active verb  
**U<sub>T</sub>** undergoer of a transitive, active verb  
**d-S** undergoer of a passive verb  
**S** argument (actor or undergoer) of an intransitive verb

The use of the label S reflects that English does not syntactically distinguish actor arguments of intransitive verbs from undergoer arguments of intransitive verbs. Since RRG considers English passive verbs to be intransitive (the optional *by*-phrase coding the actor is taken to be in the periphery), the undergoer of a passive verb is labeled S, as well, but with the added prefix 'd-' to denote that it is an intransitive that was 'derived' via the voice opposition. With these labels, our data look as follows:

(52) **Van Valin (2005:95–96)**

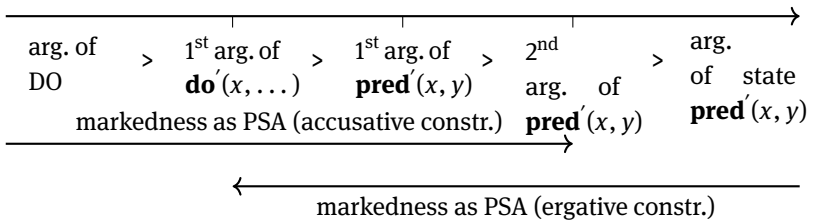
	<b>Controller</b>	<b>Pivot</b>
a. <i>Chris<sub>i</sub> slapped Pat<sub>j</sub> and then _<sub>i</sub> ran away.</i>	A <sub>T</sub>	S
b. * <i>Chris<sub>i</sub> slapped Pat<sub>j</sub> and then _<sub>j</sub> ran away.</i>	U <sub>T</sub>	S
c. <i>Pat<sub>i</sub> was slapped by Chris<sub>j</sub> and then _<sub>i</sub>/*<sub>j</sub> ran away.</i>	d-S	S
	<b>Controller</b>	<b>Pivot</b>
d. <i>Chris ran up to the table and _ slapped Pat.</i>	S	A <sub>T</sub>
e. * <i>Chris<sub>i</sub> ran up to the table and Pat slapped _<sub>i</sub>.</i>	S	U <sub>T</sub>
f. <i>Chris ran up to the table and _ was slapped by Pat.</i>	S	d-S

This gives us a much clearer picture of what is going on: the only ungrammatical cases are the ones labeled U<sub>T</sub>, while A<sub>T</sub>, S, and d-S can all function as both controller and pivot in this construction. The restricted neutralization for this case can be written as [A<sub>T</sub>, S, d-S] meaning that the actor of a transitive (active) verb, the undergoer of a passive verb and the argument of an intransitive verb, regardless of macrorole, can function as controller or pivot.

In English the PSA of most (but not all!) constructions is the same [A<sub>T</sub>, S, d-S]-PSA we have seen in the previous example, which corresponds to the traditional grammatical relation 'subject'. Ergative languages, in contrast, will often exhibit

a [U<sub>T</sub>, S, d-S]-PSA, with the ‘d-S’ label here denoting the actor argument of an antipassive verb. This can be captured in the following PSA selection hierarchy:

(53) **Van Valin (2005:100)**



In accusative constructions, the default choice for the PSA would be the highest ranking argument in the logical structure with respect to this hierarchy; in ergative constructions it would be the lowest. In addition, language-specific constraints may be in place that require PSAs to be macrorole arguments or have a certain case.

To be consistent with this approach to syntactic relations, case marking rules in RRG are not formulated in terms of the grammatical relations subject, direct and indirect object. Instead this is done based on the PSA selection hierarchy and the macrorole arguments of the predicate. In an accusative construction, nominative is assigned to the highest ranking macrorole argument; the other macrorole argument gets accusative case. In an ergative construction, the lowest ranking macrorole argument is assigned absolutive and the other gets ergative case. This can be thought of as a default case that covers non-idiosyncratic case marking. Similar rules can be formulated for the assignment of dative and instrumental case when additionally taking into account the logical structure of the predicate.

## 2.4 The Linking Algorithm

RRG's linking algorithm connects the syntactic and semantic representation in both directions (see Figure 2.1). Linking from semantics to syntax can be thought of as part of speech production, while the opposite direction, from syntax to semantics, can be thought of as part of the comprehension process. In this section, we will briefly discuss how the linking algorithm functions for simple sentences.

In both directions, the algorithm must meet the following completeness constraint:



**Completeness Constraint (Van Valin 2005:129–130)**

All of the arguments explicitly specified in the semantic representation of a sentence must be realized syntactically in the sentence, and all of the referring expressions in the syntactic representation of a sentence must be linked to an argument position in a logical structure in the semantic representation of the sentence.

This ensures that the number of arguments in the clause and in the logical structure are the same and they can be correctly mapped onto each other.

Figures 2.12 and 2.13 show the linking from semantics to syntax and from syntax to semantics. Major steps are represented in green, while case distinctions and minor steps contributing to a larger task are shown in blue.

**2.4.1 Linking from Semantics to Syntax**

We will begin our discussion with the linking procedure from semantics to syntax (Figure 2.12) as this direction is easier to formulate in full generality: we are starting from the semantic side, which is subject to less cross-linguistic variation than the syntactic side. We will illustrate the process with the following example:

(54) *He showed the picture to the woman.*

The first step is to construct the semantic representation of the sentence based on the logical structure of the predicate. This is retrieved from the lexicon. In our case, the result is as follows:

(55) [**do'**(he, ∅)] CAUSE [INGR **see'**(woman, picture)]

In principle, English allows for variable undergoer assignment (*He showed the woman the picture.*), but for this example, we will assume the unmarked case: *he*, the first argument of **do'**, is assigned the actor macrorole and *picture* is assigned UNDERGOER. This leaves the remaining argument *woman* as a non-macro-role argument (NMR).

Then, the appropriate number of macroroles are assigned to the arguments in the logical structure according to the actor-undergoer-hierarchy shown in Figure 2.11.

ACTOR	NMR	UNDERGOER

(56) [**do'**(he, ∅)] CAUSE [INGR **see'**(woman, picture)]

In the next step, the morphosyntactic coding of the arguments is determined depending on language-specific principles. In languages with verb-agreement, the

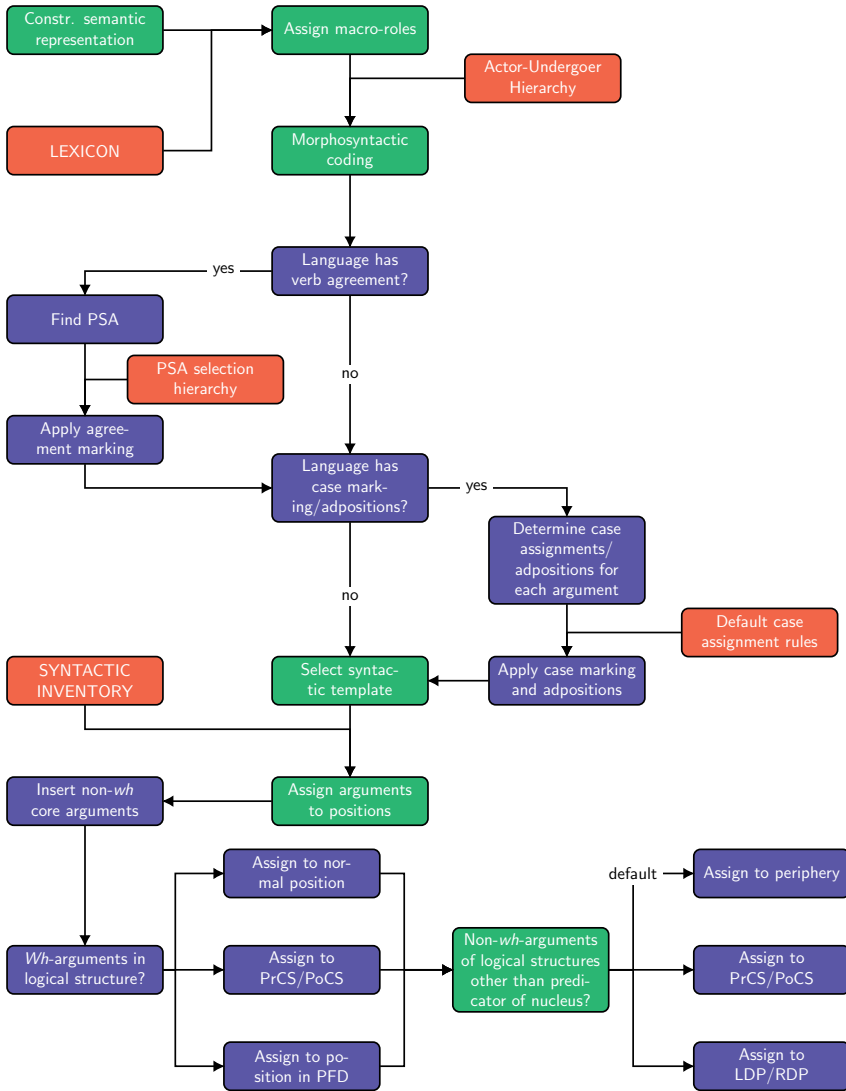
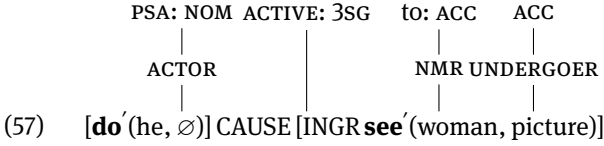


Fig. 2.12: Linking from Semantics to Syntax (flow chart based on Van Valin 2005:136)

corresponding PSA is determined according to the language’s criteria and the appropriate marking is applied to the verb. If the language has case-marking, default rules are applied assigning the appropriate case-markers and/or adpositions to the arguments in the semantic representation.



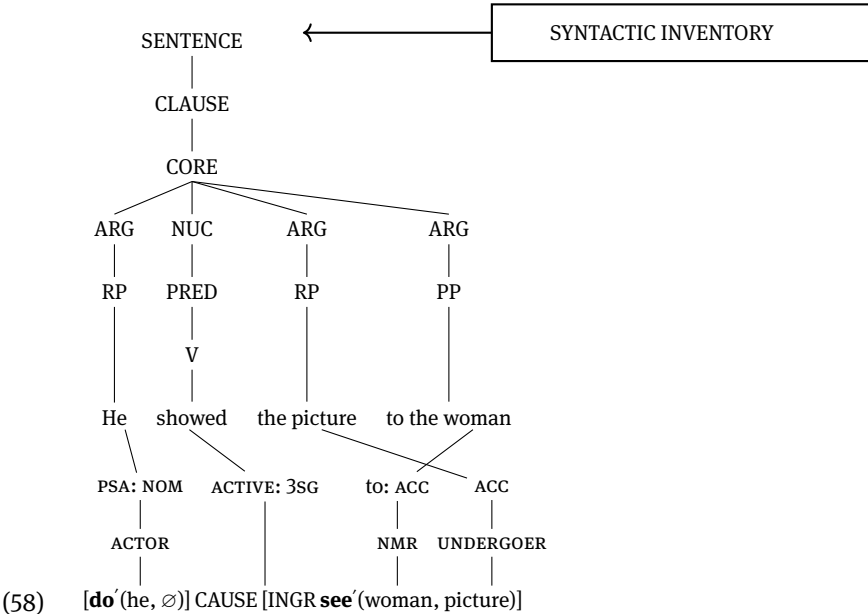
In our example, we have an accusative construction, which makes the highest ranking argument according to the PSA selection hierarchy (53) the PSA. This gives us 3SG agreement on the verb. The PSA is also assigned NOMINATIVE case, while the lowest ranking argument on the PSA selection hierarchy, the UNDERGOER is assigned ACCUSATIVE. Finally, the non-macrorole argument *woman* gets the preposition *to* which assigns ACCUSATIVE case.

Now, a syntactic template can be selected according to the following principle:

**Syntactic Template Selection Principle (Van Valin 2005:129–130)**

The number of syntactic slots for arguments and argument-adjuncts within the core is equal to the number of distinct specified argument positions in the semantic representation of the core.

Some languages may have an additional addendum to this principle. English, for example, requires all cores to have a minimum syntactic valency of one, such that even for atransitive predicates a template with a core-argument slot is selected. In our example, a core template with three argument slots is selected:

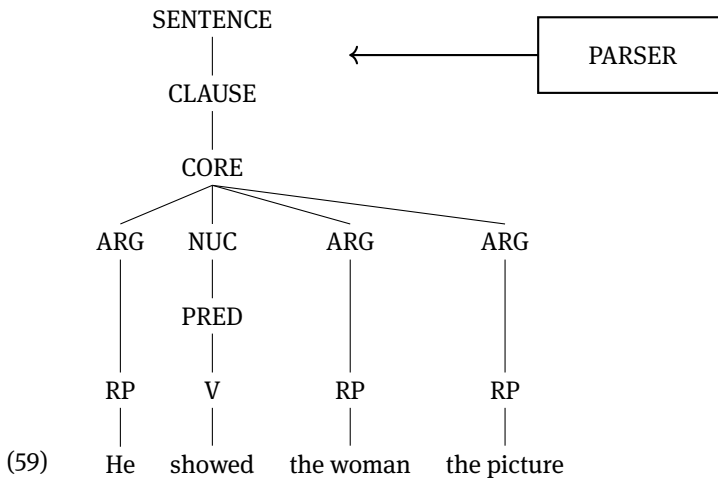


In the final step, the arguments are matched to their respective positions in the syntactic representation.

As hinted previously, the linking process described above can be thought of as a default case. Naturally, not all language-specific idiosyncrasies should be crammed into the general linking algorithm. Some constructions in some languages will require non-standard macrorole assignments, voice oppositions can change the syntactic valency of the required core template, some verbs may require idiosyncratic case marking etc. These specifics are captured in constructional schemas which override the general rules discussed above. Thus, each step could be prefaced with ‘if not otherwise specified by a relevant constructional schema...’.

### 2.4.2 Linking from Syntax to Semantics

The linking from syntax to semantics begins with a syntactic structure provided by the parser. To illustrate the linking algorithm in this direction, we will use a slightly different example:



The first step is to determine the macrorole arguments and, if present, the other core arguments of the clause and with this we are plunged in to the complexity of this linking direction. This step involves a case distinction: 1. For intransitive verbs, there is only one argument, which is assigned a macrorole or direct core-argument status. 2. For transitive verbs in languages without a voice opposition, case marking and/or word order can be used to assign the macroroles correctly. In languages with a voice opposition, the constructional schema for the voice constructions must be consulted to identify the macrorole arguments. The cases shown in Figure 2.13 are

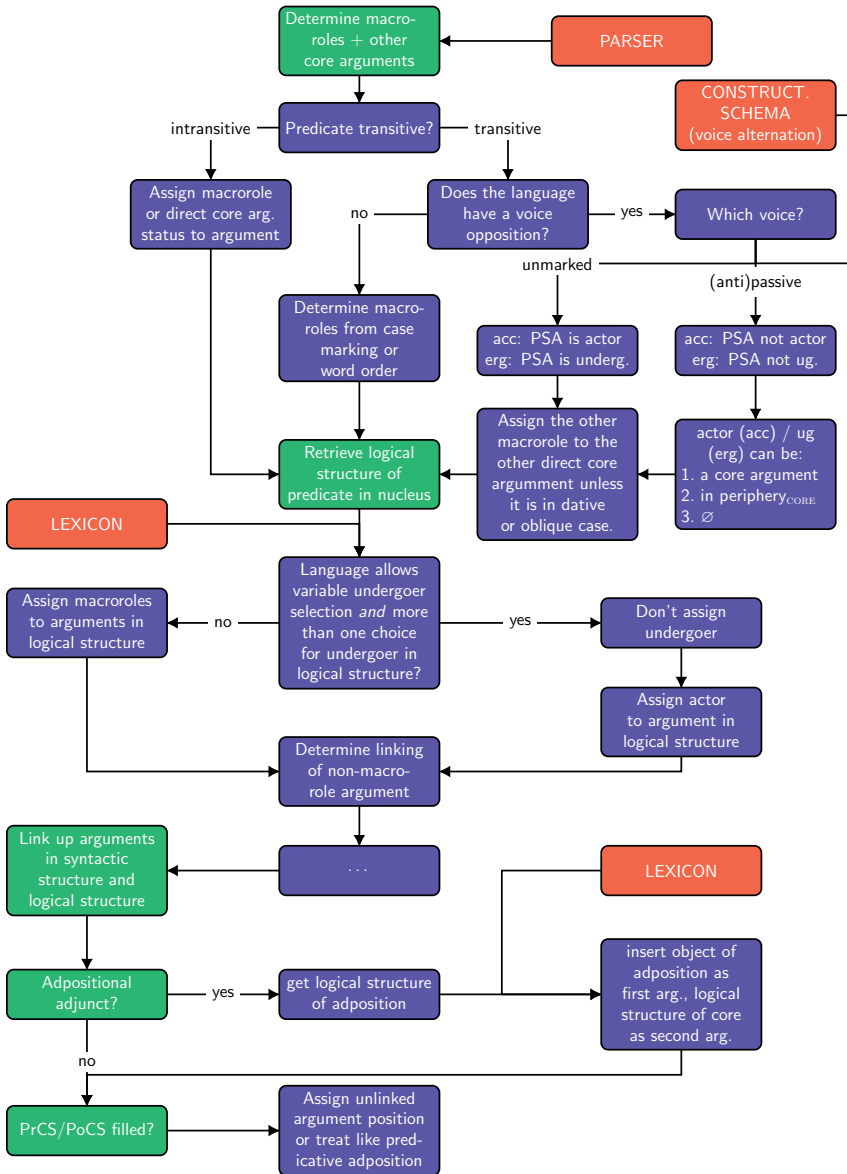
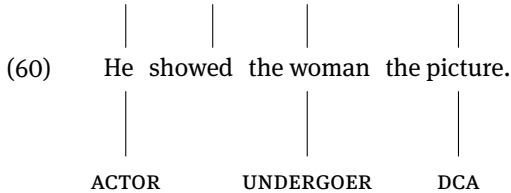
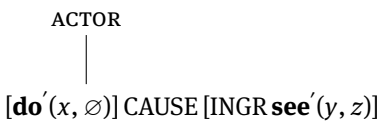
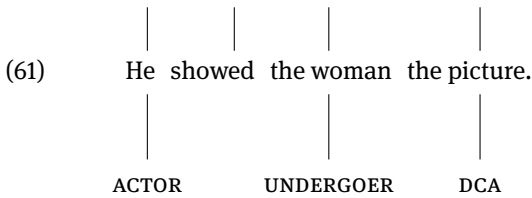


Fig. 2.13: Linking from Syntax to Semantics (flow chart based on Van Valin 2005:149–150)

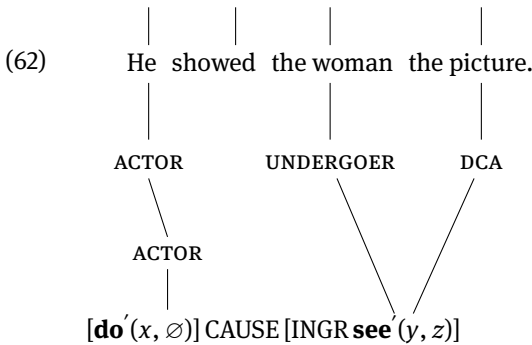
for an accusative system with active and passive voice and for an ergative system with active and antipassive voice. In our example, we have an active construction telling us to assign its PSA the role of actor. The dative shift construction we have here has two direct core arguments following the nucleus. The first is the UNDERGOER leaving the second one without a macrorole labeled simply as non-macro-role argument direct core argument (NMR-DCA).



In the next step, the logical structure of the predicator in the nucleus is retrieved from the lexicon and the macroroles are assigned in the same way this was done in the linking from semantics to syntax – with one exception: if the language allows variable undergoer choice – as English does – then the undergoer macrorole is *not* assigned.



If a non-macrorole argument is present, the linking algorithm provides further rules to correctly link it depending on the composition of the logical structure and morphosyntactic factors such as case marking. This step has been omitted in Figure 2.13 for simplicity. The relevant rule for our example is, “If there is a two-place state predicate in the logical structure [**see'**] and if the non-macrorole core argument [in our case *the picture*] is not marked by a locative adposition or dative or a locative-type case, then link it with the second argument position in the state predicate and link the other non-actor core argument (if there is one) [in our case *the woman*] to the first argument position in the state predicate.”



The final two steps shown in Figure 2.13 deal with adpositional adjuncts and any elements found in the PrCS or PoCS, which are not directly relevant to our example.

## 2.5 A Frame-Based Approach to the Syntax-Semantics Interface

Osswald and Kallmeyer (2018) outline a formalization of the RRG-framework that puts a stronger emphasis on mathematical and logical rigor than was done previously. Not only could such a formal approach serve as a basis for a computational implementation of the theory, but the theory as a whole could profit since this would help to identify and fix any gaps or inconsistencies that may exist in RRG. One specific issue Osswald and Kallmeyer (2018:357) name is the lack of an integrative perspective on syntactic and semantic composition. As we have seen above, it is assumed in the linking algorithm from semantics to syntax that the semantic representation of the sentence is simply constructed from the meanings of the individual words coming from the lexicon without reference to their morphosyntactic properties. Similarly, when linking from syntax to semantics the parser simply provides a full syntactic representation of the sentence. It remains somewhat unclear what information the parser uses other than the sequence of words to generate the syntactic representation, nor is the content of the syntactic inventory precisely specified, i. e. which universal and language-specific templates are stored in the inventory and how exactly are they combined to larger structures.

### 2.5.1 Formalizing the Syntactic Representation

Osswald and Kallmeyer (2018:358–371) retain trees as the mode of representing syntactic structure, albeit with a crucial modification: the leaves of the tree can carry features. This allows combining the constituent projection and the opera-

tor projection into a single tree structure (see also Kallmeyer and Osswald 2017). Instead of an arrow indicating the layer of the clause that an operator modifies, it is represented as a daughter of that clause layer carrying the feature [OP+]. By similar means, the periphery node and the pred node are replaced by the features [PERI+] and [PRED+]. Figure 2.15 shows a syntactic representation following Van Valin (2005) and one following Osswald and Kallmeyer (2018) allowing for direct comparison.

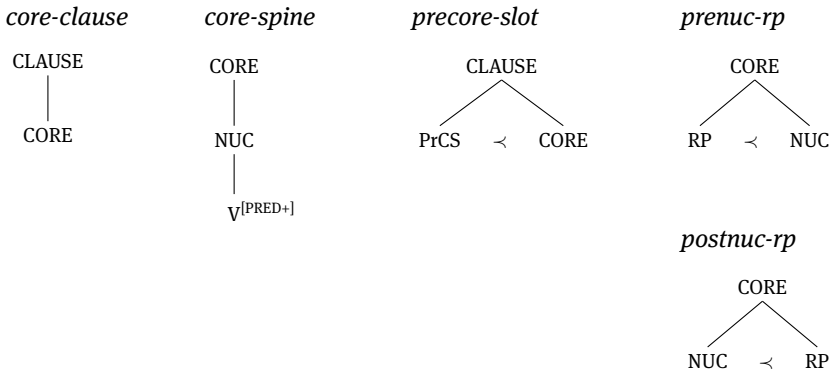


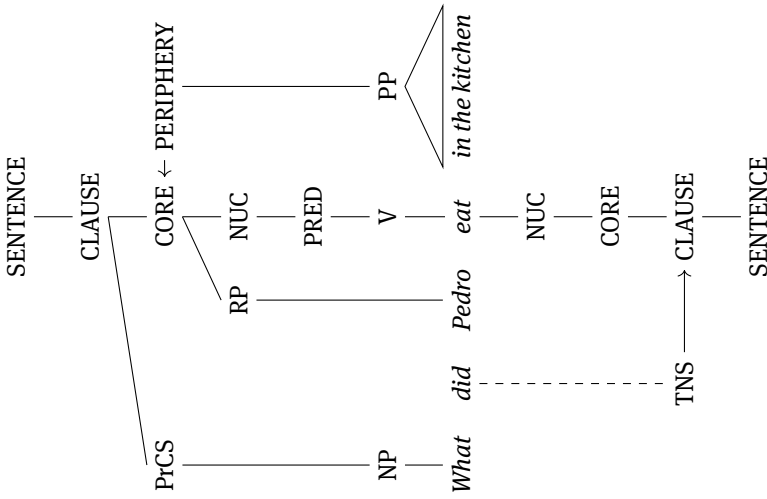
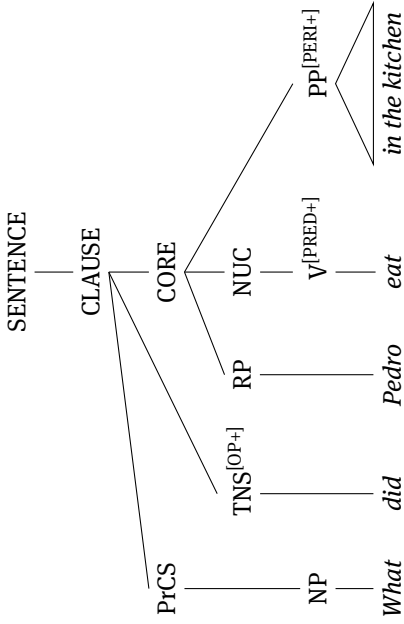
Fig. 2.14: Specifications of syntactic fragments (Osswald and Kallmeyer 2018:371)

Osswald and Kallmeyer (2018:371) further propose formalizing the syntactic templates in the syntactic inventories as minimal models of tree descriptions consisting of dominance and precedence constraints. The trees shown in Figure 2.14 together with the names they are given by Osswald and Kallmeyer (2018) are to be understood as tree descriptions. The specification with the name *postnuc-rp*, for example, is to be understood in the following way:

- There are three nodes  $n_1$ ,  $n_2$ , and  $n_3$ .
- The nodes are labeled CORE, NUC, and RP, respectively.
- $n_1$  dominates  $n_2$ .
- $n_1$  dominates  $n_3$ .
- $n_2$  immediately precedes  $n_3$  (expressed in Fig. 2.14 by ◀).

In this manner, templates can be related to each other by relating their corresponding descriptions. For instance, a *base-transitive* template could be described in the following way using the syntactic fragments from Fig. 2.14:





(a) Van Valin (2005)

(b) Osswald and Kallmeyer (2018)

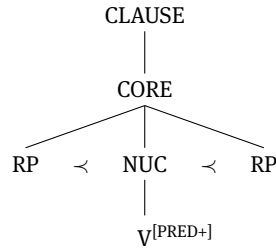
**Fig. 2.15:** Comparison of syntactic representations following Van Valin (2005) and Osswald and Kallmeyer (2018)

(63) *base-transitive* := *core-spine*

^ *core-clause*

^ *prenuc-rp*

^ *postnuc-rp*

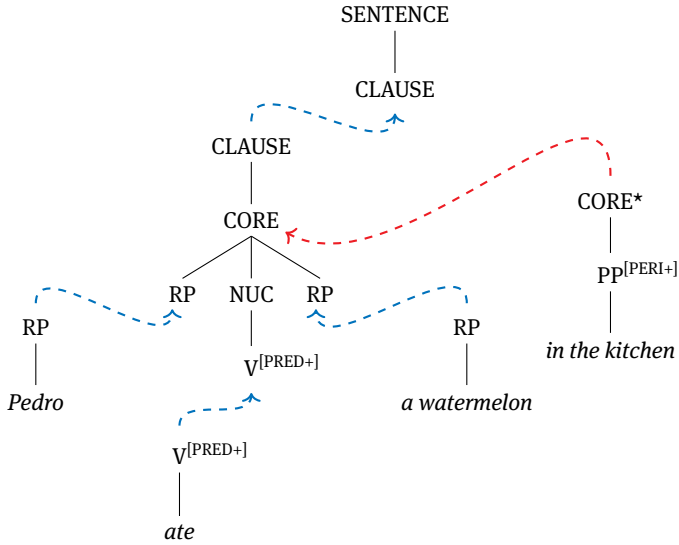


As a result, related templates, e. g. the templates for an English passive construction with and without a *by*-phrase to code the actor, don't simply exist as individual templates without any explicit relationship. Instead, the *passive-with-by-phrase* template would be specified as the template for passive without a *by*-phrase plus the specification for a *by*-PP and constraints on its position.

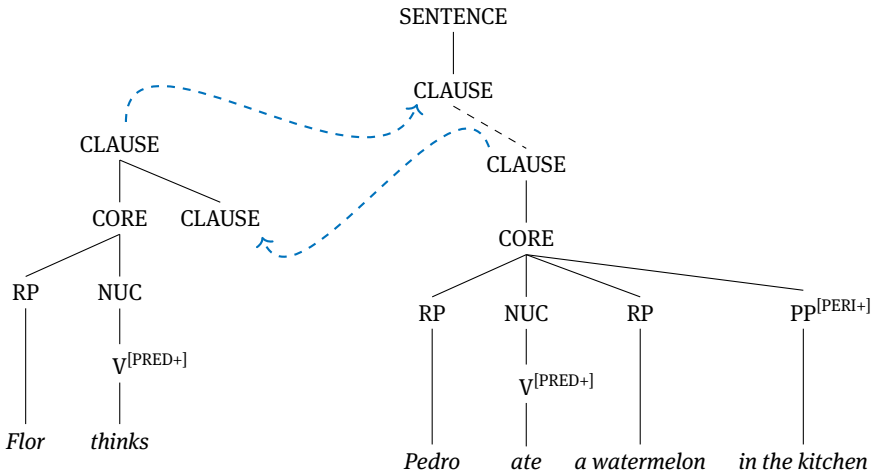
To formalize the combination of syntactic templates to form larger syntactic structures, Osswald and Kallmeyer (2018) build on a comment by Van Valin and LaPolla (1997:75, note 34) that processes like the formation of complex structures from syntactic templates in RRG have already been formalized using Tree Adjoining Grammars (Joshi and Schabes 1997). They posit three mechanisms for combining templates: 1. substitution, 2. adjunction, and 3. wrapping substitution. Examples for substitution and adjunction are shown in Figure 2.16. In a substitution operation, a leaf with label *X* is replaced by a tree with a root carrying the same label as shown in Fig. 2.16 for the two RP-trees. On the other hand, in an adjunction operation, the root label of the adjunction tree (the core-node in Fig. 2.16 marked with an asterisk) specifies its attachment site of the adjunct tree. Substitution is the process responsible for adding periphery elements and operators to existing trees. The somewhat more complex wrapping substitution operation can be thought of as splitting one tree into two parts and substituting each of the two parts into another tree, essentially wrapping one tree around another. An example is shown in Figure 2.17. The clause-node in the right tree is 'split' into two nodes, the lower of which is substituted for the lower clause-node in the left tree. Simultaneously the upper clause-node of the left tree, which now has the lower part of the right tree attached to it, is substituted for the upper clause-node of the right tree.

### 2.5.2 Formalizing the Semantic Representation and Linking

For the semantic representation, Osswald and Kallmeyer (2018:372) make use of decompositional frames. Going back initially to Fillmore (1982), the concept of frames was further developed by Barsalou (1992) who suggested that they are the "fundamental representation of human knowledge in human cognition" (Barsalou



**Fig. 2.16:** Examples for substitution (blue) and (sister) adjunction (red) in formalized RRG (Osswald and Kallmeyer 2018)



**Fig. 2.17:** Example of wrapping substitution (Osswald and Kallmeyer 2018)

1992:21). More recently, Löbner (2014:23) adopts the hypothesis that human cognition operates with a “single general format of representation”, which he argues to be the format of frames.

Slightly different formal definitions of frames have been given by Petersen (2007), Kallmeyer and Osswald (2013), and Löbner (2017). We will discuss the definitions by Kallmeyer and Osswald (2013:276–290) in some detail here since they are not only relevant for the formalization of RRG but also to the frame-based model of discourse proposed by Balogh (2018), which we will discuss in chapter 6.

As a starting point, we need a *signature*, which is defined as follows.

**Definition. Signature (Kallmeyer and Osswald 2013:281)**

A signature is a 4-tuple  $\langle A, T, R, B \rangle$  consisting of

- a finite set  $A$  of attributes,
- a finite set  $T$  of types,
- a finite set  $R$  of relation symbols, and
- a countably infinite set  $B$  of base labels.

Each relation symbol  $r \in R$  has an arity, which we will denote by  $\alpha(r) \in \{2, 3, \dots\}$ . Without loss of generality, we will assume from here on  $B = \{\underline{0}, \underline{1}, \underline{2}, \dots\}$ . With these prerequisites, we can now define a frame as a typed base-labeled feature structure with relations:

**Definition. Typed Base-Labeled Feature Structure with Relations**

**(Kallmeyer and Osswald 2013:281)**

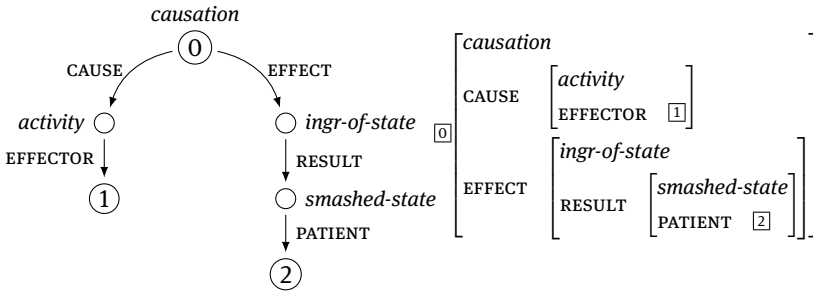
A typed feature structure with relations over a signature  $\langle A, T, R, B \rangle$  is a 5-tuple  $\langle V, \beta, \delta, \tau, \rho \rangle$ , where

- $V$  is a finite set of nodes,
- $\delta$ , the node transition function, is a partial function from  $V \times A$  to  $V$ , i. e.  
 $\delta: V \times A \supset U \rightarrow V$
- $\tau$ , the typing function, is a function  $\tau: V \rightarrow \wp(T)$  that assigns a set of types to each node,
- $\rho$  is a function  $\rho: \{\bigcup V^n \mid n \in \alpha(R)\} \rightarrow \wp(R)$ , such that a tuple  $\langle v_1, \dots, v_n \rangle$  of length  $n$  is mapped to a set of  $n$ -ary relations, and
- $\beta$ , the base-labeling function, is a partial function from  $B$  to  $V$ , i. e.  
 $\beta: B \supset W \rightarrow V$   
 such that for every node  $v \in V$  there exists a base-labeled node  $v' \in \beta(B) \subseteq V$  and a sequence of attributes  $a_1, \dots, a_k$  such that  $v = \delta(\delta(\dots \delta(v', a_1), a_2) \dots, a_k)$ .

To see how such frames can be used to formalize RRG’s logical structures, consider the following example:

(64) **Osswald and Kallmeyer (2018:373)**

[do'(x, ∅)] CAUSE [INGR smashed'(y)]

**Translation to first-order predicate logic:**

$$\exists e' \exists e'' \exists s (causation(\underline{0}) \wedge CAUSE(\underline{0}, e') \wedge EFFECT(\underline{0}, e'') \wedge activity(e') \\ \wedge EFFECTOR(e', \underline{1}) \wedge ingr\text{-}of\text{-}state(e'') \wedge RESULT(s) \wedge PATIENT(s, \underline{2}))$$

In the graph representation, the nodes  $n_i \in V$  are represented as circles with their types  $\tau(n_i)$  written next to them in italics. If a node  $n$  is in the image of  $\beta$ , its base label  $\beta(n)$  is shown inside the circle corresponding to  $n$ . An arrow pointing from a node  $n_i$  to another node  $n_j$  means  $\delta(n_i, a) = n_j$  for some  $a \in A$ . The attribute  $a$  is written above the arrow in small caps. Note that by definition, attributes are functional, i. e. a node cannot be connected to two distinct nodes by the same attribute. The constraint on the base-labeling function  $\beta$  formulated in the definition above ensures that every node in this representation can be reached by following the arrows from at least one of the base-labeled nodes.

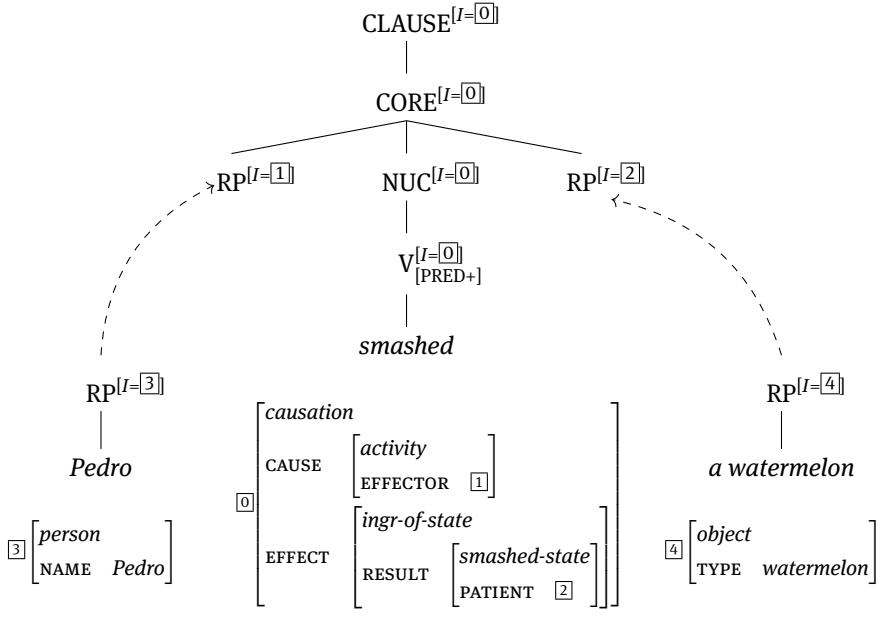
An alternative notation for the same frame is shown next to the graph, a so-called attribute value matrix (AVM). The types are written at the top of an AVM, attributes in the left column below and the corresponding values in the right column. The value of an attribute can be AVM itself.

Note how the frame representation conserves the structure of the lexical decomposition: each of the component predicates, operators and variables translates to one of the nodes in the frame. Kallmeyer and Osswald (2013) also provide a way to translate such frame representations into first-order predicate logic, as shown below the two frame representations.

An essential ingredient that is still missing is that of *unification* of frames (under constraints), which in turn builds on the subsumption relation, which is defined as follows:

**Definition. Subsumption (Kallmeyer and Osswald 2013:281–283)**

Let  $F_1 = \langle V_1, \beta_1, \delta_1, \tau_1, \rho_1 \rangle$  and  $F_2 = \langle V_2, \beta_2, \delta_2, \tau_2, \rho_2 \rangle$  be two base-labeled



unification under  $1 \triangleq 3$  and  $2 \triangleq 4$  leads to

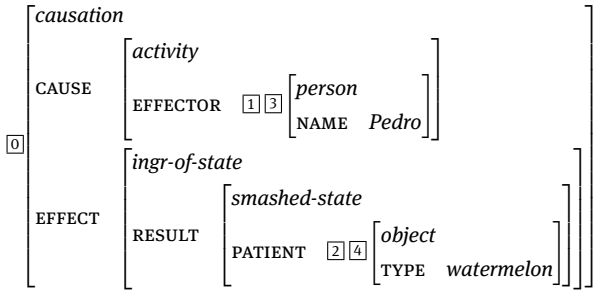


Fig. 2.18: RRG-tree and frame composition

feature structures over  $\langle A, T, R, B \rangle$ . Then,  $F_1$  subsumes  $F_2$ , or  $F_1 \sqsubseteq F_2$ , if a function  $h: V_1 \rightarrow V_2$  exists, such that

- $\forall v \in V_1 \forall a \in A$  : if  $\delta_1(v, a)$  is defined then so is  $\delta_2(h(v), a)$  and  $\delta_2(h(v), a) = h(\delta_1(v, a))$ ,
- $\forall v \in V_1$  :  $\tau_1(v) \subseteq \tau_2(h(v))$ ,
- $\forall n \in \alpha(R) \forall \langle v_1, \dots, v_n \rangle \in V^n$  :  $\rho_1(v_1, \dots, v_n) \subseteq \rho(h(v_1), \dots, h(v_n))$ , and
- $\forall l \in B$  : if  $\beta_1(l)$  is defined then so is  $\beta_2(l)$  and  $h(\beta_1(l)) = \beta_2(l)$ .

Such a function  $h$  is called a morphism of base-labeled feature structures.

The subsumption relation  $\sqsubseteq$  defines a preorder on the set of frames over a given signature. This makes it possible to define the unification  $F_1 \sqcup F_2$  of two labeled feature structures as the least upper bound of  $F_1$  and  $F_2$ . Provided it exists, it is unique up to isomorphism. Now, constraints can be imposed using the base labels. Assume  $\boxed{1}$  is a label of a node in  $F_1$  and  $\boxed{2}$  is a label of a node in  $F_2$ . Let us furthermore assume that  $F_1$  and  $F_2$  have disjoint labels, i. e.  $\text{dom}(\beta_1) \cap \text{dom}(\beta_2) = \emptyset$  (otherwise they can be relabeled<sup>1</sup> to make them disjoint). Then, the unification of  $F_1$  and  $F_2$  under identification of  $\boxed{1}$  and  $\boxed{2}$  is defined as the unification of  $F'_1$  and  $F_2$  as defined previously, where  $F'_1$  is the relabeling of  $F_1$  obtained by adding the label  $\boxed{2}$  to the node labeled  $\boxed{1}$ .

This can be applied in the formalization of RRG following Osswald and Kallmeyer (2018) as shown in Figure 2.18. The tree in the middle is the basic transitive template we have already seen previously. Two RPs are to be joined to it via substitution as indicated by the dashed arrows. The constituents in the trees carry interface features as superscripts. The  $I$ , for individual, cross references each constituent with the corresponding component in the frame representation below the tree. These interface features also give rise to the constraints for the unification of the frame components:  $\boxed{1}$  is identified with  $\boxed{3}$  and  $\boxed{2}$  with  $\boxed{4}$ .

<sup>1</sup> Formally,  $\langle F, \beta' \rangle$  is a relabeling of  $\langle F, \beta \rangle$  if a function  $\sigma: B \rightarrow B$  exists such that  $\beta'(\sigma(B)) = \beta(B)$ . However, to understand the following sections, the intuitive notion of relabeling is sufficient.

## 2.6 Information Structure

Information-structural terminology is notoriously messy with a plethora of different notions and subtle variations in their respective definitions. We will begin this section by defining the topic-comment and the focus-background distinctions as they are used in RRG. Then, we will see how they are represented in RRG's third projection, the *focus projection*, more recently called the *information-structure projection* (Balogh 2020). Finally, we will briefly explore a few other notions and definitions that are commonly used in the information-structure literature.

### 2.6.1 Notions of Information Structure

#### 2.6.1.1 Topic and Comment

The information-structural notions used in RRG build on work by Lambrecht (1986; 1987; 1994; 2000) and references therein. We will begin with the definition of *topic* and *comment*, for which Lambrecht gives the following definition citing Gundel (1988):

**Definition. Topic and Comment (Gundel 1988:210)**

*An entity, E, is the topic of a sentence, S, iff in using S the speaker intends to increase the addressee's knowledge about, request information about, or otherwise get the addressee to act with respect to E. A predication, P, is the comment of a sentence S, iff in using S the speaker intends P to be assessed relative to the topic of S.*

Lambrecht (1994:150) notes that this definition means that the topic must in some sense be part of the *pragmatic presupposition*, which he defines as follows:

**Definition. Pragmatic Presupposition (Lambrecht 1994:52)**

*The set of propositions lexicogrammatically evoked in an utterance which the speaker assumes the hearer already knows or believes or is ready to take for granted at the time of speech.*

In other words, to increase someone's knowledge about *E* or request information about *E* requires that *E* is already present in the discourse or otherwise familiar to the interlocutors. As a result, topics are often said to be 'presupposed'. Lambrecht (1994:151), however, recommends to express this as being in the presupposition since

What is presupposed in a topic-comment relation is not the topic itself, nor its referent, but the fact that the topic referent can be expected to play a role in a given proposition, due to its status as a center of interest or matter of concern in the conversation. It is this property



that most clearly distinguishes topic arguments from focus arguments, whose role in the proposition is always unpredictable at the time of utterance. (Lambrecht 1994:151)

The quote above mentions the distinction between the *topic referent* and the *topic expression*, i. e. the expression that is used to refer to the topic referent in a given sentence. Since different expressions can be used to refer to the same entity (e. g. pronouns, synonyms), a different topic expression does not necessarily imply a different topic. Note also that it is not required that every sentence have a topic.

### 2.6.1.2 Focus and Background

Before turning to some examples, we will define the second information-structural division: focus and background. However, we first need to define the *pragmatic assertion* of a sentence:

**Definition. Pragmatic Assertion (Lambrecht 1994:52)**

*The proposition expressed by a sentence which the hearer is expected to know or believe or take for granted as a result of hearing the sentence uttered.*

This allows us to now define focus based on the notions of pragmatic assertion and pragmatic presupposition:

**Definition. Focus / Focus of the Assertion (Lambrecht 1994:213)**

*The semantic component of a pragmatically structured proposition whereby the assertion differs from the presupposition.*

For short, this is often condensed to the following ‘formula’:

$$(65) \text{ FOCUS} = \text{ASSERTION} - \text{PRESUPPOSITION}$$

In words, focus is the assertion minus the presupposition, or put in another way, “*the part that is asserted in a declarative utterance or questioned in an interrogative utterance*” (Van Valin 2005:69). The part of the sentence that is not the focus is referred to as the background. While, as mentioned above, topicless sentences are possible, it would not make sense for a sentence not to have a focus.

Let us now turn to some examples to illustrate the notions we have just defined and simultaneously introduce the focus types according to Lambrecht (1994:221–238). In each of the examples, the target sentence will be the response by speaker B. Speaker A’s utterance will provide different contexts for the same response by speaker B which will give it different information-structural properties in each case. The first focus type we will discuss is *narrow focus*, in this case, more precisely *argument focus* (small caps used to indicate focal accent):

(66) **Contrastive Narrow Argument Focus<sup>2</sup>****A:** *Did John buy a MERCEDES?***B:** *No, he bought an AUDI***presupposition** John bought *x*.**assertion** John bought an Audi.**new information** *x* = 'an Audi'**focus** 'an Audi'

Based on A's question, B can assume that A will take for granted that John bought something. This is captured by the variable *x* in the presupposition formulated above. B now corrects A by asserting that it was an Audi (and not a Mercedes) that John bought, thus providing A with the new information that the *x* in the presupposition is an Audi. The presupposition and the assertion differ precisely in the expression *an Audi*, which makes it the focus of the sentence. It is, however, important to note that the referent of the focus need not be new in the discourse, rather what is new is the relationship between the focus referent and the open proposition formed by the pragmatic presupposition. Another example of narrow focus is the following:

(67) **Completive Narrow Argument Focus****A:** *What did John buy?***B:** *He bought an AUDI.***presupposition** John bought *x*.**assertion** John bought an Audi.**new information** *x* = 'an Audi'**focus** 'an Audi'

The same line of reasoning can be applied as in the example above. As a result of the question, B can assume that A will take for granted that John bought something. The assertion and the presupposition differ in the argument *an Audi*, which is again in narrow focus. The main difference between the two is contrast: in (66), since B is correcting A, the *Audi*, which is in narrow focus in B's utterance is directly contrasted with the *Mercedes* in A's utterance. In (67), there is no such contrast. Rather, B is simply supplying the information corresponding to the *wh*-word in A's question. This is referred to as completive or information focus.

The counterpart to *narrow focus* is *broad focus*, which refers to the case that more than one constituent is part of the focus domain. We will see two examples of this, *predicate focus* and *sentence focus*.

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<sup>2</sup> Examples (66–69): based on p. c. Van Valin.

(68) **Predicate Focus****A:** *What did John do?***B:** *He bought an AUDI.***presupposition** John did  $x$ .**assertion** John bought an Audi.**new information**  $x$  = ‘bought an Audi’**focus** ‘bought an Audi’

Here, A’s question evokes the presupposition that John did something. The unspecified action is represented above by the variable  $x$ . B’s response provides a value for  $x$  in the form of the predicate and its undergoer argument, which together form the focus of his utterance. Notice that in this case, the topic-comment division and the focus-background division both divide the sentence in the same way. Since A is requesting information about John, he is the topic and the remainder of the sentence is the comment. Thus, topic and background are the same (*John*), as are focus and comment (*bought an Audi*). This is not necessarily always the case. While the topic is always part of the background, it need not be identical to it. Similarly, the focus will always be part of the comment, but not necessarily identical to it.

Finally, consider the following example of sentence focus:

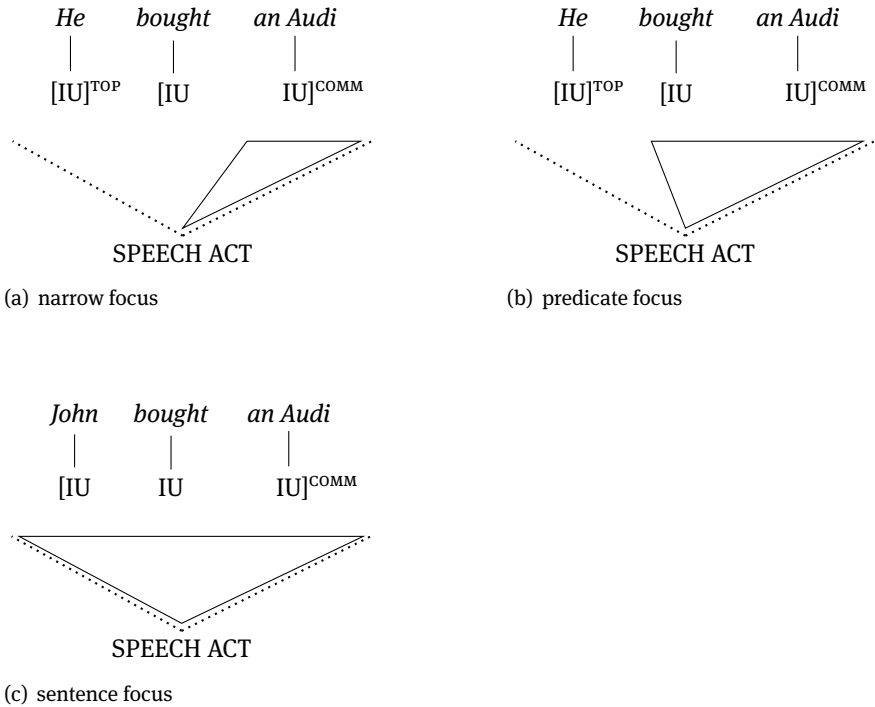
(69) **Sentence Focus****A:** *What’s new?***B:** *John bought an AUDI.***presupposition** none**assertion** John bought an Audi.**new information** John bought an Audi.**focus** John bought an Audi.

In this case, due to the generality of A’s question, no particular presupposition is in place. This makes the entire sentence by B new information and the focus domain encompasses the entire sentence.

## 2.6.2 Representation of Information Structure in Role and Reference Grammar

In addition to the constituent and operator projections, RRG posits a third projection to represent information structure: the focus projection (Van Valin 2005:77-80) or, as more recently proposed, the information-structure projection (Balogh 2020).

Information-structure projections for the the focus-type examples discussed in the last section are shown in Figure 2.19. Although graphically separate, the



**Fig. 2.19:** Information-structure projections for the examples given in the previous section

information-structure projection is related to both the constituent and the operator projection. The influence information structure has on syntactic structure in many languages is one connection between information-structure and constituent projection. The other are the information unit nodes ‘IU’ below the basic information units of the utterance. These can be thought of as the minimal focus domains, which were labeled like their syntactic counterparts, e. g. ARG or NUC, in older versions of RRG (Van Valin and LaPolla 1997:214–218). Following Balogh (2020), the information-unit nodes are labeled with topic ‘TOP’ and comment ‘COMM’ to represent the topic-comment division of the utterance.

Below the information units, dotted lines demarcate the potential focus domain (PFD), the maximal possible focus domain or the part of the sentence that can contain focal material. A solid triangle is used to indicate which information units actually are in focus, the so-called actual focus domain (AFD). The information-structure projection is anchored in the SPEECH ACT node at the bottom. The illocutionary-force operator specifies what type of speech act the utterance is (declarative, interrogative,...) and the PFD must fall within its scope. This ties

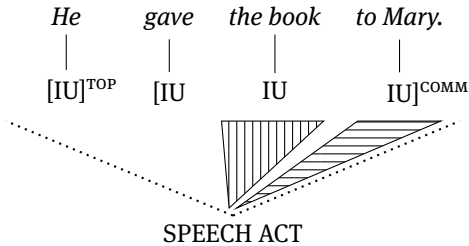
together the operator projection and the information structure projection. Note that the PFD is not necessarily coextensive with the clause. Although this is the case in English, languages like Italian or Mandarin prohibit focal material before the nucleus (Van Valin 2005:79). In these languages, the PFD begins with the nucleus and excludes any information units occurring before it.

An utterance is not limited to having only one AFD. The following example contains both an argument in contrastive focus and one in completive focus. To distinguish them in the information-structure projection, the corresponding triangles are filled with vertical and horizontal lines respectively:

(70) **Van Valin (2005:73)**

**Q:** *Who did Bill give the book to and who did he give the magazine to?*

**A:** *He gave THE BOOK to MARY and THE MAGAZINE to SALLY.*



In this example, *the book* is explicitly contrasted with *the magazine*, while *Mary* supplies the the information requested in the question by the *wh*-word *who*. This example also shows that it is possible for an utterance to have more than one focus domain.

### 2.6.3 Further Information-Structural Notions

Before moving on to the main section of this work, I would like to introduce a few additional information-structural notions that are commonly used in the information-structure literature as some of them will be referenced in the following chapters.

#### 2.6.3.1 Common Ground

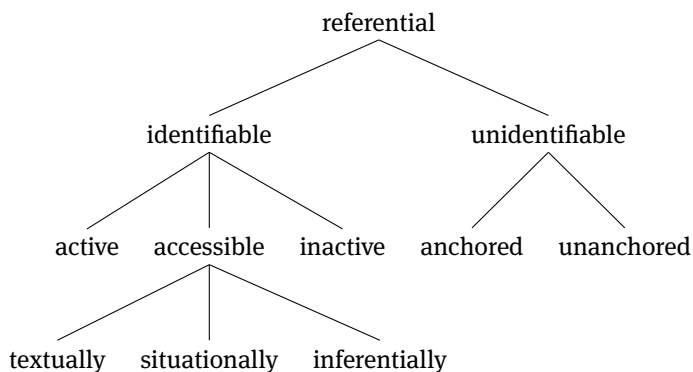
The term common ground (CG) (Stalnaker 2002) refers to the knowledge that is presumed to be shared between interlocutors. This includes a set of propositions that the speakers take for granted (or at least act that way) as well as a set of

entities that are known or have been introduced into the CG during the discourse. Both are constantly updated as communication progresses. Assertions add to the information within the CG, questions express a need for information on the part of one of the interlocutors without adding factual content to the CG. This is referred to as CG-management (Féry and Krifka 2008).

Berio et al. (2017) discuss the distinction between immediate common ground (ICG), the information related to the current situation and the current discourse, and the general common ground (GCG), which refers to the knowledge the interlocutors share about the world independent of the current situation, and show that this distinction manifests in the grammar of some languages. An example of this are the two definite articles in Lakhota, *ki(ŋ)* and *k'uŋ*. While *ki(ŋ)*, similar to the English *the* can be used when referring to entities in both the ICG and GCG, *k'uŋ* can be used for entities in the ICG only. As a result, it is often translated as *the aforementioned*. In chapter 6 we will discuss a frame-based model of discourse by Balogh (2018) that, among other things, models the ICG and the update process of the ICG in terms of frames.

### 2.6.3.2 Givenness

The category of *givenness* expresses in the simplest case whether or not an entity or an information is in the CG. If it is, it is *given*; if not, it is *new* (Krifka and Musan 2012). Van Valin and LaPolla (1997:200) introduce a more fine-grained distinction for the RRG-framework at the time with terminology building on work by Prince (1987) and Chafe (1987). An overview of the terminology is shown in



**Fig. 2.20:** Givenness as cognitive states of referents in discourse (Van Valin and LaPolla 1997:201)

Figure 2.20. New referents (unidentifiable) can be anchored to already known referents or completely unanchored. In either case, after their first mention, they are considered identifiable. Identifiable referents can be active, i. e. the current focus of attention, they can be textually, situationally or inferentially accessible or inactive. In chapter 6, we will discuss the RefLex annotation system (Riester and Baumann 2017), which annotates givenness at an even more fine-grained level. Riester and Baumann (2017) distinguish not only givenness at the referential level, i. e. givenness of referents, but also whether the lexical item has been mentioned in the discourse or not (givenness at the lexical level).

### 2.6.3.3 Question Under Discussion

The main idea behind questions under discussion (QUDs) is to analyze discourse in terms of questions, implicit or explicit, that speakers successively answer. We have seen in previous examples how question-answer pairs help in determining the focus structure of a sentence since they facilitate separating the pragmatic presupposition from the pragmatic assertion and thus determining the focus. Although the details of the formalizations may vary, the QUDs are organized in a way that reflects the flow of discourse, entailment relations between the questions (questions vs. subquestions), and pairs questions up with assertions that provide answers or partial answers to them. Roberts (2012), for example, thinks of QUDs as organized in a QUD-*stack*, while Riester (2019) organizes them into a tree as shown in Figure 2.21. The foci of each of the sentences are easily determined as the part of the sentence that provides the answer to the *wh*-word in the question immediately dominating it:  $A_0$  is sentence focus,  $A_1'$  and  $A_1''$  are predicate focus, and  $A_2'$  and  $A_2''$  are narrow undergoer focus. Riester (2019) further provides the following guidelines for constructing QUDs:

- Q-A-Congruence**      QUDs must be answerable by the assertion(s) they immediately dominate.
- Q-Givenness**        Implicit QUDs can only consist of given (or, at least, highly salient) material.
- Max-Q-Anaphoricity**    Implicit QUDs should contain as much given material as possible.

The Q-A-Congruence constraint captures the obvious requirement that the constructed QUDs actually match the assertions made in the discourse. The next two constraints, Q-Givenness and Max-Q-Anaphoricity, ensure discourse coherence by making sure the QUDs build on the immediate context and forbid the introduction of new material in an implicit question. We will use these tools on several occasions to analyze the focus structure of examples from our data.

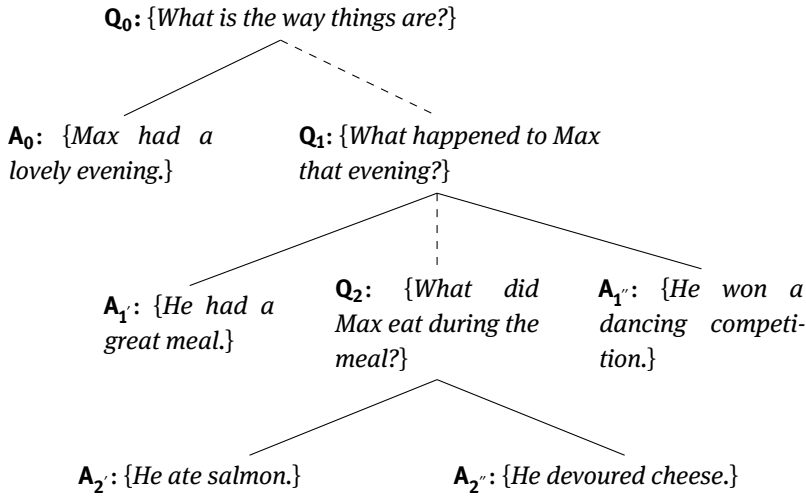


Fig. 2.21: Example of a QUD-tree (Reproduced from Riester 2019, Fig. 7)

#### 2.6.3.4 Contrastive Topic

Contrastive topics indicate alternative topics that are contrasted with one another, such as in the following example from Krifka and Musan (2012):

(71) **Based on Krifka and Musan (2012:30)**

**Q:** *What do your siblings do?*

**A:** [*My sister*]<sup>CT</sup> [*studies medicine,*]<sup>FOC</sup>  
and [*my brother*]<sup>CT</sup> [*is working on a freight ship.*]<sup>FOC</sup>

The question is answered by two coordinated clauses each featuring one of the speaker's siblings as the contrastive topic followed by the focal predicate that specifies what they do, i. e. the answer to the question. This type of incrementally answering a question, or an implicit QUD, is often taken to be the function of contrastive topics (Krifka and Musan 2012; Büring 2015; Riester 2019). Riester (2019) analyzes examples such as the one above as splitting the question up into subquestions which are answered by parallel structures:

(72) **Q<sub>1</sub>:** *What do your siblings do?*

> **Q<sub>1.1</sub>:** *What does your sister do?*

> > **A<sub>1.1</sub>:** [*My sister*]<sup>CT</sup> [*studies medicine,*]<sup>FOC</sup>

> **Q<sub>1.2</sub>:** *What does your brother do?*

> > **A<sub>1.2</sub>:** and [*my brother*]<sup>CT</sup> [*is working on a freight ship.*]<sup>FOC</sup>



Büring (2015) similarly assumes that contrastive topics are associated with alternative questions in a similar way foci are associated with alternative propositions in alternative semantics (see Rooth 1992). In our example, the CT-alternatives would be the set of questions of the form ‘What does *y* do?’ where *y* ranges over the speakers’s siblings. A similar line of thinking is the analysis of contrastive topics as foci nested within a topic (Erteschik-Shir 2007; Krifka and Musan 2012):

(73) **Krifka and Musan (2012:30)**

[*My [sister]<sup>FOC</sup>]<sup>TOP</sup> [*studies MEDICINE,*]<sup>FOC</sup>  
and [*my [brother]<sup>FOC</sup>]<sup>TOP</sup> [*is working on a FREIGHT ship.*]<sup>FOC</sup>**

In both clauses, the referring expression that denotes the sibling the current clause is about are taken to be the topic, while the nouns *sister* and *brother* that identify which of the subquestions the speaker is currently answering is taken to be focal. However, as Krifka and Musan (2012) notes, the contrastive topic does not carry the focal accent, which falls on the comment portion as indicated by the small caps in the examples.

### 2.6.3.5 Framesetters

According to Krifka and Musan (2012:31), the function of framesetters is to “*to limit the applicability of the main predication to a certain restricted domain*” (Chafe 1976). To illustrate this, consider the following examples:

(74) **(Krifka and Musan 2012:31)**

- a. **A:** *How is John?*  
**B:** [*Healthwise / As for his health,*]<sup>FRAME</sup><sub>SETTER</sub> he is fine.
- b. **A:** *How is business going for Daimler-Chrysler?*  
**B:** [*In Germany,*]<sup>FRAME</sup><sub>SETTER</sub> the prospects are good,  
[*In America,*]<sup>FRAME</sup><sub>SETTER</sub> they are losing money.

In the first example, the framesetter specifies the dimension of evaluation of the predicate *fine*, specifying that it applies to *John*’s health situation, as opposed to, for example, his financial situation. In the second example, the framesetters specify geographic domains for which the question is answered separately with each proposition being valid only for the location specified by the framesetter. Although the topics in these examples are clearly *John* and *Daimler-Chrysler*, framesetters are often grouped together with topics.



## 3 Data Collection

This chapter will give an overview of the Tagalog language data that was collected by the project I was working in. The project D 04: *'The role of information structure in sentence formation and construal: a frame-based approach'* was part of the collaborative research center CRC 991 *'The Structure of Representations in Language, Cognition, and Science'*, which was funded by the *Deutsche Forschungsgemeinschaft* (DFG).

During the funding period from July 2015 until June 2019, we made two trips to the Philippines to collect data in Metro Manila. In Sections 3.1 and 3.2, I will discuss the consultants we worked with on each of these trips, the materials we used in elicitation and how the data was processed afterwards. In doing so, I will focus on the materials that are relevant to this work.

Then, in Section 3.3, I will briefly discuss the Tagalog translations of the *Hunger Games* (Reyes 2012b; Reyes 2012a; Reyes 2013), which were used as a data source as well. Finally, Section 3.4 will conclude this chapter by giving an overview of the relevant data and the labels that are used for examples throughout the book to identify which data set they are taken from.

### 3.1 Data Acquisition in the Field 2016

The data collected in 2016 was elicited with Dr. Anja Latrouite in Metro Manila, more specifically in Quezon City in September and October 2016 for the collaborative research center CRC 991, project D 04 *'The role of information structure in sentence formation and construal: a frame-based approach'*, which was funded by the *Deutsche Forschungsgemeinschaft* (DFG).

#### 3.1.1 Consultants

The consultants we worked with came from a wide range of social, economic and educational backgrounds. Their degree of academic education varied from high school graduate over college student to college graduate. In terms of age, they covered the range from 17 to 63 years and thus included students, working adults (e. g. engineer, waiter, nanny, self-employed web-designer) and retired people.

Of our 14 consultants, 5 were male and 9 were female. All of them self-identified as native speakers of Tagalog and all spoke English to varying degrees of proficiency.

A few of them also indicated that they spoke a regional dialect/language with parts of their social circle.

### 3.1.2 Elicitation Materials and Procedures

The main goal was to elicit data relevant to information-structural research. Thus, the context of an utterance – be it a question-answer pair or the context within a narrative – was of particular importance. We selected our elicitation material accordingly with a large part of it aimed at eliciting stories or narratives. This was done in spoken form using picture stories and in written form using translation tasks. Additionally, selected materials from the *Questionnaire on Information Structure* (Skopeteas et al. 2006) were used.

#### 3.1.2.1 Spoken Narratives: The *Frog Stories*

Most of the narratives collected in 2016 were elicited using the well-known ‘*Frog Stories*’ by M. Mayer. These are a series of six picture books for children that each depict episodes centering around a young boy, his pet dog, and a frog. The stories are told using pictures only. In our sessions, we worked with the first three volumes:

1. *A boy, a dog and a frog* (Mayer 1967),
2. *Frog, where are you?* (Mayer 1969), and
3. *A boy, a dog, a frog and a friend* (Mayer 1971).

During elicitation, we worked with groups of two consultants<sup>1</sup>. We asked each speaker to choose one of the books and allowed them to acquaint themselves with the story for several minutes. Then, they were instructed to tell the story to the other consultant, who was, of course, unfamiliar with the story at this point. We encouraged the listener to interrupt the speaker with questions to get some additional question-answer pairs. Since the stories are quite lengthy and involve a lot of details, we allowed the consultants to hold on to the book while they were telling the story so that they could review the pictures as the story went along. Not allowing them to do so could have turned the task into a ‘memory test’, i. e. the consultants would have had to concentrate too much on getting the details of the story line right so that the quality of the data might have suffered.

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<sup>1</sup> In one case, we were faced with an odd number of consultants, and so, one group of three was formed.

### 3.1.2.2 Questionnaire on Information Structure (QUIS)

The *Questionnaire on Information Structure* is a typologically oriented set of stimuli developed by the CRC 632 at the University of Potsdam to investigate information-structural topics in the languages of the world. Thus, it is very extensive and offers a wide range of tasks that target various information-structural phenomena, not all of which are relevant for Tagalog. The full questionnaire consists of four sets of slides with a total of about 1800 slides. Since the time we had to work with each consultant was fairly limited, we selected only a few stimuli that promised to elicit interesting data to use for our work in the field.

As a consequence, we did not use the slides provided with the QUIS manual and simply extracted the stimuli relevant to us and presented them to our consultants on a computer. Normally, different conditions of the same task are separated within a QUIS-session by numerous other tasks, which avoids interference between the two conditions: after completing dozens of other tasks, the consultants will hopefully no longer remember that they were previously shown a similar stimulus together with a similar question. In our case we simply used other tasks that were not part of the QUIS materials to serve this purpose, e. g. eliciting a *Frog Story* between two QUIS tasks.

Let us now go over the QUIS tasks that were recorded in 2016.

#### 3.1.2.2.1 Fairy Tale

The *Fairy Tale* tasks are used in QUIS to elicit topic and focus structures in coherent discourse (Skopeteas et al. 2006:149), which is elicited using picture stories. We selected the picture story entitled “*Tomato Story*”, which is shown in Figure 3.1.

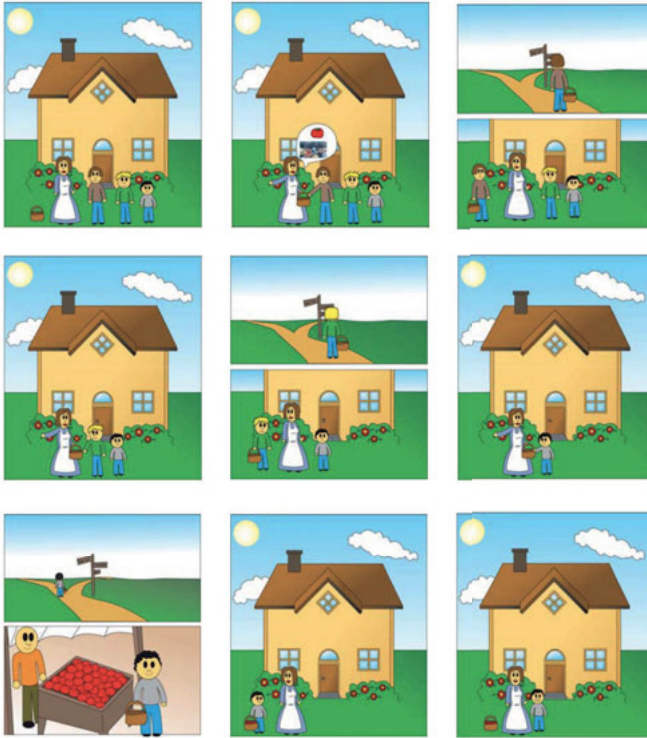
Here a brief summary of the story: A mother is shown with her three children. She first sends the eldest child to the market to buy tomatoes. When he does not find the way to the market, she sends the second child, who also gets lost. Finally, she sends the third and youngest child, who successfully makes it to the market and returns home with a basket full of tomatoes.

We proceeded in a similar way to the *Frog Stories* by allowing consultants to first acquaint themselves with the story and ask comprehension questions if necessary. When working with the full questionnaire, this task would be performed in four conditions:

**Condition A** The consultant is asked to tell the story shown in the pictures from the perspective of a third person observer, i. e. “narrator = off voice” as the QUIS manual puts it.

**Condition B** The story is to be told in the first person perspective of the youngest child.

**Condition C** The story is to be told in the first person perspective of the mother.



**Fig. 3.1:** The *Tomato Story* from the *Questionnaire on Information Structure* (Image from Skopeteas et al. 2006)

**Condition D** The consultant is only shown the beginning of the picture story and asked to tell the story and complete it as they expect it to continue.

After the narration is completed, the consultant is asked to respond to the following five questions:

- (75) Who was asked by his mother to go and buy tomatoes first?
- (76) Why did the mother ask another child to go and buy tomatoes?
- (77) What did the second child bring home?
- (78) Which child brought home tomatoes?
- (79) At the end of the story, are the mother and her youngest child happy or sad?

Depending on the condition the questions are adjusted to address the mother or the youngest child.

For our data collection, we decided to use Condition A and had a consultant translate the questions for us before we began using this material:

(80) *Sino ang=una-ng p(in)a-bili-∅ ng=nanay ng=mga=kamatis?*  
 who NOM=first-LK (RLS)CAUS<sub>PA</sub>-buy-UV<sub>in</sub> GEN=mother GEN=PL=tomato  
 Who was asked by his mother to go and buy tomatoes first?

(81) *Bakit nag-pa-bili ang=nanay sa=iba-ng anak=niya ng=kamatis?*  
 why AV.RLS-CAUS<sub>PA</sub>-buy NOM=mother DAT=other-LK child=3SG.GEN  
 GEN=tomato  
 Why did the mother ask another child to go and buy tomatoes?

(82) *Ano ang=(in)uwi-∅ ng=ikalawa-ng anak?*  
 what NOM=(RLS)bring.home-UV<sub>in</sub> GEN=second-LK child  
 What did the second child bring home?

(83) *Sino-ng anak=niya ang=nag-dala ng=mga=kamatis?*  
 who-LK child=3SG.GEN NOM=AV.RLS-bring GEN=PL=tomato  
 Which child brought home tomatoes?

(84) *Sa=katapusan ng=kuwento, masaya=ba o malungkot ang=nanay at*  
 DAT=end GEN=story happy=Q or sad NOM=mother and  
*ang=bunso?*  
 NOM=youngest  
 At the end of the story, are the mother and her youngest child happy or sad?

These questions were presented to the consultant in written form in Tagalog only. First, they were asked to read the question aloud, then to formulate their response in a full sentence.

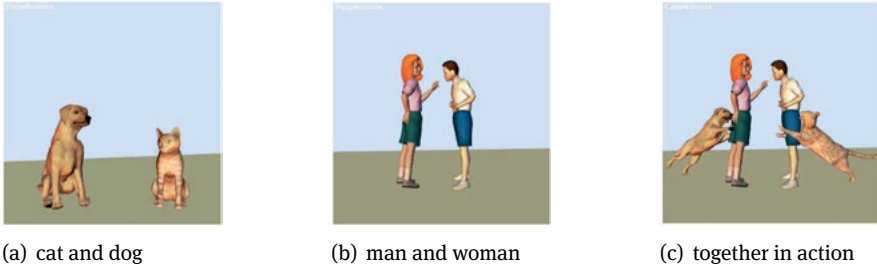
### 3.1.2.2.2 Contrast

The second QUIS task used in the field was the *Contrast* task, which is supposed to elicit contrast in pairing events using picture sequences or single pictures. A shared feature of all stimuli is that they involve two distinct agents acting on two distinct patients. In item 1, which we used, a dog and a cat (the agents) attack a woman and a man (the patients) respectively (See Figure 3.2). The task was performed in three conditions that differed in which – if any – of the participants were introduced first:

**Condition A** agents given, i. e. first Figure 3.2 (a), then (c).

**Condition B** patients given, i. e. first Figure 3.2 (b), then (c).

**Condition C** all new, i. e. only Figure 3.2 (c).



**Fig. 3.2:** Stimuli used for Picture Description task: item 1 from *Contrast* task in the *Questionnaire on Information Structure* (Image from Skopeteas et al. 2006)

As described in the QUIS manual (Skopeteas et al. 2006:107–110), the consultants were asked to give a brief description of the scenes they are shown. In Conditions A and B they were to assume that the scene shown in the first picture takes place first and the second scene some time later, e. g. after several minutes. They were also instructed to focus on the figures and actions in the foreground of the picture rather than describing details about individual figures or the picture as a whole. The task was conducted using all three conditions.

### 3.1.2.2.3 Giving

The final QUIS task used in our data collection is entitled *Giving* (Skopeteas et al. 2006:36–38). It is meant to study how givenness/newness is reflected in ditransitive constructions. The stimuli consist of four stop-motion films (Condition A–D) of around 20–30 seconds each featuring a man, a woman, and a stick. The conditions differ in how the participants are introduced:

#### **Condition A** all new

The man is shown giving the stick to the woman in front of a tree (scene 1) and she hits him with it (scene 2).

#### **Condition B** given agent

The man is shown approaching a tree (scene 1). He then gives the stick to the woman (scene 2) and she hits him with it (scene 3).

#### **Condition C** given theme

The stick is shown as it falls out of the tree (scene 1). In the next scene, the man is shown giving the stick to the woman (scene 2) and she hits him with it (scene 3).

#### **Condition D** given recipient

The woman is shown approaching a tree (scene 1). In the next scene, the man is shown giving her the stick (scene 2) and she hits him with it (scene 3).



**Condition A**

(a) man gives stick to woman



(b) woman hits man

**Condition B**

(c) man approaches tree



(d) man gives stick to woman



(e) woman hits man

**Condition C**

(f) stick falls from tree



(g) man gives stick to woman



(h) woman hits man

**Condition D**

(i) woman approaches tree



(j) man gives stick to woman



(k) woman hits man

**Fig. 3.3:** Screenshots from the stop-motion videos for the QUIS task *Giving* (Skopeteas et al. 2006)

See Figure 3.3 for an overview. When using these materials, we showed one of the videos to our consultant and asked them to describe what they had seen.

### 3.1.2.3 Translation Tasks

In addition to the oral elicitation described above, we also asked our consultants to translate a few texts, the so-called *Unhappy Rat* stories, from English to Tagalog in written form. The task was developed by Dr. Anja Latrouite to investigate the effects of information structure and givenness on voice selection and choice of syntactic construction in Tagalog (Latrouite and Riester 2018). The same texts were also used by Balogh (2020) for elicitation work in Hungarian.

The *Unhappy Rats* comprise 5 brief narratives, which all culminate in (a slight variation of) the same target sentence:

(85) **Unhappy Rats:** *Cats catch rats.*

Since actor and undergoer in the target sentence are both generic nouns, I developed a second set of stories following the model of the *Unhappy Rats* that instead used definite nouns. The result were the *Unhappy Dog* stories. The common target sentences were:

(86) **Unhappy Dog:** *My sister hits the dog.*

In each of the narratives, the target sentence is embedded in a different context so that actor, undergoer, and predicate differ in terms of givenness. Consider, for example, the following two examples taken from the *Unhappy Dog* stories:

(87) *My little sister can be really mean sometimes. She always drives our mother crazy with her constant complaining. She never stops talking and always leaves her toys all over the house. On top of that, [my little sister]<sup>given</sup> [hits the dog]<sup>new</sup> whenever she has the chance.*

(88) *When we were younger, there was a clear pecking order among us siblings. My brother used to hit me, I hit my little brother. And [my little sister]<sup>new</sup> [hit]<sup>given</sup> [the dog]<sup>new</sup>.*

The complete stories as they were used in the field can be found in Appendix A. When working with consultants, they were simply given the English texts and asked to translate them to Tagalog. While in the field we collected two translations of the *Unhappy Rat* stories, and obtained comments from speakers on two translations we already had beforehand. They were judged as sounding natural, the only suggestions being minor lexical substitutions, where a more colloquial or a more formal word was preferred by some consultants. As for the *Unhappy Dog* stories, we

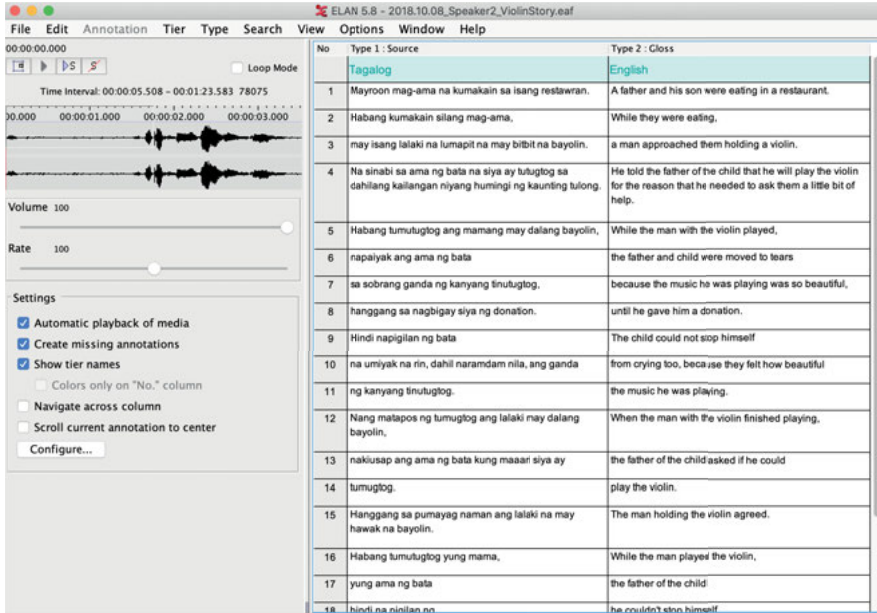


Fig. 3.4: Screenshot of the transcription mode in ELAN (Note: the screenshot shows version 5.8, a more current version than the one used in 2016.)

were only able to get a translation from a native speaker upon our return from the Philippines.

### 3.1.3 Data Processing

#### 3.1.3.1 Recording

To enable us to work independently in the field, we used two different audio recording devices, 1. a Philips Voice Tracer DTW 2510 recording with a sample rate of 48 kHz and  $16 \frac{\text{bit}}{\text{sample}}$  and 2. a Roland R-05 recording at 44.1 kHz sample rate with  $16 \frac{\text{bit}}{\text{sample}}$ . All recordings were saved as \*.wav-files.

#### 3.1.3.2 Transcription

For transcription, the computer software ELAN (version 4.9.4<sup>2</sup>) was used, which was developed at the *Max Planck Institute for Psycholinguistics* in Nijmegen (Wittenburg

<sup>2</sup> Retrieved from <https://tla.mpi.nl/tools/tla-tools/elan/> in September 2016.

et al. 2006). The audio files were imported into ELAN and two annotation tiers were added – one for the Tagalog transcription and one for an English translation.

Whenever possible, we asked the consultants to transcribe their own recordings or to transcribe each other when working in pairs. This was done in three steps. 1. Using ELAN’s segmentation mode, the consultant listened to the recording and pressed the enter key at every clause boundary to create timestamped annotations on the Tagalog and English tiers. 2. Next, in ELAN’s transcription mode, they could listen to each of the segments created in the last step individually and transcribe them onto the Tagalog tier. If necessary, the playback speed could be reduced. 3. Finally, they added a free English translation to the English tier. See Figure 3.4 for a screenshot of this step of the process. It was not always possible to complete the entire transcription process while in the field. What remained was completed by a Tagalog native speaker living in Germany after our return.

### 3.1.3.3 Further Processing

The *Frog Story* data and story about life in Manila in the 60s<sup>3</sup> went towards building a Tagalog field data corpus. To this end they were glossed and Universal part-of-speech tags (Petrov, Das, and McDonald 2012) were added (see Table 3.1).

Initially, glossing was done manually by transferring the data into a Microsoft Excel worksheet. Based on the CoNLL format, the first column was used for the original text, one word per line. The second column contained a morpheme-by-morpheme segmentation of the word followed by its gloss in the third column.

**Tab. 3.1:** Universal POS-tags (Petrov, Das, and McDonald 2012)

POS	Annotation	POS	Annotation
adjective	ADJ	particle	PART
adposition	ADP	pronoun	PRON
adverb	ADV	proper noun	PROP
auxiliary	AUX	punctuation	PUNCT
coordinating conjunction	CCONJ	subordinating conjunction	SCONJ
determiner	DET	symbol	SYM
interjection	INTJ	verb	VERB
noun	NOUN	other	X
numeral	NUM		

<sup>3</sup> A consultant spontaneously told us about his childhood in Tagalog and allowed us to record him and use the data.

2645	\ref	Violin11.004				
2646	\tx	Binigyan	ito	ng	pera.	
2647	\mb	-in-	bigyan	ito	ng	pera
2648	\ge	<-RLS.UV>-	give	DEM.PROX.NOM	GEN	money
2649	\ps	-X-	VERB	DET	DET	NOUN

**Fig. 3.5:** Screenshot of the tab-separated file exported from Toolbox and opened in Apple Numbers

Later a column for part-of-speech tags was added. This was done for most of the *Frog Story* data<sup>4</sup>.

Eventually, the task of glossing was moved to the Field Linguist's Toolbox<sup>5</sup>, a free software developed and maintained by *SIL International*. Our student research assistant, Corinna Langer M. A., used it to create a morpheme-level glossing, add POS tags, and a free translation, while having the data in a format that is much more convenient for a human reader than the CoNLL format. During the process of glossing, the program creates a library of morphemes and corresponding glosses and can give increasingly accurate suggestions for how a given word is to be segmented and glossed. The user then only needs to intervene when the gloss suggested by the program is incorrect. This, of course, greatly accelerates the process. The Field Linguist's Toolbox can export data into the CoNLL format, thus ensuring compatibility with the previously glossed data.

Finally, the data looked as shown in Figure 3.5. The first line contained a Toolbox reference number of the current sentence, the second line contained the original Tagalog text, followed by a morpheme by morpheme segmentation and glossing in the next two lines. The data that had been glossed and POS-tagged in Excel spreadsheets could be converted to this format using a python script.

From here the narratives could be exported into tab-separated files for further annotation and analysis, e. g. as described in chapter 6.

### 3.1.4 Evaluation of the Acquired Data

Before moving on to the second round of data collection, let us briefly discuss how the materials used in 2016 were perceived by our consultants, what went particularly well and what could be improved the next time.

<sup>4</sup> Thanks to our student research assistants, Lara Möllemann and Corinna Langer, for their support with this task.

<sup>5</sup> Retrieved from <https://software.sil.org/toolbox/download/> in March 2018.

Most consultants had a lot of fun working with the *Frog Story* books. Although we encouraged consultants to interrupt each other with questions, this was rarely done. As a result, we were able to record a decent amount of data this way with long stretches of coherent discourse. Very complex sentences were not common, which was to be expected given that the *Frog Stories* were made for children and most consultants told them accordingly.

A possible source of problems when working with the *Frog Stories* in Tagalog is the role animacy plays in the language. The most obvious reflection of this category is the distinct set of case-marking particles (*si, ni, kay*) that is used for proper (typically human) names and kinship terms, such as *si=tatay* ‘NOM=father’ or *si=ate* ‘NOM=eldest.sister’. The animacy hierarchy is, however, also invoked in other contexts.

(89) **Animacy Hierarchy (Van Valin and LaPolla 1997:365)**

1P/2P > 3P human > 3P non-human, animate > 3P inanimate > other

Latrouite (2011) notes its importance in voice selection, which depends on the prominence of actor and undergoer on three levels: 1. information-structural, 2. event-structural, and 3. referential prominence. A higher level of animacy translates to a higher degree of referential prominence. Furthermore, animacy appears to play a role in reference tracking. In Tagalog, there are three possible anaphoric devices for third-person referents: personal pronouns, demonstrative pronouns, and zero anaphora. Although Nagaya (2006a) finds that topicality rather than animacy is the reason for speakers to choose personal pronouns over demonstratives or zeros, his data clearly show that referents of third person personal pronouns are overwhelmingly human, i. e. animate (Nagaya 2006a:89, Table 5). However, he seems to lack data on non-human animates.

In the *Frog Stories* books we used, the only human character is the boy. The remaining protagonists are all animals, thus animate but non-human. This difference in animacy could affect our speakers’ morphosyntactic choices but also have information-structural effects: one way of interpreting Nagaya’s (2006) findings would be that speakers tend to select human referents as topics. Our consultants, however, gave us some reason to believe that they treated the animal protagonists on par with the boy. First, some of them used the case markers used for personal names for the animals, i. e. *si=palaka* instead of *ang=palaka* ‘NOM=frog’. Secondly, they also used personal pronouns to refer to the animals, especially when they were acting alone, but also when the boy was present as in the following example:

(90) **2016-1-Frog3**

*At na-galit ang=bata; sa=aso;*  
and STAT.RLS-get.angry NOM=child DAT=dog  
And the boy got angry at the dog,...

*Kasi=nga, akala ng=bata na p(in)atay-Ø=niya<sub>j/#i</sub>*  
 because=PTCL belief GEN=child COMP (RLS)kill-UV<sub>in</sub>=3SG.GEN  
*ang=pagong.*  
 NOM=turtle

...because the boy thought he (dog) had killed the turtle.

In the second sentence, the dog is referred to by the third person genitive pronoun *niya* showing that the speaker has no problem using personal pronouns for animate non-human referents or, according to Nagaya (2006a), selecting a non-human topic. Finally, in many cases, consultants speculated about the mental state of the animals and discussed what they were thinking and feeling. This strongly suggests that they were seen as anthropomorphized. Nevertheless, it would be a good idea to gather some additional data where only human referents interact with each other.

Another interesting point that we will have a closer look at in chapter 6 is that the use of third person plural and third person singular personal pronouns was sufficient in most situations to unambiguously refer to the most relevant participants: in book one, the boy and the dog (third person plural) vs. the frog (third person singular); in book three, the boy, the dog, and the frog (third person plural) vs. the turtle (third person singular). This eliminated the need to use the different third person anphoric devices based on information-structural considerations as described by Nagaya (2006b). Therefore, it would be interesting to elicit stories with not only human referents but with *individually* acting human referents.

Another concern regarding the picture stories pertains to the givenness of the referents in the narratives. Naively, one would expect speakers to introduce participants as new, when they appear the first time. In some cases, this was done using the presentational *may*-construction, which is said to be used in such ‘all new’ contexts. Here several examples taken from the beginning of the *Frog Stories*:

(91) 2016-3-Frog3

*May bata-ng mangingisda sa=tabi ng=ilog.*  
 EXIST child-LK AV.IPFV.go.fishing DAT=side GEN=river

A boy was going to go fishing on the river bank.

(lit.: There was a boy who was going to go fishing at the side of a/the river.)

Another strategy was to explicitly mark the new referent as new by adding the numeral *isa-ng* ‘one-LK’ before the noun to indicate indefiniteness:

(92) 2016-6-Frog1

*Isa-ng araw, na-pag-isip-an ng=isa-ng bata na*  
 one-LK day ABIL.RLS-STEM-think-UV<sub>an</sub> GEN=one-LK child COMP

*p(um)unta sa=bukid.*  
 ⟨AV⟩go      DAT=field

One day, a boy (*lit.*: one boy) decided to go into the fields.

Here, the speaker refers to the boy as *isa-ng bata* ‘one boy’ to address the newness of this referent at the beginning of the story. Another consultant in a similar situation provided the following construction without the numeral:

(93) 2016-1-Frog3

*Isa-ng araw, na-pag-desisyun-an      ng=bata na mangisda*  
 one-LK day    ABIL.RLS-STEM-decide-UV<sub>an</sub> GEN=child COMP AV.go.fishing  
*sa=lawa...*  
 DAT=pond

One day, a/the boy decided to go fishing in a lake...

Note however, that the omission of *isa-ng* ‘one-LK’ does not necessarily mean ‘*the* boy’, i. e. that the noun phrase is definite. Rather, as it is, it is ambiguous in terms of definiteness, which leaves it to the context to disambiguate. In this case, at the beginning of the story, one could argue that the indefinite reading was intended.

On the other hand, it might also be due to the fact that the consultants could see the pictures while they were telling the story and were aware that the other consultant, the person they were telling the story could see them as well. Thus, even new characters in the story were already part of the (situational) immediate common ground, since they were visible to both speaker and listener and thus needed no special introduction. Furthermore, since the *Frog Stories* share their main characters, the consultant who told their story second, may not have specifically introduced the characters since they were already known to both from the previous consultant’s story.

The QUIS-materials were in general received by consultants with somewhat less enthusiasm. While the *Fairy Tale* picture story posed no problems at all, the pictures for the *Contrast* task and the videos for the *Giving* task were unclear to many. In the *Contrast* task (Figure 3.2), it was not clear that the cat and the dog were attacking the people and not each other or simply jumping around. Some consultants also over-interpreted both the *Contrast* picture sequence and the *Giving* videos (Figure 3.3) since they didn’t seem to make sense to them: there is no reason for the animals to attack the people nor for the woman to hit the man with the stick. This led to wild speculations about the back story or metaphorical interpretations of the sequences.

In general, some consultants appeared to be intimidated by the elicitation procedure. The tasks reminded them of school work and apparently gave them the feeling they were taking a test. Others, however, thoroughly enjoyed the experience,



had a lot of fun and laughed a lot. Thus, it might be helpful to have some materials for the more nervous consultants that are less reminiscent of school work.

As always, there is a certain danger when working with elicited data that the consultants don't speak entirely as they would in a natural conversation. They are aware that they are being recorded and that we are linguists who plan to investigate their language. Especially for the consultants that appeared to enjoy the elicitation sessions, this probably was not so much of an issue since they appeared to focus on story telling after a few minutes and based on the interactions of the consultants with each other, they seemed to forget about being recorded. Most consultants, however, tried not to use English loanwords and resorted to using 'deep Tagalog' words they usually would not use, such as *pulot-pukyutan* 'honeycomb, beehive', and sometimes ended up discussing what the correct Tagalog term was for something they would usually simply say in English, if at all.

## 3.2 Data Acquisition in the Field 2018

On a second trip to the Philippines in October 2018, I had the opportunity to collect some additional data<sup>6</sup>. Since the narratives were the most interesting type of data in 2016, I focused on procuring more narratives and selected my materials accordingly. Just as the last time, I worked with picture stories, but this time, I also tried a more spontaneous approach using story prompts to elicit less constrained narratives.

Additionally, I prepared several QUIS tasks, asked for grammaticality judgments and translations of several short texts including an updated version of the *Unhappy Dog* stories.

### 3.2.1 Consultants

As in the previous trip, the data were collected in Quezon City from speakers that self-identified as native speakers of Tagalog. They covered various professions and levels of education. The 13 consultants were between 19 and 65 years of age and included some speakers that we had worked with in 2016. This time I recorded 4 male and 9 female speakers. Their professions included (music-)teachers, a physical therapist, housekeepers; others were still students or already retired.

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<sup>6</sup> As in 2016, the trip was funded by the *Deutsche Forschungsgemeinschaft* (DFG) as part of the CRC 991, project D 04 '*The role of information structure in sentence formation and construal: a frame-based approach*'.

Tab. 3.2: Speaker Metadata 2018

ID	1	2	3	4	5	6	7	8	9	10	11	12	13
Age	65	44	39	56	19	46	68	27	55	23	25	44	40
Gender	f	f	f	f	m	f	f	m	f	f	m	f	m
Education	col	hs	col	hs	col*	col	col	col	hs	col	col	col	col
<b>Language Background</b>													
L <sub>1</sub>	tgl	tgl	tgl	tgl	tgl	tgl	tgl	tgl	tgl	tgl	tgl	tgl	tgl
L <sub>2</sub>	eng	eng	eng	eng	eng	eng	eng	eng	eng	eng	eng	eng	eng
L <sub>3</sub>	-	-	-	vis	-	hil	-	-	bik	zho	-	-	jpn
L <sub>4</sub>	-	-	-	-	-	-	-	-	-	kor	-	-	-
<b>Speaker uses English<sup>a</sup> with...</b>													
neighbors	3	1	2	1	2	4	3	3	3	4	4	3	2
coworkers	-	-	-	-	2	? <sup>b</sup>	3	3	3	4	4	3	4
classmates	-	-	3	4	2	-	3	3	-	5	4	4	3
vendors etc.	2	1	1	1	1	1	2	3	1	2	3	1	3
family	4	4	5	4	3	5	3	4	1	-	4	4	5
<b>Speaker reads in...</b>													
Tagalog	4	3	2	4	4	5	3	5	4	4	4	3	5
English	4	3	5	4	4	5	5	5	3	4	5	3	5
L <sub>3</sub>	-	-	-	3	-	2	-	-	-	2	-	-	2
L <sub>4</sub>	-	-	-	-	-	-	-	-	-	3	-	-	-
<b>Speaker writes in...</b>													
Tagalog	2	3	2	4	4	4	3	5	4	5	3	4	5
English	2	3	5	2	4	4	5	4	3	5	5	4	5
L <sub>3</sub>	-	-	-	2	-	2	-	-	-	3	-	-	2
L <sub>4</sub>	-	-	-	-	-	-	-	-	-	4	-	-	-

**Genders**

f female

m male

**Education Background**

col college graduate

col\* college student

hs high school graduate

**Languages**

bik Bikol

eng English

hil Ilonggo

jpn Japanese

kor Korean

tgl Tagalog

vis Visayan

zho Chinese

**Frequencies**

1 never

2 rarely

3 occasionally

4 often

5 always

- n/a

**<sup>a</sup> Visaya for Speaker 4**

**<sup>b</sup> Speaker checked both 3 and 4**

This time, I had the rare opportunity of working with a (nearly) monolingual speaker (Speaker ID: 4 in Table 3.2). She listed English and Visaya as her second and third language, but her knowledge of English was very basic and according to other consultants who knew her well, she only knew a few phrases in Visaya. Unfortunately however, she failed to follow the instructions given to her during the tasks and I later found out from other speakers that her Tagalog sounded odd even to them and they often had difficulty understanding what she meant. Thus, the data I collected from her is ultimately useless as it doesn't reflect the way people speak in general nor did it appropriately address the task that it was elicited for. Prior to working with them, I asked each of the consultants to fill out one-page questionnaire. The meta-data acquired in this way is shown in Table 3.2.

### 3.2.2 Elicitation Materials and Procedures

For the most part, the elicitation procedures did not differ much from those used in 2016. Nevertheless, I will go over the various tasks and materials I used and discuss how they were used with particular emphasis on any differences to the previous round of data collection.

#### 3.2.2.1 Father & Son Stories

The *Frog Stories* we used in 2016 were replaced this time by the *Vater und Sohn* (Ohser 2016) stories. These picture stories created by German cartoonist Erich Ohser (a. k. a. E. O. Plauen) are often used in German elementary schools and center around a bald, chubby father and his little son. Thus, in contrast to the *Frog Stories*, the characters in these stories are all human. This avoids the issue discussed above, that the level of animacy of a referent could influence the anaphoric devices speakers choose to refer to it. Additionally, characters of the *Vater und Sohn* stories often act individually forcing narrators to explicitly distinguish several third person referents in some way. In the *Frog Stories* this could often be avoided by using third person plural pronouns to refer to a group, e. g. the boy and his dog in contrast to a third person singular pronoun used to refer to the frog.

With only six to eight pictures per story, the *Vater und Sohn* stories are much shorter than the *Frog Stories*. This, of course, resulted in shorter narratives from our consultants. To compensate, many were willing to record two or even three *Vater und Sohn* stories.

Four picture stories were selected from *Vater und Sohn: Sämtliche Bildgeschichten* (Ohser 2016):

1. *Sanftmut hat Grenzen* ('Submissiveness has its limits', Balloon Story)



(a) Balloon Story

(b) Gift Story



(c) Tree Story

(d) Violin Story

**Fig. 3.6:** The *Vater und Sohn* stories used in 2018 for data collection (Images from Ohser 2016)

2. *Das Geschenk* ('The Gift', Gift Story)
3. *Vorgetäuschte Kraft* ('Feigned Strength', Tree Story)
4. *Hingeschluchzt – hergeschluchzt* ('Sobbing Back and Forth', Violin Story)

They are shown in Figure 3.6. These were printed out and laminated. Consultants were asked to choose which one they would like to narrate and given some time to acquaint themselves with the story and, if necessary, ask questions. Then, they were asked to tell the story out loud to me while bearing in mind that I cannot see the pictures and supposedly do not know the story.

### 3.2.2.2 Story Prompts

Oftentimes in 2016, the consultants felt intimidated by the picture stories, as they reminded them of school and gave them the feeling, they were taking an exam. So for the 2018 data collection, I additionally prepared some story prompts for free narration for consultants that preferred this to the picture story materials. Whenever a consultant seemed reluctant to choose from the *Vater und Sohn* stories, I offered the story prompts as an alternative and gave them the list of story prompts and asked whether they would be more comfortable with this task. Usually, the consultant quickly found one that was to their liking and I simply let them tell me their story. Out of a list of 19 story prompts, which can be found in Appendix B, the following four were actually chosen by consultants:

- (94) *Tell me about your best friend! Why are you best friends? How did you meet? Describe the impact of your relationship on your life. Does anything about him/her bother you? What? Why?*
- (95) *If you could live your life as any animal, which would you want to be and why? What would you do all day?*
- (96) *If you were the king of the world, how would you solve global warming? How would you make the world a better place? Which steps would you take to ensure better education for everyone on the planet?*
- (97) *If you can change one thing about today's society, what would that be?*

It was very useful to have an alternative to the picture stories to offer some of the more nervous consultants and these story prompts were then received quite well. In fact, the narratives resulting from the story prompts tended to be substantially longer than the *Vater und Sohn* stories on average. They have a clear disadvantage though: inter-speaker comparison is practically impossible since they are very individual.

Even when talking about their friends, the speakers either didn't use names or only nicknames. Thus, the speakers' anonymity is still preserved.

### 3.2.2.3 Translation Tasks

As in 2016, some data was collected in the form of written translation tasks that were developed together with Dr. Anja Latrouite. One of the materials used was an updated version of the *Unhappy Dog* stories. This contained a few additional conditions, such as verum focus or stories that explicitly avoided the parallelisms that were frequent in the original stories. Furthermore, a few short texts (no longer than the *Unhappy Dog* stories) were used to investigate further how role-reversals and unexpectedness influence construction choice in Tagalog (Latrouite and Rieger 2018; Latrouite 2020). All of these texts as well as the updated *Unhappy Dog* stories can be found in Appendix A. The elicitation procedure remained completely unchanged: consultants were given the texts and asked to provide a written translation of each story.

### 3.2.3 Data Processing

**Recording** As before, the data was recorded in \*.wav-files using the Roland R-05 at 44.1 kHz sample rate and  $16 \frac{\text{bit}}{\text{sample}}$ .

**Transcription** This time, I managed to transcribe and translate most of the data myself. This saved a lot of time and made it possible to spend more time with consultants eliciting data rather than asking them to transcribe. My transcriptions were then checked by one of the speakers who also transcribed the remaining data.

**Further Processing** The narratives were processed just as in 2016 by our student research assistant, Corinna Langer. They were imported into the Field Linguist's Toolbox and glosses and POS-tags were added. Then, the data were exported as tab-separated files.

### 3.2.4 Evaluation of the Acquired Data

Overall the consultants enjoyed the *Vater & Sohn* stories just as they did the *Frog Stories* and most had no problem at all working with them. The stories ended up being fairly short, but many were willing to record two or even three stories.

Regarding the givenness of the characters in the story, the precautions taken this time did not seem to have much of an effect. Although I sat across from the speakers where I could not see the pictures and told them I was unfamiliar with the story, this did not stop some of the speakers from pointing at the characters on the picture in their hands and referring to them as in the following example:

(98) 2018-9-Balloon

*Ang=lalaki-ng ito ay isa-ng bully.*

NOM=man-LK DEM.PROX.NOM INV one-LK bully

This man is a bully.

Since the speaker is pointing at one of the characters and using a demonstrative pronoun (*this* man') she clearly intends a definite reading despite this being the very first sentence of her story. And she was not the only consultant to do this. It was later brought to my attention that, the entire setting may have a negative influence on the data: probably none of the consultants actually believed that I was unfamiliar with the pictures I gave them. Thus, in addition to the story, they would have had to create a model of my 'fictional' state of mind and tell the story accordingly, which would of course add to the cognitive load of the task and possibly influence the data. While I doubt that this had such a dramatic effect on the quality of the data as a whole, one should probably be very cautious in drawing any conclusions on how speakers introduce new referents from this data set alone.

The story prompts indeed came in very handy for two consultants that preferred them over the picture stories. In the end the material elicited that way was more than what we typically got from two *Vater & Sohn* stories. However, as mentioned before, these stories are very individual and don't allow inter-speaker comparison to see how different speakers dealt with the comparable narrative contexts.

### 3.3 The Hunger Games

To investigate written, non-spontaneous data, a large, balanced, fully annotated text corpus including English translations and glosses would be ideal. Unfortunately, such a corpus is hard to come by for Tagalog, if such a corpus even exists at all. When I began working on this project in 2017, the *Open Parallel Corpus Project* OPUS<sup>7</sup> (Tiedemann 2012) offered four Tagalog resources:

- Tatoeba – 4900 sentences in English and Tagalog without context.
- Ubuntu – 5100 sentences from Ubuntu error messages
- GNOME – 3500 more error messages.
- OpenSubtitles2016 – 8200 sentences from movie subtitles.

Given our interest in information structure, context is of particular importance for us making Tatoeba as well as the error messages fairly useless to us. Even the

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<sup>7</sup> URL: <http://opus.nlpl.eu/>, last visited on 2020-11-03.

OpenSubtitles2016 is of limited use since the environmental context may also have an influence on linguistic coding and this cannot be taken into account with the subtitles alone.

Another online corpus, the South East Asian Languages (SEALang) Library<sup>8</sup>, contains around 2 million tokens consisting of examples from the Ramos Tagalog dictionary (Ramos 1971) and the Philippine Languages Online Corpora (PLOC) project (Dita and Roxas 2011). However, when searching these corpora, only a very limited amount of context, typically five to ten words, is displayed. Translations are not provided.

This lead us to using the *Hunger Games* (Collins 2008; Collins 2009; Collins 2010) and their Tagalog translations (Reyes 2012a; Reyes 2012b; Reyes 2013) as a sort of parallel corpus for our investigations. Obviously this is by no means a balanced corpus since the text only reflects one speaker's use of the language in translating an English novel. But this way we have access to both English and Tagalog versions and as much context as we need. Linguistic studies that make use of Bible translations (e. g. Lee and Shimojo 2016) have similar problems and the *Hunger Games* translations are certainly a better reflection of modern speaking and writing habits than a translation of the Bible would be.

The *Hunger Games* novels comprise three books: 1. *The Hunger Games* 2. *Catching Fire*, and 3. *Mockingjay*. They are set in a dystopian future, in the fictional nation of *Panem*, which consists of the wealthy *Capitol* which is supplied by the suppressed outlying *Districts*. Children from the *Districts* are forced to fight to the death in an annual event called *The Hunger Games* to commemorate an uprising that took place during the *Dark Ages*. The main story line of the trilogy describes a new uprising of the outlying *Districts* against the *Capitol*. The books are written from the first-person perspective of the protagonist, *Katniss Everdeen*, who is chosen as a tribute to represent *District 12* in the 74th *Hunger Games*.

Between 2012 and 2013 the books were translated to Tagalog by Reyes, J. (Reyes 2012b; Reyes 2012a; Reyes 2013). Our consultants confirmed that the translation is well written Tagalog. In some cases, however, the translator used less common or “deep” Tagalog or English loanwords, where it would be more common to use the Tagalog word. Possibly, this was done intentionally to capture the writing style of the original books. As a Filipina blogger puts it:

I can only imagine how difficult it was for the translator, Janis delos Reyes, to translate such material. Yet, she managed to come up with a translation that is not only a fairly accurate translation of the material, but also a translation that captures the writing “voice” of Suzanne Collins.

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<sup>8</sup> URL: <http://sealang.net/tagalog/corpus.htm>, last visited on 2020-11-03.



While this book isn't exactly light reading fare (at least, for me) – it is a challenging book to read – I loved the way it was translated. This translation only confirms what I have always believed in my heart, that there's magic in the written Filipino word.

The translated prose of Suzanne Collins has a very beautiful, lyrical quality to it. It's exactly what I expected, given the excellent quality of the original material.

(blogpost by The Filipina Reader 2012<sup>9</sup>)

In particular, it seems justified to assume that the translation not only sounds natural but also exemplifies coherent, well-written discourse without pragmatic or information-structural oddities.

The books contain a total of ca. 27 000 sentences – a small corpus but nevertheless a good starting point for investigations.

### 3.4 Overview of Data Collection

To conclude this chapter, Table 3.3 shows an overview of the data sources we have just discussed. For each elicitation material that was used, the table shows in how many elicitation sessions it was used, how much audio material was recorded (if applicable) and how many sentences and tokens were elicited. For completeness and for comparison, the *Hunger Games* are also included at the bottom of the table.

The *Frog Stories* and *Vater & Sohn* stories play a particularly prominent role in Chapter 6 since they were annotated for further analysis regarding reference tracking. The QUIS-materials, the *Frog Stories* and the *Hunger Games* feature both in chapter 7 as well as the article “Reversed *Ang*-Inversion and Narrow Focus Marking in Tagalog” (Nuhn 2019).

Whenever examples from this data collection are shown, they will be preceded by an identifier, which makes it possible to quickly identify which speaker the example is from and what elicitation material was used. The identifier consists of the year in which the data was elicited followed by the speakers ID and the abbreviation of the elicitation material as shown in Table 3.3. For QUIS tasks the Condition of the task is added at the end. The speakers both in 2016 and 2018 were simply numbered from 1–14 and 1–13, respectively. The combination of year and speaker-ID thus results in a unique combination for each consultant. Note however that there are consultants we worked with both in 2016 and 2018 who thus received to separate IDs. So, for example, an identifier such as the following:

(99) 2016-4-QUIS-Contrast-B

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<sup>9</sup> URL: <https://thefilipinareader.blogspot.com/2012/10/the-filipino-translation-of-suzanne.html>, visited on 2020-11-03.

would indicate that the corresponding example was elicited in 2016 from Speaker 4 using the QUIS-task *Contrast*, Condition B.

**Tab. 3.3:** Overview of the types and quantities of data that were collected during fieldwork

Elicitation Material	Sessions	Rec. Time in hrs.	Sentences	Tokens	Identifier
<b>Frog Stories</b>					
Book 1	7	00:33:21	391	3 363	Frog1
Book 2	2	00:09:38	137	1 065	Frog2
Book 3	5	00:26:15	343	2 918	Frog3
<b>Total</b>	14	01:09:16	1 217	7346	
<b>Spontaneous Story</b>	1	00:03:52	47	468	SpStory
<b>Vater &amp; Sohn Stories</b>					
Balloon Story	4	00:10:48	91	793	Ballon
Gift Story	4	00:07:03	59	758	Gift
Tree Story	2	00:01:56	21	179	Tree
Violin Story	4	00:05:20	32	471	Violin
<b>Total</b>	14	00:25:08	353	2 201	
<b>Story Prompts</b>	5	00:13:06	129	1 661	Prompt
<b>QUIS</b>					
Fairy Tale	5	00:16:43	207	1 824	QUIS- -Tomato
Contrast	7	00:09:22	53	912	-Contr
Giving	10	00:11:59	69	1 230	-Giving
<b>Total</b>	28	00:38:05	329	3 966	
<b>Translation tasks</b>					
Unhappy Rats	(2+) 2	—			Rats
Unhappy Dog	(1+) 0	—			Dog
Unhappy Dog (2018)	5	—	169	2 433	Dog2
Other	3	—	87	1 180	Transl
<b>Hunger Games</b>	—	—	27 012	333 795	—

## 4 A Broad Look at *ay*-Inversion

Before diving into fairly specific issues in Chapters 5–7, this Chapter aims to take a broad and descriptive perspective on the Tagalog *ay*-inversion construction, by observing and characterizing how it is used in our narrative data.

In Section 4.1, we will begin by looking at the various ways *ay*-inversion is used in Tagalog. As mentioned in Chapter 1, various constituents can be fronted using *ay*-inversion and more than one *ay* can occur in a given sentence. This section will give an overview of uses already discussed elsewhere, as well as some that can be found in our data set but are as of yet underrepresented in the literature.

Next, we will turn to the information-structural properties of *ay*-inversion in Section 4.2. It is widely accepted that the *ay*-inversion construction is in some sense information-structurally marked, i. e. its use is subject to information-structural constraints (Kroeger 1991; Kaufman 2005; Dery 2007; Latrouite and Riester 2018; Latrouite and Van Valin 2020). We will again discuss previous findings on the subject but also investigate some challenging examples from our own data.

Throughout Sections 4.1 and 4.2 we will collect hypotheses and open questions regarding the *ay*-inversion of core-arguments of transitive verbs. This case is particularly interesting since it can shed light on the interplay of information-structure, syntax, and (voice" )morphology. Finally, Section 4.4 will then present a case study investigating these hypotheses based on the *Hunger Games* data and, to a lesser extent, the elicited field work data.

### 4.1 The Various Uses of *ay*-Inversion

The *ay*-inversion is named after the particle *ay*, glossed here as inversion marker ‘INV’, which follows a constituent that has been displaced to the beginning of the sentence (often the sentence-initial position) and sets it off from the remainder of the sentence. Prosodically, the particle *ay* belongs to the following rather than the preceding intonational phrase, as it is often preceded by an optional (cf. Schachter and Otanes 1972:458) pause. Consider, for instance the following example:

(100) **2016-4-Frog2**

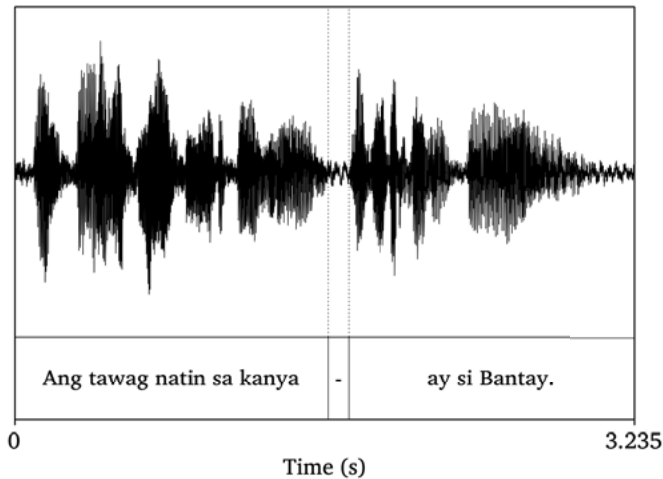
*Ang=tawag=natin sa=kanya ay si=Bantay.*

NOM=call=1PL.INCL.GEN DAT=3SG.DAT INV NOM=Bantay

Our name for him is Bantay. (= We will call him Bantay.)

The predicate of the sentence is *si=Bantay* ‘NOM=Bantay’, the name the speaker has given the dog in the *Frog Story*. It takes the *ay*-fronted phrase *ang=tawag=natin*

*sa=kanya* ‘our name for him’ as its argument. The waveform of this utterance was visualized using *praat* (Boersma and Weenink 2018) and is shown in Figure 4.1.



**Fig. 4.1:** Waveform of example (100) showing a pause of around 90 ms preceding the inversion marker *ay* (Figure created with *praat* [Boersma and Weenink 2018])

Immediately preceding the inversion marker *ay*, the speaker made a clear pause of around 90 ms. The constituent preceding *ay* is, nonetheless often said to be *ay*-marked, *ay*-fronted or *ay*-inverted. I will use these terms interchangeably throughout this work with no intended difference in meaning.

We will begin our overview with the constituents Schachter and Otnes (1972:485) list in their *Tagalog reference grammar* that can appear fronted in an *ay*-inversion:

1. the *ang*-marked argument of the predicate (in their terms the *topic*),
2. certain verb complements,
3. a phrase introduced by the negative polarity item *ni*, or
4. an adverbial,

Then, we will look at possessor ascension, a construction in which the *ay*-marked RP is the possessor of one of the predicate’s arguments, and pseudo verbs that can be followed by the inversion marker instead of the linker *na* in impersonal constructions. Finally, we will turn to some more exotic constructions: RP-internal *ay*-inversion, constructions involving multiple *ay*-inversions, and combinations of *ay*-inversion and other inversion constructions.

### 4.1.1 *ay*-Inversion of Arguments

We have already briefly touched on the subject of *ay*-inversion when discussing the Tagalog inversion constructions in Chapter 1. As mentioned there, the *ang*-marked argument of any predicate can be *ay*-inverted, regardless of the type of predicate:

(101) ***ay*-inversions for different types of predicates (Schachter and Otnes 1972:486)**

a. **adjectival predicate**

*Kayo'y mabait na mabait.*

2PL.NOM=INV kind LK kind

You are very kind. (cf. *Mabait na mabait kayo.*)

b. **NP predicate**

*Ang=mga=anak ay kayamanan ng=mga=magulang.*

NOM=PL=child INV jewels GEN=PL=parents

Children are the parents' jewels. (cf. *Kayamanan ng mga magulang ang mga anak.*)

c. **verbal predicate**

*Ang=sulat ay t(in)anggap-∅=ko kahapon.*

NOM=letter INV (RLS)receive-UV<sub>in</sub> 1SG.GEN yesterday

I received the letter yesterday. (cf. *Tinanggap ko ang surat kahapon.*)

d. **existential construction with *may***

*Ang=bawa't bata'y may desk.*

NOM=each child=INV EXIST desk

Every child has a desk. (cf. *May desk ang bawa't bata.*)

e. **locational predicate**

*Ang=lahat ng=tao'y narito=na.*

NOM=all GEN=person=INV here=now

All the people are here now. (cf. *Narito na ang lahat ng tao.*)

In each of the previous examples, the sentence is also given in “canonical” word order. In each case, the *ay*-inverted version is formed by simply realizing the *ang*-marked argument of the predicate sentence-initially and adding the particle *ay*. Notice that the inversion marker *ay* is shortened to *y* when it follows a vowel in (a) and (d). The argument-RP retains its case marking although the case marker *ang* is optional before *ay*-fronted *bawa't* ‘each’ and *lahat* ‘all’ (c and d).

A construction that appeared several times in the *Hunger Games* data but doesn't quite fit into the categories listed under example (101) is the following:

(102) **The Hunger Games (Reyes 2012b:340)**

**Context:** In the arena, Katniss accuses Peeta of stealing food for himself. He rejects this accusation by saying he could not have been anywhere near the food supplies because he was collecting berries by the river. He offers her some to try:

“‘And you ate without me!’ I really don’t care, I just want something else to be mad about. ‘What? No, I didn’t,’ Peeta says. ‘Oh, and I suppose the apples ate the cheese,’ I say. ‘I don’t know what ate the cheese,’ Peeta says slowly and distinctly, as if trying not to lose his temper, ‘but it wasn’t me. I’ve been down by the stream collecting berries. Would you care for some?’” (Collins 2008:317)

“‘*At kumain ka nang wala ako!*’ *Wala naman talaga akong pakialam, gusto ko lang ng ibang ikagagalit. ‘Ano? Hindi, hindi ako kumain,’ ani Peeta. ‘Ah, siguro kinain ng mga mansanas ang keso,’ sabi ko. ‘Hindi ko alam kung ano ang kumain sa keso,’ mabagal at mariing sabi ni Peeta na para bang pinipigilan niyang maubusan na rin ng pasensiya. ‘Pero hindi ako iyon. Naroon ako sa batis at nangunguha ng mga baya. Gusto mo bang tumikim ng ilan?’*” (Reyes 2012b:340)

*Ang=totoo ay gusto ko-ng t(um)ikim pero ayoko-ng*  
 NOM=truth INV want 1SG.GEN-LK (AV)taste but not.want.1SG-LK  
*b(um)igay agad.*  
 (AV)give.in at.once

The truth is (that) I want to have a taste but I don’t want to give in right away.

The translation using the copula *to be* makes this example look similar to the adjectival predicate in (101). However, instead of an adjective predicate following the inversion marker *ay*, we find here an entire clause. Essentially, the referent of the *ay*-fronted RP *ang=totoo* ‘the truth’ is equated with the proposition following the *ay*. This was also used on occasion to introduce quoted speech. Some recurring *ay*-fronted constituents in this type of construction were:

- *ang hula ko* ‘my guess’
- *ang plano natin* ‘our plan’
- *ang sabi niya* “what he/she said”
- *ang tanong/sagot niya* ‘his/her question/answer’
- *ang ibig sabihin niyon* ‘the meaning of that’

In some cases, the clause following the *ay* was a subordinate clause often following a fronted demonstrative pronoun:

(103) **The Hunger Games: Catching Fire (Reyes 2012a:62)**

**Context:** After the *Hunger Games*, Katniss and Peeta are in District 11 as part of their Victory Tour. This is Rue's district, the girl Katniss teamed up with but whose life she failed to save. They announce that they will donate a large amount of money to the families of the fallen tributes every year. Katniss sees Rue's sister in the crowd.

"...she's not happy. In fact, her look is reproachful. Is it because I didn't save Rue? No." (Collins 2009:60)

"*Sa katunayan, tila nanunumbat ang ekspresyon niya. Iyon ba ay dahil hindi ko nailigtas si Rue? Hindi.*" (Reyes 2012a:62)

*Iyon ay dahil hindi=ko=pa=siya*  
DEM.DIST.NOM INV because NEG=1SG.GEN=yet=3SG.NOM

*na-pa~pa-salamat-an.*

ABIL.RLS-IPFV~CAUS<sub>PA</sub>-thank-UV<sub>an</sub>

That is because I haven't thanked her yet.

Schachter and Otones (1972:485) note that the difference between an *ay*-inversion and the corresponding sentence in canonical word order is more one of style or register than a semantic difference. Constructions involving *ay* are characteristic of formal language and can be found in written Tagalog or formal speech situations rather than casual spoken Tagalog. We will see in Section 4.2, however, that information-structural considerations play a crucial role, as well.

In addition to the *ang*-marked undergoer, undergoer voice verbs also allow for the actor to be *ay*-fronted:

(104) **canonical word order**

*B(in)ili-∅ ng=bata ang=isda.*

⟨RLS⟩buy-UV<sub>in</sub> GEN=child NOM=fish

The child bought the fish.

(105) **fronted undergoer**

*Ang=isda ay b(in)ili-∅ ng=bata.*

NOM=fish INV ⟨RLS⟩-UV<sub>in</sub> GEN=child

(106) **fronted actor**

*Ang=bata ay b(in)ili-∅ ang=isda.*

NOM=child INV ⟨RLS⟩buy-UV<sub>in</sub> NOM=fish.

In example (105), the *ang*-marked undergoer is fronted similar to (101c). The canonical word order is shown in (104) for comparison. On the other hand, when the actor appears sentence initially in an *ay*-inversion as in (106), it does not retain

its regular case marking, which would be *ng* ‘GEN’, but receives nominative case, thus is *ang*-marked. The result is a sentence with a transitive predicate and two arguments which are both *ang*-marked.

It has been remarked that this construction may occur less frequently than the fronting of the *ang*-marked argument as it seems more difficult to process: a listener would first construe the fronted argument as the undergoer until the second *ang*-phrase, the actual undergoer, is uttered at which point the beginning of the sentence needs to be reinterpreted – the *ang*-phrase appearing in-situ is in fact the undergoer and the fronted *ang*-phrase is actually the actor (p. c. Latrouite). Thus, due to this higher processing effort, we may expect to find actor fronting with undergoer voice less frequently than actor fronting with actor voice or undergoer fronting with undergoer voice.

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**Hypothesis:** The construction ACT *ay* UV is less frequent than ACT *ay* AV and UG *ay* UV.

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Notice that the converse case does not work. As shown in the following example, only the actor can be fronted in an actor-voice sentence. Fronting the undergoer is ungrammatical:

(107) **canonical word order**

*B*(*um*)*ili ng=isda ang=bata.*  
 ⟨AV.RLS⟩buy GEN=fish NOM=child  
 The child bought a fish.

(108) **fronted actor**

*Ang=bata ay b*(*um*)*ili ng=isda.*  
 NOM=child INV⟨AV.RLS⟩buy GEN=fish

(109) **fronted undergoer (ungrammatical)**

\* *Ang/\*Ng=isda ay b*(*um*)*ili ang=bata.*  
 NOM=fish INV ⟨AV.RLS⟩buy NOM=child

One might expect that in analogy to the *ng*-marked actor in an undergoer voice sentence, which we have seen *can* be *ay*-inverted, the same should be possible for the *ng*-marked undergoer in this case. In fact, only the actor can be *ay*-fronted as shown in (108). Fronting the *ng*-marked undergoer as in (109) is ungrammatical and it cannot be remedied by changing the case marking from *ng* to *ang* as in the undergoer voice case.

Let us now turn to the next two points in Schachter and Otnes’s list: “certain verb complements” and phrases introduced by the negative polarity item *ni*. Indefinite pronouns used as arguments can be *ay*-fronted as well as arguments with the



focus-sensitive particle *kahit* ‘even’ or the negative polarity item *ni*. As shown in the following examples, the indefinite pronouns are not preceded by a case marker when they are *ay*-fronted:

(110) **Schachter and Otones (1972:490)**

- a. *Sinuman ay hindi ma-bu~buhat-∅ nang nag-iisa*  
 anyone INV NEG ABIL-IPFV~lift-UV<sub>in</sub> LK alone  
*ang=kahon-g=iyon.*  
 NOM=BOX-LK=DEM.DIST.NOM  
 No one can lift that box by himself.  
 (cf. *Hindi mabubuhat ng sinuman nang nag-iisa ang kahong iyon.*)
- b. *Kahit sino ay hindi ma-bu~buhat-∅ nang nag-iisa*  
 even who INV NEG ABIL-IPFV~lift-UV<sub>in</sub> LK alone  
*ang=kahon-g=iyon.*  
 NOM=BOX-LK=DEM.DIST.NOM  
 No one can lift that box by himself.  
 (cf. *Hindi mabubuhat ng kahit sino nang nag-iisa ang kahong iyon.*)

Tagalog indefinite pronouns can be formed by suffixing *-man* to a *wh*-question word, as done in (110a) for the question word *sino* ‘who’. Another option is to add *kahit* (which normally means ‘even’) before the question word, as in (110b). In both examples, the indefinite pronoun stands for the actor of an undergoer-voice verb. Thus, they are marked by the genitive case-marker *ng* when in-situ, but when *ay*-inverted, the case-marker is deleted.

A peculiarity of this use of *ay*-inversion is that it is obligatory in certain cases:

(111) **Schachter and Otones (1972:491)**

- a. *Sinuman ang=p(um)asok dito ay ma-ki~kita=iyon.*  
 whoever NOM=(AV.RLS)enter here INV UV-IPFV~see=DEM.MED.NOM  
 Whoever enters this place can see that.
- b. \* *Ma-ki~kita=iyan ng=sinuman ang=p(um)asok*  
 UV-IPFV~see=DEM.MED.NOM GEN=whoever NOM=(AV.RLS)enter  
*dito*  
 here

In this case, the actor is not simply an indefinite pronoun but the “indefinite nominal clause” (Schachter and Otones 1972:491) *sinuman ang=pumasok dito* meaning ‘the one who enters here is whoever’ or ‘whoever it is who enters here’. Actor arguments of this type cannot, as shown above, appear in-situ. They must be *ay*-fronted. In contrast, for all the other examples we’ve seen up to this point

in this section, we also saw a grammatical version where the fronted argument appeared in-situ.

Another use of *kahit* is to express the scalar additive ‘even’. In this function it behaves in a similar way:

(112) **Schachter and Otones (1972:490)**

*Kahit (na) sampu-ng dosena ay bi~bili si=Marco.*  
 even LK ten-LK dozen INV IPFV~buy NOM=Marco  
 Marco will buy even ten dozen.  
 (cf. *Bibili si Marco ng kahit (na) sampung dosena.*)

The undergoer *kahit sampung dosena* ‘even ten dozen’ gets genitive marking when in-situ but not when it appears *ay*-inverted.

What is especially remarkable about example (110b), is that we have an actor-voice verb here, *bi~bili* ‘IPFV~buy’ and are *ay*-fronting what would normally be the *ng*-marked undergoer. This would not be possible without *kahit* as we have already seen in example (109).

Turning finally to the negative polarity item *ni*, the situation looks similar to the *kahit*-case we have just seen, especially since it is also translated as ‘even’ in English:

(113) **Schachter and Otones (1972:492)**

*Ni=lapis ay hindi nag-dala si=Rosa.*  
 NPI=pencil INV NEG AV.RLS-bring NOM=Rosa  
 Rosa did not bring even a pencil.  
 (cf. *Hindi nagdala si Rosa ni lapis.*)

Notice, however, that here, the undergoer *ni=lapis* doesn’t get case marking even when it appears in situ. Furthermore, *ay*-inversion is obligatory in certain cases: for demonstratives and for actors. That is, if we replace *lapis* ‘pencil’ in (113) by *iyon* ‘that’ we get (114a):

(114) **based on Schachter and Otones (1972:391)**

- a. *Ni=iyon ay hindi nag-dala si=Rosa.*  
 NPI=DEM.DIST.NOM INV NEG AV.RLS-bring NOM=Rosa  
 Rosa did not bring even that.
- b. \**Hindi nag-dala si=Rosa ni=iyon.*  
 NEG AV.RLS-bring NOM=Rosa NPI=DEM.DIST.NOM

The in-situ version of (113), however, is no longer possible as shown in (114b). A similar pair is shown in the following example for an actor associating with the negative polarity element:

(115) **Schachter and Otones (1972:492)**

- a. *Ni=si=Pedro ay hindi ma-bu~buhat-∅ ito.*  
 NPI=NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM  
 Even Pedro cannot lift this.
- b. \**Hindi ma-bu~buhat-∅ ni=si=Pedro ito.*  
 NEG ABIL-IPFV~lift-UV<sub>in</sub> NPI=NOM=Pedro DEM.PROX.NOM

As with the demonstrative, the actor is obligatorily fronted and the sentence is ungrammatical when it is realized in-situ. Notice also that unlike the undergoer in (113) and (114a) the actor here retains its case-marking<sup>1</sup>.

Fronting of arguments can be found quite frequently in our data. In the *Hunger Games* data the constructions discussed in this section make up 44.7 % of all *ay*-inversions. This number is even higher in the elicited narratives (i. e. *Frog Stories* and *Vater & Sohn*), where they make up around 80 %<sup>2</sup>. This large discrepancy between the two data sets can be traced to the abundance of *ay*-fronted adverbials in the *Hunger Games* data. In spoken Tagalog, these are much less frequent where the *ay* is simply omitted and these adverbials often set-off by just a pause.

#### 4.1.2 Adverbials in *ay*-Inversions

As already hinted at in the previous section, adverbials make up the largest group in the *Hunger Games* data set accounting for 47.3 % of the *ay*-inversions. In the spoken data they make up only about 9 % since speakers seem to prefer setting adverbials off by a pause rather than *ay* when speaking.

These fronted adverbials can be adverbs, with which we will begin our discussion. But entire adverbial clauses are possible, as well (Schachter and Otones 1972:461). Schachter and Otones (1972:436–461) distinguish two main types of adverbs: movable adverbs and initial adverbs. The initial adverbs always appear sentence-initially or clause-initially and are followed by **(a)** a pause, **(b)** a pause or the inversion marker *ay*, **(c)** the linker *na*, or **(d)** none of the above. An example of an adverb that can be followed by *ay* is the following:

(116) **Schachter and Otones (1972:460)**

(*Lumang luma=na ang=kotse.*)  
 very.old=already NOM=car

<sup>1</sup> This has nothing to do with the actor being coded by a proper name and thus receiving the case-marker *si* instead of *ang*. A common noun marked with *ang* would also retain its case marker (Schachter and Otones 1972:491).

<sup>2</sup> For detailed numbers and see Table 4.1 and discussion.

*Gayunman ay bi~bilh-in=pa=rin=niya.*  
nevertheless INV IPFV~buy-UV<sub>in</sub>=still=also=3SG.GEN

(The car is already very old.) Nevertheless, he will still buy it.

In such cases, the adverbial is obligatorily placed in sentence initial position and it must be set off from the remainder of the clause by either a pause or the inversion marker *ay*. Thus, it is not surprising that the use of *ay*-inversion does not necessarily have a formal connotation as it is claimed to have for *ay*-fronted arguments.

Movable adverbs, on the other hand, are not tied to a specific position within the clause and can appear in various positions without affecting the meaning of the sentence:

(117) **Schachter and Otones (1972:436)**

- a. *S⟨um⟩ulat kahapon ng=liham kay=Maria si=Juan.*  
⟨AV.RLS⟩write yesterday GEN=letter DAT=Maria NOM=Juan
- b. *S⟨um⟩ulat ng=liham kahapon kay=Maria si=Juan.*  
⟨AV.RLS⟩write GEN=letter yesterday DAT=Maria NOM=Juan
- c. *S⟨um⟩ulat ng=liham kay=Maria kahapon si=Juan.*  
⟨AV.RLS⟩write GEN=letter DAT=Maria yesterday NOM=Juan
- d. *S⟨um⟩ulat ng=liham kay=Maria si=Juan kahapon.*  
⟨AV.RLS⟩write GEN=letter DAT=Maria NOM=Juan yesterday  
Juan wrote a letter to Maria yesterday.

As the example shows, a movable adverb, in this case the temporal modifier *kahapon* ‘yesterday’, can be moved freely to any of the non-sentence-initial positions without changing the meaning. The sentence-initial position, however, is a little more tricky, as there are three distinct cases:

(118) **Schachter and Otones (1972:436)**

a. ***ay*-inversion**

*Kahapon ay s⟨um⟩ulat ng=liham kay=Maria si=Juan.*  
yesterday INV ⟨AV.RLS⟩write GEN=letter DAT=Maria NOM=Juan  
Juan wrote a letter to Maria yesterday.

b. **set off by pause**

*Kahapon [pause], s⟨um⟩ulat ng=liham kay=Maria si=Juan.*  
yesterday ⟨AV.RLS⟩write GEN=letter DAT=Maria NOM=Juan  
Yesterday, Juan wrote a letter to Maria.

c. **adjunct inversion**

*Kahapon s(um)ulat ng=liham kay=Maria si=Juan.*  
 yesterday (AV.RLS)write GEN=letter DAT=Maria NOM=Juan  
 It was yesterday that Juan wrote Maria a letter.

The difference, according to Schachter and Otnes (1972), is that the *ay*-inversion (118a) has a formal ring to it compared to the versions shown in (117). This is quite similar to what he have already seen for *ay*-fronted arguments. When the adverb is set off by a pause, as in (118b), it gets a contrastive interpretation. Thus, a possible implication would be that Juan will do something else today. And finally, without a pause, we have adjunct inversion (see Chapter 1) where the sentence-initial adverb is in narrow focus.

Adverbs of this type include various time and locative adverbs as well as manner adverbs. Most of these allow for *ay*-inversion:

(119) **Schachter and Otnes (1972:489)**

*Madalas ay p(um)u~punta=siya dito.*  
 often INV (AV.RLS)IPFV~go=3SG.NOM DEM.PROX.DAT  
 He comes here often.  
 (cf. *Pumupunta siya dito nang madalas.*)

Adverbs that are usually introduced by the linker *na* or *nang* when in-situ, lose the linker when they are *ay*-inverted. This can be seen above for *madalas*, which takes the linker *nang* when in-situ as shown below the example.

There are, however, a few noteworthy exceptions, i. e. movable adverbs which cannot be *ay*-fronted. These include manner adverbs, temporal adverbs expressing a time of day, such as *nang gabi* ‘when night’, adverbials expressing frequencies using *beses* or *ulit* ‘times’, e. g. *dalawang beses* ‘two times’, or *palagi* ‘always’:

(120) **Schachter and Otnes (1972:488)**

\* *Palagi ay nan-mi~mili=sila dito.*  
 always INV AV.RLS-IPFV~shop=3PL.NOM DEM.PROX.DAT  
*intended:* They always go shopping here.  
 (cf. *Namimili sila ditong palagi.*)

Similarly, any adverbial clause can undergo *ay*-inversion.

(121) **Schachter and Otnes (1972:489)**

*Kung mabuti ang=ani’y maka-ka-bili=ako ng=traktor.*  
 COMP good NOM=harvest=INV ABIL~IPFV-buy=1SG.NOM GEN=tractor  
 I’ll be able to buy a tractor if the harvest is good.  
 (cf. *Makakabili ako ng traktor kung mabuti ang ani.*)

According to Schachter and Otnes (1972:464), it is more common for a proposed adverbial clause to be followed by a pause than by the inversion marker.

Let us now turn once again to the data. As already mentioned initially, these adverbials account for a particularly large group of the *ay*-inversion found in the *Hunger Games* data – in total 2349, of which 190 or 8% are subordinate clauses. Before moving on to the next type of *ay*-inversion, let us look into the types of adverbials that are *ay*-fronted in some more detail. By far the most numerous are temporal modifiers accounting for 46% or 1077 cases. The most frequent temporal modifiers include *pagkatapos (niyon)* ‘then/after that’ (417 cases), *ngayon* ‘now’ (128 cases), *sa wakas* ‘in the end’ (48 cases), and *minsan* ‘sometimes’ (35 cases).

Adverbials conveying various epistemic nuances constitute another large group comprising 835 cases or 36%. These include *siguro* ‘maybe’ (204 cases), *marahil* ‘perhaps’ (125 cases), *malamang* ‘probably’ (65 cases). Many of these belong to a class of adverbs Schachter and Otnes (1972:457) refer to as ‘*sa...ng... adverbs*’, as they consist of a *sa*-phrase followed by a *ng*-phrase. Some examples include: *sa tingin ng/ni X* ‘in X’s view’ (265 cases), *sa pakiramdam ng/ni X* ‘according to X’s feeling’ (69 cases), or *sa palagay ng/ni X* ‘in X’s opinion’ (50 cases). Of course the *ng*-phrase can also be replaced by the genitive form of a pronoun or demonstrative. Since the novel is written from a first person perspective, the genitive phrase *ng/ni X* is most often the first person singular genitive pronoun *ko*, i. e. *sa tingin ko* or *sa pakiramdam ko* etc.

It has already been noted that marking frame-setting topics is one function of *ay*-inversion (Latrouite and Van Valin 2020). Nice examples of this can be found among the ‘*sa...ng... adverbs*’ we have just seen, as in the following example:

(122) **The Hunger Games: *Mockingjay* (Reyes 2013:15)**

**Context:** In District 13, Katniss asks about two refugees from District 8 that she had encountered in the forest when she was still living in her home District 12:

“Bonnie and Twill, the District 8 refugees who I encountered in the woods last winter, weren’t so far from their destination after all. They apparently didn’t make it, though. When I asked about them in 13, no one seemed to know who I was talking about. Died in the woods, I guess.” (Collins 2010:16)

“*Sina Bonnie at Twill, ang mga takas mula sa District Eight na nakilala ko sa gubat noong nakaraang taglamig, ay hindi pala talaga nalalayo sa kanilang destinasyon. Pero malinaw na hindi sila nakarating. Nang ipagtanong ko sila sa District Thirteen, walang sinuman ang nakakaalam kung sino ang tinutukoy ko.*” (Reyes 2013:15)

*Sa=palagay=ko ay na-matay=na=sila sa=gubat.*  
 DAT=opinion=1SG.GEN INV AV.RLS-die=already=3PL.NOM DAT=forest

In my opinion, they died in the forest.

According to Féry and Krifka (2008:127), a defining property of frame setters is that they “express a certain restriction of the ensuing predication to some perspective that is not clearly identified by the context already”. In other words, they “set the frame in which the following expression should be interpreted” (Krifka and Musan 2012:31). In this case, the statement “they died in the woods” is framed as a guess or an opinion of the narrator. It is restricted to her world view as opposed to being presented as a fact.

Many of the other *ay*-marked elements in this category aid in structuring the common ground in a slightly different way: they work as discourse connectives and clarify temporal relations (e. g. *pagkatapos* ‘then’), causal relations (e. g. *dahil doon* ‘because of that’), or relate the following sentence to the previous context in some other way (e. g. *gayunman* ‘nevertheless’ in ex. (116), *kung hindi* ‘if not/otherwise’). For example,

(123) **The Hunger Games: *Catching Fire* (Reyes 2012a:51)**

**Context:** “At some point, the train stops. Our server reports it will not just be for a fuel stop — some part has malfunctioned and must be replaced. It will require at least an hour.” (Collins 2009:49)

*“Noon huminto ang tren. Sinabi ng tagapagsilbi namin na hindi tumigil ang tren para magpagasolina kundi may naglokong parte ng makina at kailangan iyong mapalitan. Mangangailangan iyon ng hindi bababa sa isang oras.”*  
 (Reyes 2012a:51)

*Dahil doon ay na-taranta si=Effie.*  
 because DEM.DIST.DAT INV STAT.RLS-panic NOM=Effie

Because of this, Effie panics.

Here, the *ay*-marked *dahil doon* ‘because of that’ makes it explicit that Effie’s panic is a consequence of the news that they will be stuck for at least an hour, thus clarifying the discourse relation to the previous sentence.

#### 4.1.3 Possessor Ascension

Kroeger (1991:31–32) describes a possessor ascension construction, which, he says, can be found in other Philippine languages as well. In such a construction, a possessor phrase can be topicalized, i. e. left dislocated, as in the following example:

(124) **Kroeger (1991:31)**

- a. *P<(in)utol ng=magsasaka ang=sungay ng=kalabaw.*  
 ⟨RLS⟩cut GEN=farmer NOM=horn GEN=buffalo  
 The farmer cut off the buffalo's horn.
- b. *Ang=kalabaw, p<(in)utol-∅ ng=magsasaka ang=sungay.*  
 NOM=buffalo ⟨RLS⟩cut-UV<sub>in</sub> GEN=farmer NOM=horn  
 The buffalo, the farmer cut off the (i. e. its) horn.

The referent of the topicalized RP *ang=kalabaw* 'NOM=buffalo' is interpreted as the possessor of the nominative-marked argument in the clause.

Kroeger (1991) remarks that this type of construction is most often found with inalienable possession, although this is not necessary and there are exceptions from this rule. There are, however, two conditions he lists, which are necessary for possessor ascension to be possible: 1. affectedness of the possessor and 2. nominative marking of the possessum.

Thus, changing the verb in the above example to *t<(in)ingn-an* '⟨RLS⟩look-UV<sub>an</sub>' results in an ungrammatical statement:

(125) **Kroeger (1991:31)**

- \* *Ang=kalabaw, t<(in)ingn-an ng=magsasaka ang=sungay.*  
 NOM=buffalo ⟨RLS⟩look-UV<sub>an</sub> GEN=farmer NOM=horn  
*intended:* The buffalo, the farmer looked at the (i. e. its) horn.

In this case, the buffalo is not affected in any significant way by the farmer's looking at its horn. Thus, the sentence is ungrammatical.

To illustrate the necessity of both nominative marking and affectedness, Kroeger (1991:32) presents the following three examples:

(126) **Kroeger (1991:32)**

- Si=Juan, k<(in)agat-∅ ng=aso ang=anak.*  
 NOM=Juan ⟨RLS⟩bite-UV<sub>in</sub> GEN=dog NOM=child  
 Juan, a dog bit the (i. e. his) child.

- (127) \* *Si=Juan, k<(um)agat ang=aso sa=anak.*  
 NOM=Juan ⟨AV.RLS⟩bite NOM=dog DAT=child  
*intended:* Juan, the dog bit the child.

- (128) *Si=Juan, k<(in)agat-∅ ng=ahas ang=aso.*  
 NOM=Juan ⟨RLS⟩bite-UV<sub>in</sub> GEN=snake NOM=dog  
 Juan, a snake bit the (i. e. his) dog.



In the first example, we see the familiar pattern, that the left-dislocated RP *si=Juan* ‘NOM=Juan’ is interpreted as the possessor of the (affected) nominative-marked argument of the clause, *ang=anak* ‘NOM=child’. In the second sentence, however, this is not possible: the child cannot be interpreted as the possessum since it is dative-marked and not nominative; the dog, on the other hand, is nominative-marked, but not affected. To show that this has nothing to do with the preference for inalienable possession in this construction, the third example shows that the relationship between a dog and its master does indeed allow possessor ascension if the dog fulfills both criteria, i. e. it is both affected and nominative-marked.

Replacing the pause in the examples above by the inversion marker *ay*, leads to a similar possessor ascension construction which one might expect to be subject to the same constraints as those found by Kroeger (1991). Indeed one can find the following example:

(129) **Latrouite and Van Valin (2020:14)**

*Si=Jose ay na-matay ang=asawa.*  
 NOM=Jose INV AV.RLS-die NOM=spouse  
 As for Jose, [his] wife died.

Here, the fronted RP *si=Jose* is interpreted as the possessor of the in-situ RP *ang=asawa*. As in the cases discussed by Kroeger, the possessum is the nominative marked argument of the predicate, in this case the only argument, and the requirement that the possessor be affected is fulfilled, as well<sup>3</sup>.

Examples of possessor ascension are very rare in our data. None at all occurred in the elicited spoken data and only 23 cases (0.5 %) in the *Hunger Games* translations. In all cases, the predicate was intransitive. Thus, the constraint that the possessum must be the nominative marked argument of the predicate was trivially fulfilled.

What is interesting is that it does not seem to be a requirement that the possessor be affected by what is predicated about the possessum:

(130) **The Hunger Games (Reyes 2012b:132)**

**Context:** Before the *Hunger Games*, each of the tributes is interviewed on television. One by one the tributes of Districts are called onto stage in numerical order. Immediately preceding District 12, the home of the protagonists,

<sup>3</sup> Interestingly, some of our consultants objected to the *ay*-inversion equivalent of example (126):

?? *Si=Juan ay k(in)agat-∅ ng=aso ang=anak.*  
 NOM=Juan INV (RLS)bite-UV<sub>in</sub> GEN=dog NOM=child  
 Juan, a dog bit the (i. e. his) child.

the tributes of District 11 are called onto the stage. First, a dark-skinned, young and fragile looking girl named Rue comes out for her interview. When she finishes, the next in line is the male tribute from her district, Thresh. The narration immediately jumps from Rue's interview to the following description of Thresh:

*Si=Thresh [...] ay maitim=din ang=balat...*

NOM=Thresh INV black=also NOM=skin

Thresh, [his] skin is dark, too.

**Continuation:** “*Pero doon na natapos ang pagkakatulad ng mga ito. Isa siya sa malalaki, siguro ay nasa anim na talampakan at kalahati ang taas at kasinlaki ng isang ox. Napansin kong tinanggihang niya ang alok ng Career Tributes na sumama sa grupo ng mga ito. Sa halip ay palagi siyang nag-iisa, hindi nakikipag-usap sa kahit kanino, at hindi gaanong nagpapakita ng interes sa pagsasanay.*” (Reyes 2012b:132)

“...but the resemblance stops there. He's one of the giants, probably six and a half feet tall and built like an ox, but I noticed he rejected the invitations from the Career Tributes to join their crowd. Instead he's been very solitary, speaking to no one, showing little interest in training.” (Collins 2008:126)

For clarity, I have omitted the apposition *ang lalaking pambayad mula sa District 11* ‘the male tribute from District 11’ in the example above, as indicated by ‘[...]’. As the context shows, this sentence is merely a description, a statement of fact. The skin color does not come with any implications that would justify that Thresh is in some way affected by having the same skin tone as Rue.

Assuming that the possessum is (most typically) inalienably possessed as described by Kroeger, a closer look at the occurring possessa might shed some light on what is perceived as inalienable in Tagalog:

(131) **The Hunger Games: *Mockingjay* (Reyes 2013:218)**

*Lahat tayo ay i-isa=lang ang=kaaway (at iyon*

all 1PL.INCL.NOM INV just~one=only NOM=enemy and DEM.DIST.NOM

*ay ang=Kapitolyo.)*

INV NOM=Capitol

*original:* “We all have one enemy, and it's the Capitol!” (Collins 2010:216)

*literally:* We all, the (i. e. our) enemy is only one and that is the Capitol.

In this example, the RP *ang=kaaway* ‘the enemy’ is interpreted as possessed by the left-dislocated *lahat tayo* ‘we all’. The predicate is the numeral *i-isa* ‘just one’ with the reduplication of the first syllable marking it as a restrictive numeral (Schachter and Otanes 1972:212) conveying something akin to the English ‘just one’. Here we

leave the realm of body parts (skin in (130) and horn in (124)) and kinship (spouse in (129) and child in (126)) and see a social relationship as possessum.

We also find mental states, part-whole relationships, and attributes of the possessor:

(132) **mental state**

**The Hunger Games: *Catching Fire* (Reyes 2012a:234)**

...ngunit *ang=karamihan ay nakatuon ang=pansin sa=litsong baboy.*

but NOM=most INV focused NOM=attention DAT=roasted.pig

But most, the (i. e. their) attention is focused on the roasted pig.

(133) **part-whole-relationship**

**The Hunger Games (Reyes 2012b:106)**

(*I-p(in)a-retoke=niya ang=kanya-ng mga=ngipin para*)

UV<sub>i</sub>-⟨RLS⟩CAUS<sub>PA</sub>-alter=3SG.GEN NOM=3SG.DAT-LK PL=tooth to

*ang=bawat isa ay maging matulis ang=dulo tulad ng=isa-ng pangil.*

NOM=each one INV become sharp NOM=end like GEN=one-LK fang

She had her teeth altered so that each one, the (i. e. its) end is sharp like a fang.

(134) **attribute of possessor, here: name**

**The Hunger Games (Reyes 2012b:12)**

*Si=Gale=naman [...] ay apatnapu't dalawa-ng beses=na nakalista*

NOM=Gale=PTCL INV forty=and two-LK times=now listed

*ang=pangalan.*

NOM=name

Gale on the other hand, the (i. e. his) name is listed already forty two times.

However, as already mentioned by Kroeger (1991), alienable possession is not completely out, as we also find the following example:

(135) **The Hunger Games: *Mockingjay* (Reyes 2013:337)**

*Ang=mga=mas=nakapaghanda ay ilan-g suson ang=suot na*

NOM=PL=more=prepared INV several-LK layer NOM=worn LK

*mga=damit.*

PL=clothes

The more prepared (people), the (i. e. their) clothing worn [by them] is in many layers.

The possessum here is the *ang=damit* 'NOM=clothes' which is modified by the bare root *suot* 'wear' to mean the clothes they are wearing.

It is also noteworthy that most of the examples of this type involve adjectives or nouns as predicates and may call to mind the famous Japanese example:

(136) **Mikami (1960)**

ゾウは 鼻が 長い。  
*zō=wa hana=ga naga-i.*  
 elephant=TOP nose=NOM long-NPST  
 As for elephants, the nose is long.

In this case, the *wa*-marked, i. e. topic-marked, ‘elephant’ is the possessor of ‘nose’, which is asserted to be long.

#### 4.1.4 Pseudo Verbs and Modal Particles

In Tagalog, there is a set of so-called *pseudo-verbs* that are characterized by verb-like meanings although they are incapable of inflecting for aspect. Schachter and Otnes (1972:261–273) list and discuss the following eight:

- |                                        |                                 |
|----------------------------------------|---------------------------------|
| – <i>ayaw</i> ‘not want’               | – <i>ibig</i> ‘want/like’       |
| – <i>kailangan</i> ‘must/should/ought’ | – <i>maaari</i> ‘can/may/could’ |
| – <i>dapat</i> ‘must/should/ought’     | – <i>nais</i> ‘want/like’       |
| – <i>gusto</i> ‘want/like’             | – <i>puwede</i> ‘can/may/could’ |

Each of the pseudo-verbs codes a kind of deontic modality, as indicated by the translations above. Without going too far into the details of how pseudo-verbs are used, the entity toward which this modality is directed can be overtly expressed as in the following example:

(137) **Schachter and Otnes (1972:268)**

*Kailangan=ko-ng naroon=siya.*  
 must=1SG.GEN-LK there=3SG.NOM  
 I need him to be there.

The pseudo-verb *kailangan* is immediately followed by a genitive personal pronoun expressing the entity that needs something or for which something must be the case. The pronoun is followed by the linker and a clause expressing the state of affairs that is needed.

Four of the pseudo-verbs – *kailangan*, *dapat*, *maaari*, and *puwede* – also form impersonal constructions. In this construction, the pseudo-verb is directly followed by the linker *na* and a complement clause:

(138) **Schachter and Otnes (1972:270)**

- a. *Kailangan-g lider si=Juan*  
 must-LK leader NOM=Juan  
 It is necessary for Juan to be a leader.
- b. *Dapat na lider si=Juan.*  
 should LK leader NOM=Juan  
 It is fitting for Juan to be a leader.
- c. *Puwede-ng/Maaari-ng lider si=Juan.*  
 can-LK/possible-LK leader NOM=Juan  
 It is possible for Juan to be a leader.

In this case it is left open for whom it is a necessity or a possibility that Juan is a leader, which, in the translations, is captured by the expression ‘It is necessary/fitting/possible’. For *dapat* and *kailangan* the linker *na* can be replaced by the inversion marker *ay*:

(139) **Schachter and Otnes (1972:270)**

- Kailangan / Dapat ay lider si=Juan.*  
 must must INV leader NOM=Juan  
 It is necessary for Juan to be the leader.

Like possessor ascension, this construction occurred only in the *Hunger Games* data but not in the spoken data elicited in the field. Of the two, *dapat* was by far the more frequent one, occurring 67 times where *kailangan* only occurred once in this construction.

Due to their close similarity to the pseudo-verbs, I would like to include two more particles in this category. The first is the optative particle *sana*, which usually appears as a second position clitic (Schachter and Otnes 1972:428):

(140) **Schachter and Otnes (1972)**

- Ma-kita=sana=namin ang=singsing*  
 UV-see=PTCL=1PL.INCL.GEN NOM=ring  
 I hope we find the ring.

The clitic *sana* here contributes the meaning of ‘hope’ to what without it would be a hortative ‘let us find the ring’. The other particle *nawa* can be used as a second position clitic, as well although Schachter and Otnes (1972:418) do not include it in their list. It also has an optative meaning as in the following expression from the Catholic Mass order:

- (141) *Tanggap-in=nawa ng=Panginoon ito-ng paghahain*  
 accept-UV<sub>in</sub>=PTCL GEN=Lord this.NOM-LK sacrifice  
*sa=iyon-g=mga=kamay.*  
 DAT=2SG.DAT-LK=PL=hand  
 May the Lord accept this sacrifice at your hands.

Both *sana* and *nawa* occur in the *Hunger Games* data in *ay*-inversion constructions such as in the following examples:

(142) **The Hunger Games (Reyes 2012b:145)**

*Sana ay alam=ko ang=pangalan=niya.*  
 hope INV know=1SG.GEN NOM=name=3SG.GEN  
 I wish I knew her name.

(143) **The Hunger Games: (Reyes 2012b:19)**

*Nawa'y maging mapalad=kayo!*  
 may=INV become lucky=2PL.NOM  
 May you be lucky!

Unlike the pseudo-verbs, we do not get an impersonal meaning in the *ay*-inverted version. Rather, they still appear to express the wish of the speaker. Naturally, neither of the particles takes any aspectual morphology and both code deontic modality just like the pseudo-verbs. Therefore, I have decided to group them in the same category despite considerably less verb-like nature

Of these two modal particles, *sana* occurred more frequently in *ay*-inversions; in fact, with 71 occurrences it was the most frequent in this entire category. *Nawa* only occurred 5 times in this construction. The example above is, of course, the famous *Hunger Games* quote “*May the odds be ever in your favor!*” (Collins 2008:19).

#### 4.1.5 Variations of *ay*-Inversions

In this section, we will not see any new constituents that are accessible to *ay*-inversion. Rather, we will have a look at some variations of what we have already seen: sentences that contain multiple *ay*-inversions, sentences that contain multiple different inversion constructions and *ay*-inversions within RPs.

##### 4.1.5.1 Multiple *ay*-Inversions

Schachter and Otones (1972) note that, although not very common, it is possible to *ay*-invert both an adverb and an argument:

(144) **Schachter and Otones (1972:489)**

- a. *Pu~punta=kami bukas.*  
 IPFV~go=1PL.EXCL.NOM tomorrow  
 We will go tomorrow.
- b. *Kami'y bukas ay pu~punta.*  
 1PL.EXCL.NOM=INV tomorrow INV IPFV~go
- c. *Bukas ay kami'y pu~punta.*  
 tomorrow INV 1PL.EXCL.NOM=INV IPFV~go  
 We will go tomorrow. (formal style)

As the examples above show, the order of the adverb and the argument is not important in terms of grammaticality: both orders are fine.

This iterated *ay*-inversion did not occur at all in our data. While it was not uncommon for sentences in the *Hunger Games* data to contain the inversion marker *ay* several times, it was usually in separate coordinated sentences as in the following example:

(145) **The Hunger Games: *Mockingjay* (Reyes 2013:96)**

- [*Sa=isa-ng iglap, ang=mundo ay nag-laho*] at  
 DAT=one-LK instant NOM=world INV AV.RLS-fade.away and
- [*ang=na-tira ay ang=namumula-ng mukha=niya*].  
 NOM=STAT.RLS-remain INV NOM=blushing-LK face=3SG.GEN

In an instant, the world fades away and what remains is his blushing face.

The brackets indicate the boundaries of the two clauses coordinated by the conjunction *at* 'and'. In the first sentence, *ang=mundo* the argument of the verb *nag-laho* 'AV.RLS-fade.away' is *ay*-fronted. In the second sentence, we have a reversed *ang*-inversion (see below). It identifies 'his blushing face' as 'what remains'. Another way to express this would be through *ang*-inversion:

- (146) [*Ang=namumula-ng mukha=niya*]<sup>FOC</sup> [*ang=na-tira*]<sup>BG</sup>.  
 NOM=blushing-LK face=3SG.GEN NOM=STAT.RLS-remain  
 It is his blushing face that remains.

In the original example however, the second *ang*-phrase is *ay*-inverted reversing the order of the two *ang*-phrases, thus the term 'reversed *ang*-inversion'. It is clear that the two *ay*-inversions in this example are very different from the iterated *ay*-inversions shown in example (144) as we are looking at two *ay*-inverted arguments of different verbs in coordinated sentences rather than two *ay*-inverted constituents within a single sentence.





(149) **The Hunger Games: *Mockingjay* (Reyes 2013:281)**

*Ngunit* [*si=Peeta*, *na* [*lagi=naman-g malakas at*  
but NOM=*Peeta* LK always=*PTCL-LK strong* and

[*ngayon*]<sup>ADV</sup> *ay na-ga-gatung-an=pa ng=pagkabaliw dahil*  
now INV ABIL.RLS-IPFV~fuel-UV<sub>an</sub>=yet GEN=*insanity* because  
*sa=trackerjacker*]<sup>REL</sup> ]<sup>ARG</sup>,  
DAT=*trackerjacker*

*ay na-gawa-Ø-ng i-tukod ang=paa sa=tiyan ni=Mitchell...*  
INV ABIL.RLS-do-UV<sub>i</sub>-LK UV<sub>i</sub>-position NOM=*foot* DAT=*belly* GEN=*Mitchell*

But *Peeta*, who was always strong and now is fueled by *tracker-jacker* insanity, positions his feet under *Mitchell's* belly...

**Continuation:** "...at *sinipa siya palayo sa bloke.*"

(...and kicks him away down the block.)

The main predicate of this sentence is *nagawa-ng itukod* consisting of the undergoer voice abilitative form of the verb 'do' followed by the linker and the dictionary form *itukod* 'to position'. The contribution of *nagawa* in this combination is the meaning of 'succeeding', i. e. 'succeed(s) to position his feet under *Mitchell's* belly'. The actor argument *si=Peeta* is *ay*-fronted (brackets labeled ARG) and modified by two coordinated relative clauses (brackets labeled REL), the second of which contains the *ay*-fronted adverbial *ngayon* (brackets labeled ADV).

Finally, we also find *ay*-fronted adverbials within an *ay*-fronted adverbial clause as in the following example:

(150) **The Hunger Games (Reyes 2012b:139; Collins 2008:134)**

[*Nang* [*sa=wakas*]<sup>ADV</sup> *ay t(um)ahimik*  
when DAT=*end* INV <AV.RLS>quiet.down  
*ang=mga=manonood*]<sup>CLAUSE</sup> *ay b(um)ulong=siya*  
NOM=PL=*viewers* INV <AV.RLS>whisper=3SG.NOM  
*ng=pasasalamat...*  
GEN=*thanks*

When the audience finally quiets down, he whispers a thank you...

**Continuation:** "...at *bumalik na sa upuan niya.*"

(...and returns to his seat.)

This example features an *ay*-fronted temporal subordinate clause (brackets labeled CLAUSE), within which we find the *ay*-fronted adverbial *sa=wakas* 'in the end / finally' (brackets labeled ADV).

The *ays* in the subordinate clauses in (147), (149), and (150) are optional and would also be acceptable without the inversion marker, although in (149) a pause

is needed in its place. Only the *ay* after *si=Peeta* ‘NOM=Peeta’ in (148) is obligatory and cannot be dropped.

#### 4.1.5.2 Combinations of *ay*-Inversion and Other Inversion Constructions

Next, it is worth noting, that *ay*-inversion can co-occur with the other inversion constructions. This, too, has not been discussed very much in the literature. One possible combination is forming the *ay*-inversion of an *ang*-inversion. Starting out with the example discussed above, we could form the *ang*-inversion

- (151) *Ang=bata ang=b(um)ili ng=isda.*  
 NOM=child NOM=(AV.RLS)buy GEN=fish  
 It was the child who bought fish.

In this *ang*-inverted version, the phrase *ang=bata* ‘NOM=child’ is the predicate which takes the RP *ang=bumili ng=isda* ‘the one who bought fish’ as its argument. In an *ay*-inversion, thus, the latter would appear sentence initially:

- (152) *Ang=b(um)ili ng=isda ay ang=bata.*  
 NOM=(AV.RLS)buy GEN=fish INV NOM=child  
 The one who bought fish was the child.

This so-called reversed *ang*-inversion has been described by Nuhn (2019) and we will look into this construction in more detail in Chapter 7.

Other combinations are possible as well. For instance in a transitive clause, in addition to *ay*-inversion of one of the arguments, the other argument can undergo *ang*-inversion. In our example above this would be the fish:

- (153) *Ang=mga=prutas ay b(in)ili-∅ ng=nanay;*  
 NOM=PL=fruits INV (RLS)buy-UV<sub>in</sub> GEN=mother  
 [*ang=isda*]<sup>UG</sup> *ay* [*ang=bata*]<sup>ACT</sup>=*naman ang=b(um)ili.*  
 NOM=fish INV NOM=child=PTCL NOM=(AV.RLS)buy  
 The fruits, the mother bought them; as for the fish, it was the child that bought it.

Notice that we have extracted the undergoer of an actor voice construction. Our speakers were only willing to accept this construction with the particle *naman*, which indicates contrast, and when the first sentence is added for context. Presumably, this is needed to make it explicit that the fish is being contrasted with another food item (the fruits) and, at the same time, the actors (the child vs. the mother) are being contrasted, as well.

The undergoer-voice version of the sentence, is also possible, which of course is much less surprising:

- (154) *Ang=bata ay ang=isda ang=b(in)ili-∅.*  
 NOM=child INV NOM=fish NOM=<RLS>buy-UV<sub>in</sub>  
 As for the child, it was the fish that he bought.

Examples of these combinations of inversion constructions occurred in our data, as well. Let us first consider one that is structurally parallel to (154):

(155) **The Hunger Games: *Mockingjay* (Reyes 2013:354)**

**Context:** The protagonist, Katniss, is in the hospital after being severely injured. Drifting in and out of consciousness she experiences several nightmares with memories blended into them.

“Real or not real? I am on fire. The balls of flame that erupted from the parachutes shot over the barricades, through the snowy air, and landed in the crowd. I was just turning away when one caught me, ran its tongue up the back of my body, and transformed me into something new. A creature as unquenchable as the sun.” (Collins 2010:348)

*“Totoo o hindi totoo? Nag-aapoy ako. Ang mga bola ng apoy na sumabog mula sa mga parachute ay lumabas sa barikada, tumatagos sa maniyebeng hangin, at bumabagsak sa karamihan ng tao. Papihit pa lang ako palayo nang mahagip ako ng isa, gumapang ang dila sa aking likod, at binago ang aking anyo. Isang nilalang na hindi mapapatay katulad ng araw.”* (Reyes 2013:354)

*Ang=mutt na apoy ay isa-ng sensasyon=lang ang=alam: matindi-ng*  
 NOM=mutt LK fire INV one-LK sensation-only NOM=know intense-LK  
*paghihirap.*  
 suffering

A fire mutt, one sensation only is what it knows: intense suffering.

**Continuation:** “*Walang paningin, walang tunog, walang nararamdaman maliban sa walang tigil na pagkapaso ng laman.*” (Reyes 2013:354)

“A fire mutt knows only a single sensation: agony. No sight, no sound, no feeling except the unrelenting burning of flesh.” (Collins 2010:348)

In this case, the contrast sets are supplied in the context following the example. She contrasts her normal human self with its multiple senses with the fire mutt she has turned into in her dream and the one sensation this creature can experience. The predicate is the verb ‘to know’, here realized as the bare root *alam*. It is often used this way in Tagalog and usually takes undergoer voice alignment. The *ang*-inverted argument *isang sensasyon* ‘one sensation’ is thus the undergoer argument. The actor argument *ang=mutt na apoy* ‘the fire mutt’ is additionally *ay*-fronted.

Our second example mirrors (153) in terms of voice and fronted macroroles:

(156) **The Hunger Games: *Catching Fire* (Reyes 2012a:128)**

**Context:** Katniss wakes up from a nightmare with *Hunger Games* flashbacks. She realizes that it was a dream.

“I wish that Peeta were here to hold me, until I remember I’m not supposed to wish, that anymore. I have chosen Gale and the rebellion,...” (Collins 2009:121)

“*Sana ay narito si Peeta para yakapin ako, hanggang sa maalala kong hindi ko na puwedeng hilingin iyon ngayon. Pinili ko na si Gale at ang rebelyon.*” (Reyes 2012a:128)

*Ang=hinaharap na kasama si=Peeta ay hindi=ako*  
 NOM=future LK with NOM=Peeta INV NEG=1SG.NOM  
*ang=g(um)awa,*  
 NOM=<AV.RLS>make

*kundi ang=Kapitolyo.*  
 but NOM=Capitol

A future with Peeta, it was not I who created it, but the Capitol.

**Original:** “...a future with Peeta is the Capitol’s design, not mine.” (Collins 2009:121)

Following the inversion marker *ay*, we have an *ang*-inversion involving the actor-voice verb *g(um)awa* ‘to make’ with the *ang*-fronted actor *ako* ‘1SG.NOM’, which is negated here to mean ‘It was not I who created (it)’. The undergoer argument is *ang hinaharap na kasama si Peeta* ‘NOM future with Peeta’, which is displaced to the beginning of the sentence via *ay*-inversion. Again, the context sets up the contrast necessary for this construction: The preceding sentence explicitly mentions the future Katniss has chosen, i. e. the future she *did* create. So, again she is contrasting the two undergoers (the future with Gale vs. with Peeta) and the actors (herself vs. *not* herself). See also Latrouite (2020) for further discussion of this example.

Finally, consider the following example combining *ay*-inversion and adjunct inversion:

(157) **The Hunger Games (Reyes 2012b:101)**

**Context:** The life of the tributes is being described in the days leading up to the *Hunger Games*, specifically the eating arrangements. In the training center building, where the tributes stay before the *Hunger Games*, the District has its own floor that the tributes from that district have to themselves. They are served breakfast and dinner on their respective floors while a communal lunch is served in the gymnasium.

*Ang=almusal at hapunan ay i-ni-ha-handa*  
 NOM=breakfast and dinner INV UV<sub>i</sub>-RLS-IPFV~serve

*sa=kanya-kanya-ng palapag na*  
 DAT=3SG.DAT~3SG.DAT-LK floor LK  
*t(in)u~tuluy-an=namin-g mga=pambayad,...*  
 ⟨RLS⟩IPFV~stay-UV<sub>an</sub>-1PL.EXCL.GEN-LK PL=tribute  
 Breakfast and lunch are served individually on the floors we tributes live on,...  
*pero pagsapit ng=tanghalian, lahat kami-ng dalawampu't apat*  
 but coming GEN=lunch all 1PL.EXCL.NOM-LK twenty=and four  
*na pambayad ay sa=gymnasium k(um)a~kain.*  
 LK tribute INV DAT=gymnasium ⟨AV.RLS⟩IPFV~eat  
 but come lunchtime, we all eat in the gymnasium.

In the novel, these two sentences coordinated by the conjunction *pero* ‘but’ begin the paragraph on the eating habits in the training center and thus, it comes somewhat out of the blue. The first part supplies the information that breakfast and dinner are served on the tributes’ respective floors in the building. This suggests the implicit QUD for the coordinated second sentence “Where is lunch served?”. We can, thus, expect adjunct inversion to express narrow focus on the adjunct that supplies the answer to this question.

The answer to our QUD is provided by the *sa*-phrase *sa=gymnasium* ‘in the gymnasium’, which is realized pre-verbally right after the inversion-marker *ay*. It is preceded by the *ay*-fronted actor of this sentence. Normally, second-position clitics are used in Tagalog to distinguish between adjunct fronting and a topicalized adjunct in the left-detached position: in adjunct fronting, the clitics follow the fronted adjunct, whereas they do not if it is in the left-detached position. Here, however, we can do without clitics thanks to the *ay*-inversion: if a left-detached topic and *ay*-inversion co-occur, the left-detached topic must precede the *ay*-marked phrase (Latrouite and Van Valin 2020). Since the *ay*-marked actor precedes *sa=gymnasium*, we are dealing with adjunct fronting.

#### 4.1.5.3 *ay*-Inversion within a Reference Phrase

Finally, I would like to draw attention to *ay*-inversions occurring within an RP. In the simplest case, the *ay*-inversion can be taken to be within a non-restrictive relative clause<sup>5</sup>.

<sup>5</sup> RRG treats non-restrictive relative clauses as embedded sentences, while restrictive relative clauses are considered to be just clauses. We will discuss the implications this has for *ay*-marked constituents within relative clauses in more depth in chapter 5.

(158) **The Hunger Games: *Catching Fire* (Reyes 2012a:174; Collins 2009:168)**

**Context:** Katniss is roaming around looking for someone she can confide in. She enters the notoriously chaotic and dirty house of her mentor Haymitch, who is known to have a drinking problem.

“I’m surprised to see Haymitch moving around his kitchen so early, though. I walk into his house without knocking.” (Collins 2009:167)

“*Pero nagulat ako nang makita ko si Haymitch na naglalakad-lakad sa kusina niya nang ganito kaaga. Pumasok ako sa bahay niya nang hindi kumakatok.*” (Reyes 2012a:174)

*Na-ri-rinig=ko*                      *si=Hazelle*    *sa=itaas,*  
 UV.RLS-IPFV~hear=1SG.GEN NOM=Hazelle DAT=above  
*w<(in)a-walis-∅*              *ang=sahig*  
 <RLS>IPFV~sweep-UV<sub>in</sub> NOM=floor

[*ng=[ngayon ay napaka-linis na-ng]*<sup>REL</sup> *bahay*]<sup>RP</sup>.  
 GEN=now    INV INT-clean    already-LK house

**Original:** “I can hear Hazelle upstairs, sweeping the floors of the now-spotless house.”

The relative clause here (brackets labeled REL) modifies the noun *bahay* ‘house’. Within the relative clause, the temporal modifier *ngayon* ‘now’ is *ay*-fronted and acts as a sort of delimiter to specify that the state of being extremely clean is a new state in contrast to the usual filthy and chaotic state of the house.

This example looks particularly interesting because the relative clause with its *ay*-fronted adverbial intervenes between the case marker *ng* and the RP-nucleus *bahay*. As mentioned before, *ay*-inversion is also possible in restrictive relative clauses such as the following example:

(159) **The Hunger Games (Reyes 2012b:351)**

*Ito*              [*ang=tunog na, [salamat kay=Rue, ay*  
 this.NOM NOM=sound LK thanks    DAT=Rue INV

*nag-pa~pa-uwi*                      *gabi~gabi*    *sa=mga=trabahante*  
 AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home every.evening DAT=PL=workers  
*ng=taniman sa=District Eleven]*<sup>REL</sup> ]<sup>RP</sup>.  
 GEN=orchard DAT=District Eleven

This was the sound that, thanks to Rue, called home the workers of the orchards in District Eleven every evening.

In this sentence we have a nominal predicate *ito* ‘this’ with the argument *ang=tunog* ‘NOM=sound’, which is modified by a restrictive relative clause. Within this rela-

tive clause we find the phrase *salamat kay=Rue* ‘thanks to Rue’ as an *ay*-fronted framesetter.

In other cases, however, the *ay*-marked phrase simply precedes the RP-nucleus directly. Therefore, we are not dealing with *ay*-inversion within a sentence (or clause) as in previous examples, but we actually have an *ay*-marked phrase within an RP:

(160) **The Hunger Games: *Mockingjay* (Reyes 2013:7)**

**Context:** Katniss is walking through the remains of her former home, District 12. She incredulously examines the ruins of places she used to know. “The surface beneath my feet hardens, and under the carpet of ash, I feel the paving stones of the square. Around the perimeter is a shallow border of refuse where the shops stood. A heap of blackened rubble has replaced the Justice Building.” (Collins 2010:8–9)

“*Nanigas na ang lupa sa ilalim ng mga paa ko at sa ilalim ng nakalatag na mga abo, nararamdaman ko na ang aspaltong bato ng plaza. Naroon sa paligid ang mababaw na border ng mga basura kung saan nakatayo dati ang mga tindahan. Isang bunton ng nangingitim na mga durog na bato ang pumalit sa Justice Building.*” (Reyes 2013:7)

*L*(*um*)*akad=ako*      *papunta* [*sa*=[*tantiya=ko*]<sup>AY</sup>      *ay puwesto*  
 <AV.RLS>walk=1SG.NOM towards DAT=estimate=1SG.GEN INV place  
 [*ng=panaderya na pag-aari ng=pamilya ni=Peeta*]<sup>POSS</sup> ]<sup>RP</sup>.  
 GEN=bakery      LK property GEN=family GEN=Peeta

Then I walk towards what I believe used to be the place of the bakery that Peeta’s family used to own.

The RP in question here, is the *sa*-phrase specifying where Katniss is headed. Its nucleus is the noun *puwesto* ‘place’, which is modified by the following *ng*-phrase to mean the place of her fellow tribute Peeta’s family’s bakery. Between the case marker *sa* and the noun *puwesto* we find the intervening *ay*-marked phrase *tantiya=ko* ‘estimate=1SG.GEN’ expressing the speaker’s doubt about the exact location of the bakery.

We have seen similar framesetters in Section 4.1.2, e. g. ex. (122), *ay*-fronted at the sentence level. Most of the RP-internal *ay*-inversions are similar to this example in that the *ay*-marked phrase expresses some kind of doubt or subjectivity on the part of the speaker. Usually, they can be appropriately translated as ‘what I believe to be *X*’ or *what might be X*.

These examples are particularly interesting for an RRG description of *ay*-inversion since they show that *ay*-inversion, or at least *ay*-marked framesetters don’t only occur at the sentence level but also at the RP level. Since in RRG the

layered structure of the RP mirrors the layered structure of the clause, it would be particularly elegant if these two constructions could be described syntactically in a similar way. In this context, it is noteworthy that the uncertainty expressed by the *ay*-phrase in (160) pertains not only to the nucleus *puwesto* but to the entire rest of the RP including the modifying *ng*-phrase, i. e. the speaker is uncertain whether this is the place where the bakery in question used to be and not whether it is a place or not. This point may be of importance when modeling the internal syntactic structure of such an RP.

## 4.2 Information-Structural Considerations

Let us now turn to the information structure of *ay*-inversion constructions, which also has been discussed to some extent in the literature. It is widely accepted to be for the most part a topic construction, although it is mentioned by several authors that not only topics are *ay*-fronted. We have seen some examples of this already, e. g. in (112) where an *ay*-marked RP associates with the focus-sensitive particle *kahit* it is, of course, necessarily focal and not topical.

The main arguments in favor of analyzing the main function of *ay*-inversion as a topic construction, and thus, *ay* as a topic marker, are the following:

1. *Wh*-questions cannot be *ay*-fronted, nor can the focal constituent in response to a *wh*-question.
2. A sentence can contain multiple *ay*-fronted constituents. Cross-linguistically, this is typical for topics, but not for foci.
3. *ay*-fronted constituents precede syntactically marked narrow foci (i. e. *ang*-inversion).
4. An *ay*-fronted argument can be co-referenced with a resumptive pronoun, which is cross-linguistically often seen for topics.
5. Focus sensitive particles such as the negation *hindi* and the particle *lang* do not appear in an *ay*-marked constituent.

These arguments or variations thereof can be found in several publications (Kroeger 1991; Kaufman 2005) and we will have a more detailed look at them now. Note, however, that more recent studies reflect that *ay*-inversion clearly is not a uni-functional construction (Latrouite and Riester 2018; Latrouite and Van Valin 2020; Nuhn 2019) and it is certainly not our goal to label the construction as marking any single information-structural status. Although the construction is clearly subject to information-structural constraints, the mapping between syntactic structures and information-structural categories need not be one-to-one. There are indeed other languages, such as Barayin (Güldemann 2016; Lovestrang 2018), that feature a



background marker that can be used to mark topics but also plays an essential role in marking narrow focus. We will see that a similar case can be made for Tagalog *ay* later on in chapter 7. The fact that *ay*-inversion has multiple functions is also reflected in its syntactic representations: Latrouite and Van Valin (2020) don't analyze it as a single construction, but argue that there are at least two different syntactic structures associated with *ay*-inversion. These will be discussed in more detail in chapter 5.

Let us now look into the details of the individual arguments for analyzing *ay*-inversion as a topic construction. Kaufman (2005) uses a systematic approach first collecting all *allosentences*, i. e. sentences that have the same propositional content but different syntactic structures, and uses the question-answer method as well as focus-sensitive particles and other processes cross-linguistically associated with topic and focus to determine the information structure of each of the *allosentences*.

#### 4.2.1 *wh*-Questions and Answers

A first observation is that *wh*-question words cannot be *ay*-fronted, nor can the focal constituents in the responses (Kaufman 2005; Dery 2007; Latrouite and Van Valin 2020). Thus, the following are ungrammatical:

(161) **Kaufman (2005)**

- a. \* *Saan ay p⟨um⟩unta=ka?*  
     where INV ⟨AV.RLS⟩go=2SG.NOM  
     *intended:* Where did you go?
- b. \* *Ano ay g⟨in⟩awa-∅=mo?*  
     what INV ⟨RLS⟩do-UV<sub>in</sub>=2SG.GEN  
     *intended:* What did you do?

In both cases, the source of the ungrammaticality is the *ay*-inverted *wh*-question word. The correct forms of these two questions mirror the narrow-focus constructions, adjunct and *ang*-inversion respectively:

(162) **Kaufman (2005)**

- a. *Saan=ka p⟨um⟩unta?*  
     where=2SG.NOM ⟨AV.RLS⟩go  
     Where did you go?
- b. *Ano ang=g⟨in⟩awa-∅=mo?*  
     what NOM=⟨RLS.NOM⟩do-UV<sub>in</sub>=2SG.GEN  
     What did you do?

In both examples, the question word is still in the sentence-initial position. In the first example, it is immediately followed by the second-position clitic pronoun *ka* ‘2SG.NOM’ just as an adverbial would be when it is in narrow focus in an adjunct inversion. In the second example, the question word *ano* ‘what’ is followed by an RP containing the rest of the clause with the constituent in question, here the undergoer, deleted.

Adequate responses to these questions are syntactically parallel, according to Kaufman (2005). The first example receives a response in form of an adjunct inversion, while *ay*-inversion, though grammatical, is infelicitous in the response as well:

(163) **Kaufman (2005)**

**Question:** *Saan ka pumunta?* ‘Where did you go?’

- a. *Sa=Maynila=ako p<um>unta.*  
 DAT=Manila=1SG.NOM <AV.RLS>go  
 I went to Manila.
- b. # *Sa=Maynila ay p<um>unta=ako.*  
 DAT=Manila INV <AV.RLS>go=1SG.NOM  
*intended:* I went to Manila.

Similarly, the *ay*-inversion is also infelicitous for the second example. Here, Kaufman (2005) claims *ang*-inversion to be the appropriate response, although he doesn’t provide a concrete question-answer pair in this case. The following examples are my own to illustrate this point:

(164) **Question:** *Ano ang ginawa mo?* ‘What did you do?’

- a. *Iyon ang=g<in>awa-∅=ko.*  
 DEM.DIST.NOM NOM=<RLS>do-UV<sub>in</sub>=1SG.GEN  
 That is what I did.
- b. # *Iyon ay g<in>awa-∅=ko.*  
 DEM.DIST.NOM INV <RLS>do-UV<sub>in</sub>=1SG.GEN  
*intended:* That is what I did.

However, Dery (2007) used a questionnaire in which he presented several questions and asked consultants to select the appropriate answer from a list of grammatical sentences. The result for such constituent questions was that the preferred response was simply naming the focal constituent. *Ang*-inversions were considered odd as a response by between 30 % and 60 % of his consultants. Nuhn (2019) later described reversed *ang*-inversion, a construction we will look into in more detail in Chapter 7, which was preferred by our consultants as the response to a *wh*-question requiring narrow focus on a verb argument in the response.

Cross-linguistically these observations would be in line with topic-marking constructions in other languages and, although they do not directly imply it, they would be easily explained by analyzing *ay* as a topic marker.

#### 4.2.2 Iteration of *ay*-Inversion

We have already seen in Section 4.1.5 that several *ay*-marked phrases can co-occur in one sentence. This is again taken to be a point in favor of considering *ay*-inversion to be a topic construction, as recursivity is cross-linguistically a property of topics, not of foci (Kaufman 2005; Latrouite and Van Valin 2020).

However, as seen in the examples above, such multiple topic expressions in Tagalog usually contain adverbs or other non-arguments:

- (165) *Ngayon ay siya ay na-ta-takot.*  
 now INV 3SG.NOM INV STAT.RLS-IPFV~scared  
 Now he is scared.

Kaufman (2005) cites “*the well known general constraint in Philippine languages that objects (ng phrases) may not be extracted*” to explain why one does not find any examples of *ay*-fronting of both actor and undergoer in the same sentence. However, we have already seen above that in an undergoer-voice sentence, both actor and undergoer are eligible for *ay*-inversion:

- (166) a. **canonical word order**  
*B<in>ili-∅ ng=bata ang=isda.*  
 <RLS>buy-UV<sub>in</sub> GEN=child NOM=fish  
 The child bought the fish.
- b. **fronted undergoer**  
*Ang=isda ay b<in>ili-∅ ng=bata.*  
 NOM=fish INV <RLS>buy-UV<sub>in</sub> GEN=child  
 As for the fish, the child bought it.
- c. **fronted actor**  
*Ang=bata ay b<in>ili-∅ ang=isda.*  
 NOM=child INV <RLS>buy-UV<sub>in</sub> NOM=fish  
 As for the child, he bought the fish.
- d. **both arguments fronted (ungrammatical)**  
 ? *Ang=bata ay ang=isda ay b<in>ili-∅.*  
 NOM=child INV NOM=child INV <RLS>buy-UV<sub>in</sub>  
*intended:* As for the child and the fish, he bought it.

*Ay*-inversion of both arguments simultaneously, however, has not been observed and was judged ungrammatical by our consultants. In other languages with designated syntactic constructions for overt topic marking this is possible. In Hungarian (K. Balogh, p. c.), for example, word order in the post-verbal field is free while in the pre-verbal field there are designated positions for topic and (narrow) focus. While the immediate pre-verbal position is reserved for no more than one narrow-focus constituent, the topic-position can be iterated as in the following example:

(167) **K. Balogh (p. c.)**a. **information-structurally unmarked (all new)**

*Meg-vette a fiú a hal-at.*

PTCL-bought the boy the fish-ACC

The boy bought the fish.

b. **undergoer in topic position**

[*A hal-at*]<sup>TOP</sup> *meg-vette a fiú.*

the fish-ACC PTCL-bought the boy

As for the fish, the boy bought it.

c. **both arguments in topic position**

[*A fiú*]<sup>TOP</sup> [*a hal-at*]<sup>TOP</sup> *meg-vette.*

the boy the fish-ACC PTCL-bought

As for the boy and as for the fish, he bought it.

The first version (167a) shows the information-structurally unmarked version of our example sentence in Hungarian. “Unmarked” here in the sense that nothing is explicitly marked as topic or focus. The order of the argument RPs in the post-verbal field is free, so switching the order would not change the meaning of the sentence in any way. In (167b), the undergoer argument appears in the pre-verbal topic position and finally in (167c) both arguments are in pre-verbal topic positions. Thus, (167c) is the equivalent of (166d), which in Tagalog is ungrammatical.

#### 4.2.3 TOP > FOC

Cross-linguistically, languages tend to place topics before foci (see e. g. Erteschik-Shir 2007:7). This is for instance the case for the topic and focus positions in Hungarian: the focus position is the immediate pre-verbal position. So, when both focus and topic position are filled, the topic will precede the focus (É. Kiss 2002:2–3). If *ay*-inversion is analyzed as a topic construction, Tagalog would fit into the picture as well. We have already seen some examples of this in section:

when *ay*-inversion co-occurs with *ang*-inversion or adjunct inversion, the focal constituent always came after the inversion marker *ay*. Kaufman (2005) illustrates this point using the following two examples that show that topics must precede foci and provides judgments that the reverse order is ungrammatical:

(168) **Kaufman (2005)**

- a. *Ang=isda ay sa=tubig na-bu~buhay.*  
 NOM=fish INV DAT=water STAT.RLS-IPFV~live  
 Fish live in the water.
- b. \**Sa=tubig ang=isda ay na-bu~buhay.*  
 DAT=water NOM=fish INV STAT.RLS-IPFV~live  
*intended:* Fish live in the water.

The same holds true for *wh*-question words, which cross-linguistically pattern with focal material. The following example shows this for the question word *kailan* ‘when’:

(169) **Latrouite and Van Valin (2020:12)**

- Si=May ay kailan=ba ba~balik dito?*  
 NOM=May INV when=Q IPFV~return DEM.PROX.DAT  
 As for May, when will [she] come here?

We will, however, see some examples that don’t follow this rule in Chapter 5 – one of several indications that seeing *ay*-inversion as a single uniform syntactic construction may be too simplistic.

#### 4.2.4 Resumptive Pronouns

With the exception of arguments in combination with the negative polarity item *ni*, Latrouite and Van Valin (2020) argue that *ay*-fronted arguments are left-dislocated that are syntactically housed by the clause-external LDP. Typical characteristics of constituents in this position are that they are followed by a pause, which we indeed find for *ay*-inversion, and that the referent can be taken up clause-internally by a resumptive pronoun:

(170) **Latrouite and Van Valin (2020)**

- Si=Mai ay kailan=ba (siya) ba~balik dito?*  
 NOM=Mai INV when=Q 3SG.NOM IPFV~return DEM.PROX.DAT  
 As for May, when will (she) come here?

Latrouite and Van Valin (2020) remark, however, that resumptive pronouns did not occur in their data within *ay*-inversion and cite Kaufman (p. c.) saying that resumptive pronouns are only possible when the dislocated argument is followed by a pause and *not* by *ay*. Judgments by our consultants, however, indicate that resumptive pronouns are fine even when the inversion marker *ay* is present:

- (171) *Ang=bata<sub>i</sub> ay b(in)ili-∅=niya<sub>i</sub> ang=isda<sub>i</sub>*  
 NOM=child INV ⟨RLS⟩buy-UV<sub>in</sub>=3SG.GEN NOM=fish

*at ang=tatay<sub>j</sub> ay ang=gulay=naman*  
 and NOM=father INV NOM=vegetables=PTCL  
*ang=b(in)inili-varnothing=niya<sub>j</sub>.*  
 NOM=⟨RLS⟩buy-UV<sub>in</sub>=3SG.GEN

As for the child, he bought the fish and as for the father, it was vegetables that he bought.

Additionally, there is also an example of an *ay*-inverted actor in the *Hunger Games* data that is taken up clause-internally by a resumptive pronoun:

- (172) **The Hunger Games (Reyes 2012b:326)**

*Siguro ay na-isip-∅=niya-ng ang=kaldero ng=sabaw ay*  
 maybe INV ABIL.RLS-think-UV<sub>in</sub>=3SG.GEN-LK NOM=pot GEN=soup INV  
*sabaw=lang*  
 soup=only

*talaga para kay=Peeta, samantalang ako ay alam=ko kung*  
 really for DAT=Peeta while 1SG.NOM INV know=1SG.GEN COMP  
*ano ang=kakabit na kahulugan=niyon.*  
 what NOM=connected LK meaning=DEM.DIST.GEN

Maybe he thinks that a pot of soup will really just be soup to Peeta; while I, I know the hidden meaning behind it.

Here, the *ay*-fronted pronoun *ako* ‘1SG.NOM’ in the second portion of the sentence is taken up by the genitive pronoun *ko* following the predicate *alam* ‘know’, which is often used without voice or aspect marking with undergoer-voice alignment.

#### 4.2.5 *ay*-Inversion and Focus (Sensitive Particles)

Kaufman (2005) observes that *ay*-marked phrases do not associate with focus sensitive particles, such as “only”, ‘also’, ‘even’, or constituent negation. Rather

these particles are said to associate exclusively with the narrow focus of an *ang*-inversion or an adjunct inversion, but not with an *ay*-marked element (Kaufman 2005; Nagaya 2007).

(173) **Kaufman (2005)**

- a. \* *Hindi sa=Bulakan ay nag-piknik=kami.*  
 NEG DAT=Bulakan INV AV.RLS-picnic=1PL.EXCL.NOM  
 Not in Bulacan, we picnicked.
- b. \* *Sa=simbahan=lang ay nag-bi~bigay=ako ng=pera.*  
 DAT=church=only INV AV.RLS-IPFV~give=1SG.NOM GEN=money  
 Only in church, I give money.

We have already seen, however, that this claim is too restrictive. As shown in the examples above, *kahit* ‘even’ and the negative polarity item *ni* both can associate with *ay*-marked phrases, in certain cases the *ay*-inversion is even obligatory. So, clearly, *ay*-inversion and focus *can* go together in some cases. Kroeger (1991:67) hypothesized, citing examples from Schachter and Otones (1972), that the information-structural function associated with *ay*-inversion depends on the grammatical relation of the fronted element: ‘Inverted subjects bear the topic function, while inverted non-subjects bear pragmatic focus’. Indeed, the examples he discusses involving focus sensitive *kahit* ‘even’ or the negative polarity item *ni* are all either the obligatorily fronted actors of undergoer-voice predicates (i. e. a non-subject in his terms) or the indefinite undergoers of actor-voice predicates.

Kroeger’s reasoning would lead to the easily testable hypothesis that fronted actors of undergoer-voice predicates are always focal, i. e. we would have another way of expressing narrow focus in these cases other than *ang*-inversion.

---

**Hypothesis**

The construction ACT *ay* UV is used to convey (narrow) focus on the actor. ACT *ay* AV and UG *ay* UV mark the fronted expression as topic. Thus, the information-structural properties of the fronted argument depend on whether or not its semantic role matches the voice marker on the verb.

---

Latrouite and Riester (2018:28) provide some further evidence for this hypothesis. They argue that the macroroles actor and undergoer are associated with “default values” regarding information structure: the default for an actor is to be topical; the default for an undergoer is to be focal. According to them, ACT *ay* UV UG, i. e. fronted actor (“non-subject” with undergoer voice), is used when both macroroles have non-standard values, i. e. a focal actor and a topical undergoer. In their data, they have one example of this:

(174) **Latrouite and Riester (2018:268):**

**Context:** It is not only wolves and foxes that threaten rats and catch them.

*Ang=mga=pusa=din ay h(in)u-huli-∅=sila.*

NOM=PL=cat=also INV ⟨RLS⟩IPFV~catch-UV<sub>in</sub>=3PL.NOM

Cats also catch them.

This sentence was elicited using the second story from the *Unhappy Rats* materials (see App. A). The context was constructed such that the rats are the topic and the cats are in narrow focus in the target sentence, which answers the QUD “Who else catches rats/them?”. The speaker’s translation appears to reflect this: referring to the rats using a personal pronoun (as opposed to a zero or a demonstrative) is indicative of it being a topic (Nagaya 2006a) and since the verb is part of the background, only the expression *ang=mga=pusa* ‘NOM=PL=cat’ is in the scope of the focus-sensitive particle *din* ‘also’. Notice that this should not be possible according to Kaufman (2005).

In the course of their discussion, Latrouite and Riester (2018:269) then refine their hypothesis regarding the ACT *ay* UV construction in the following way:

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**Hypothesis (Latrouite and Riester 2018:269)**

ACT *ay* V UG occurs when the undergoer has the non-default information-structural value ‘topic’. The selection of voice then depends on the information-status of the actor and the verb:

- [ACT]<sup>FOC</sup> *ay* [V]<sup>BG</sup> [UG]<sup>TOP</sup> → UV
  - [ACT]<sup>CT</sup> *ay* [V]<sup>FOC</sup> [UG]<sup>TOP</sup> → AV
- 

This leads to the topic of voice selection and with it the question whether actor and undergoer voice are equally frequent among *ay*-inversions. Latrouite (2020) found a quite pronounced skewed voice distribution in the narrow focus *ang*-inversion construction strongly favoring actor voice, i. e. a fronted actor in narrow focus. Since the macrorole of the fronted element and the voice-form of the verb are not as closely linked for *ay*-inversion as they are for *ang*-inversion, we actually have two separate questions:

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**Questions regarding *ay*-inversion of arguments of transitive predicates**

1. Are actors *ay*-fronted more frequently than undergoers (or vice versa)?
  2. Is *ay*-inversion more frequent with AV than with UV (or vice versa)?
- 

Since an undergoer voice predicate allows for either the actor or the undergoer to be *ay*-fronted, these two questions are actually independent.



**Remark**

It is worth noting that both the negation *hindi* ‘not’ and the particle *lang* ‘only’ actually can occur within *ay*-marked constituents. However, whenever this occurred in our data, the usage of these particles didn’t appear to be focus sensitive. Thus, it doesn’t serve as a counter example to the claims of Kaufman (2005) and Nagaya (2007) that these focus-sensitive particles do not associate with *ay*-marked constituents. Consider, for instance, the following example, in which *lang* ‘only’ appears within the *ay*-marked constituent:

(175) **The Hunger Games (Reyes 2012b:226)**

**Context:** Katniss and her fellow-tribute Rue have made plans to steal supplies from another group of tributes they refer to as Careers. Rue is preparing to lure them away by lighting several fires in the Forest. Meanwhile, Katniss is retracing her steps through the forest to find the Careers’ camp.

*Siguro ay napaka-bagal=ko-ng k(um)ilos nang nagdaang araw*  
 maybe INV INT-slow=1SG.GEN-LK <AV.RLS>move when preceding day

*dahil ilang oras=lang ay*  
 because how.many hours=only INV

*na-rating-∅=ko=na ngayon ang=makitid na daan*  
 ABIL.RLS-arrive-UV<sub>in</sub>=1SG.GEN=already now NOM=narrow LK way

*kung saan=ako na-ligo.*  
 COMP where=1SG.NOM STAT.RLS-bathe

I was probably moving very slowly yesterday because I now reach the narrow stretch where I took my bath in just a few hours.

**Original:** “I must have been moving very slowly yesterday because I reach the shallow stretch where I took my bath in just a few hours.” (Collins 2008:214)

The focus-sensitive use of ‘only’ evokes an alternative set to the referent of the focal element that associates with the particle *lang*. It then entails that the assertion made in the utterance holds for this referent, but does not hold for any of the other elements of the alternative set. This reasoning cannot be applied in the same way here. In (175), the speaker expresses her surprise at how fast she reached her destination much faster than she had expected as it had taken her much longer the previous day due to her injuries. Thus, the particle attaches to the *ay*-fronted adverbial *ilang oras* ‘a couple of hours’ and implies that this span of time is shorter than what the speaker had expected, i. e. the implication is “only several hours and not more / not as long as I had anticipated” rather than “only several hours and nothing else”.

Similarly, *hindi* ‘not’ can occur in an *ay*-inversion, but apart from being rare, it seems to be very restricted when this is possible. A recurring pattern is the combination *hindi lahat* ‘not all’ appearing *ay*-fronted as in the following example:

(176) **The Hunger Games: Mockingjay (Reyes 2013:33)**

**Context:** Katniss is reluctant to tell her little sister Prim about her worries and the nightmares she has been having. Prim tells her she can talk to her, she can trust her as she is good at keeping secrets – even from their mother. This brings Katniss to a realization:

“She’s really gone, then. The little girl with the back of her shirt sticking out like a duck tail, the one who needed help reaching the dishes, and who begged to see the frosted cakes in the bakery window. Time and tragedy have forced her to grow too quickly, at least for my taste, into a young woman who stitches bleeding wounds and knows...” (Collins 2010:33)

*“Wala na nga talaga siya. Ang batang nakalawit ang damit sa likuran na parang buntot ng bibe, ang nangangailangan ng tulong para maabot ang mga plato, at ang nagmamakaawa para makita ang mga may icing na cake mula sa bintana ng panaderya. Itinulak siya ng panahon at trahedyang para mabilis na tumanda, kahit paano sa aking panlasa, at maging isang dalagita na nagtatahi ng dumudugong mga sugat at nakakaalam na”...* (Reyes 2013:33)

*hindi lahat ay puwede-ng ma-rinig ng=amin-g ina.*  
 NEG all INV can-LK ABIL.UV-heard GEN=1PL.EXCL.DAT-LK mother  
 our mother cannot hear (about) everything.

**Original:** “...our mother can hear only so much.” (Collins 2010:33)

This can however be understood as sort of lexicalized synonym of ‘some things’ plus negation and not as a negated sentence with narrow focus on the word *lahat* ‘all’. To demonstrate the difference, one might try to paraphrase the English translation and view the result in the context provided above:

(177) ?? *It is not everything that our mother can hear.*

(178) *Some things our mother cannot hear (about).*

Clearly the first version is odd and the intended meaning is the second one.

### 4.3 Interim Summary

Our discussion of *ay*-inversion began with the two most frequent uses found in our data: fronted arguments and fronted adverbials. The *ang*-marked argument of a predicate is always accessible for *ay*-inversion. Additionally, the *ng*-marked

actor of an undergoer-voice verb can also be *ay*-fronted, though the *ng*-marked undergoer of an actor-voice verb generally cannot. In most of the cases we saw, *ay*-inversion was optional, though we also saw that *ay*-inversion can be obligatory in combination with the negative polarity item *ni*.

Fronted adverbials included besides adverbial clauses many temporal modifiers and *sa...ng...* adverbials (Schachter and Otnes 1972:457) often functioning as framesetters.

We then moved on to the less frequently occurring *ay*-fronted possessors (possessor ascension), pseudo-verbs and modal particles. Finally, we looked into some more elaborate constructions involving *ay*-inversion: reversed *ang*-inversion, *ay*-inversion with *ang*-inversion or adjunct inversion following the inversion marker and *ay*-inversion within RPs.

The numbers mentioned while surveying all these different uses of *ay*-inversion are summarized in Table 4.1. Examples for each of the constructions are cross-referenced within the table.

**Tab. 4.1:** Uses of *ay*-inversion discussed above and their frequencies in *Hunger Games* and fieldwork narratives

Construction	<i>Hunger Games</i>		Fieldwork		Example
<b>Argument Fronting</b>					
transitive verb	735	(14.8 %)	13	(14 %)	(101c)
intransitive verb	421	(8.5 %)	40	(42 %)	
adjective	306	(6.2 %)	7	(7 %)	(101a)
NP-predicate	247	(5.0 %)	9	(9 %)	(101b)
existential	98	(2.0 %)	3	(3 %)	(101d)
clause	225	(4.5 %)	2	(2 %)	(102)
other (intransitive)	183	(3.7 %)	3	(3 %)	
<b>Possessor Raising</b>	23	(0.5 %)	—	(0 %)	(130)
<b>Reversed <i>ang</i>-Inversion</b>	217	(4.4 %)	10	(11 %)	(152)
<b>Adverbials</b>	2159	(43.5 %)	2	(2 %)	(122)
<b>Adverbial Clauses</b>	190	(3.8 %)	7	(7 %)	(121)
<b>Pseudo-Verbs / Modal Particles</b>	144	(2.9 %)	—	(0 %)	(139)
<b>Other</b>	11	(0.2 %)	—	(0 %)	
<b>Total</b>	4959	(100.0 %)	96	(100 %)	

While Schachter and Otnes (1972) attribute the use of *ay*-inversion to formal style, the information-structural effects of *ay*-inversion have been discussed more in past years. Assuming that different allosentences can be ascribed a single information-

structural function, *ang*-inversion and adjunct inversion were identified as narrow focus constructions while *ay*-inversion was taken to be a topic-marking construction. Although *ay*-inversion *does* have many properties that are cross-linguistically associated with topic-constructions, we also saw cases of *ay*-fronted constituents associating with focus-sensitive particles and some hypotheses that have been formulated regarding the interaction of information-structure, voice selection and *ay*-inversion. I would like to collect them here before diving into the case study in the next section.

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#### Hypotheses and Questions

1. Does the added processing effort for the ACT *ay* UV construction make it less frequent than ACT *ay* AV and UG *ay* UV?
  2. Are actors of transitive verbs *ay*-fronted more frequently than undergoers (or vice versa)?
  3. Is *ay*-inversion of arguments of transitive verbs more frequently found with actor voice than with undergoer voice (or vice versa)?
  4. The construction ACT *ay* UV is used to convey (narrow) focus on the actor. ACT *ay* AV and UG *ay* UV, on the other hand, mark the fronted expression as topic. Thus, the information-structural properties of the fronted argument depend on whether or not its semantic role matches the voice marker on the verb.
  5. The construction ACT *ay* V UG occurs when the undergoer has the non-default information-structural value 'topic'. The selection of voice then depends on the information-status of the actor and the verb:
    - [ACT]<sup>FOC</sup> *ay* [V]<sup>BG</sup> [UG]<sup>TOP</sup> → UV
    - [ACT]<sup>CT</sup> *ay* [V]<sup>FOC</sup> [UG]<sup>TOP</sup> → AV
- 

### 4.4 Case Study: *ay*-Inversion in *Hunger Games* and *Fieldwork*

In this section we will have a look at our data, particularly the *Hunger Games* data, and see how the hypotheses hold up. We will also look into the narrative elicited with the *Frog Story* and *Vater & Sohn* books. However, not only do the *Hunger Games* dwarf our elicited data in terms of pure quantity, additionally *ay*-inversion is less common in spoken Tagalog than it is in written Tagalog. Thus we will mostly rely on the novel translations.

It must be pointed out that this is only a case study and all findings must be treated accordingly. Since the vast majority of the data stems from only one speaker it mostly reflects her usage of the language. Although the fact that we are dealing with a published book that was received well by readers and also by our consultants, it can be assumed that constructions she used are indeed grammatical and the choice of information-structurally marked constructions only occurred in cases where they are felicitous in the context they appear in.

#### 4.4.1 Fronted Macro-Roles and Voice Selection

In the *Hunger Games* data we find a total of 725 *ay*-inversions involving transitive predicates as shown in Table 4.1. They were then sorted according to fronted macrorole argument and the voice form of the verb. For simplicity we will only distinguish two voice forms – actor voice (AV) and undergoer voice (UV) – and the voice form of a verb is determined by the voice-affix it carries in the following way:

**actor voice:** ⟨*um*⟩, *m-*, *maka-*

**undergoer voice:** *-in*, *i-*, *-an*, *ma-*

Thus, we consider a transitive verb to be actor voice if it is marked with the infix ⟨*um*⟩, the prefix *m-*, which fuses with the stem-forming prefixes *pag-* and *pan-* to the prefixes *mag-* and *man-* (De Guzman 1978; Schachter and Reid 2008). The affixes *-in*, *i-*, and *-an* are all grouped together despite their tendency to mark different kinds of undergoers. A more fine grained study may be an interesting task for future research. Finally, the affix *maka-*, which denotes the ability to perform an action or that an action was performed involuntarily, is considered an actor-voice prefix, and its counterpart *ma-* an undergoer-voice affix. Finally, bare verb roots unmarked for voice (including pseudo-verbs) formed their own category. They can also function as transitive predicates in Tagalog and are usually used with undergoer-voice alignment, although actor-voice alignment is possible, e. g. for imperatives (Latrouite 2011).

**Tab. 4.2:** Voice selection in *ay*-inversions in the *Hunger Games* (left) and the fieldwork data (right)

Fronted Arg.	AV	UV	ROOT	Σ	Fronted Arg.	AV	UV	ROOT	Σ
ACT	303	128	10	441	ACT	5	4	0	9
UG	3	265	16	284	UG	0	4	0	4
Σ	306	393	26	725	Σ	5	8	0	13

The same was done for the fieldwork data, which contained 13 *ay*-inversions involving transitive predicates. Thus, results here must be taken with a grain of salt due to the scarcity of the data. For the most part, however, we will see that the same patterns visible in the *Hunger Games* data are visible here as well. Table 4.2 and Figure 4.2 give an overview of the counts for both data sets.

Notice that 3 cases were classified as a fronted undergoer with an actor-voice predicate, a combination usually assumed to be ungrammatical. We have, however, already seen that this can occur nevertheless when a focus-sensitive particle, such as *kahit* ‘even’ or the negative polarity item *ni* is involved (see ex. 114a), or, when

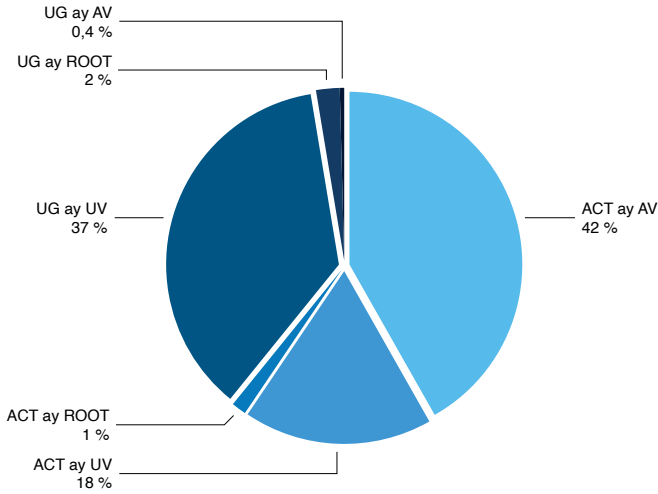


Fig. 4.2: Pie chart showing fronted macrorole and voice form for the *Hunger Games* data

there is *ang*-inversion following the *ay* as in example (156), the relevant part of which is repeated here:

(179) **The Hunger Games: *Catching Fire* (Reyes 2012a:128)**

*Ang=hinaharap na kasama si=Peeta ay hindi=ako*  
 NOM=future LK with NOM=Peeta INV NEG=1SG.NOM  
*ang=g⟨um⟩awa.*  
 NOM=⟨AV.RLS⟩make

A future with Peeta, it was not I who created it.

We will see in Chapter 5 that in an *ang*-inversion the fronted *ang*-phrase, in this case *ako* ‘I’, is considered the predicate rather than the verb within the second *ang*-phrase, here *gumawa*. Nevertheless, we will consider this type of construction UG *ay* AV since, syntactic considerations aside, the fronted *ang*-phrase is semantically still interpreted as the undergoer of the actor-voice verb.

Returning to the other counts, we see that actors are more frequently *ay*-fronted than undergoers, with fronted actors accounting 441 out of the 725 *ay*-inversions (≈61 %) involving fronted actors and only 284 (≈39 %) involving fronted undergoers. In that respect we find that *ay*-inversion is similar to *ang*-inversion in that it targets the actor more often than the undergoer. Looking at the voice form, however, we find quite the opposite: in 393 (≈54 %) the predicate is marked for undergoer voice, in 306 (≈42 %) it is marked for actor voice. These numbers are visualized in a pie chart in Figure 4.2.

Quite unsurprisingly, we find that the vast majority of cases are the three ‘standard’ *ay*-inversion variants: fronted actor with actor voice or undergoer voice and fronted undergoer with undergoer voice. These account for 96 % of the *ay*-inversions of arguments of transitive verbs, in absolute numbers 696. Of these, 44 % are fronted actors with actor voice and 38 % are fronted undergoers with undergoer voice. Given the limited data sample these numbers are compatible with the two being equally frequent. With only 128 cases or 18 %, the ACT *ay* UV makes up just under one fifth of the *ay*-inversions with transitive voice marked verbs. This makes it only about half as common as the other two options. This is consistent with our hypothesis that this construction is used less frequently than the others due to the higher processing effort.

This effect is not visible in the fieldwork data, where all three constructions are roughly equally frequent. This, however, can be attributed to the extremely small data sample – all numbers in this case are only in the single digits, not allowing for any reasonable statistics.

#### 4.4.2 Information Structural Properties

Let us now turn to hypotheses 4 and 5 from page 136 which concern the interplay of the information-structural properties of actor and undergoer, voice selection and which macrorole is fronted. Looking through the *ay*-inversion examples in context, makes it clear that these hypotheses cannot be upheld in general: although they may work for some examples, there are also numerous counter examples suggesting that there are other criteria at play here. Let us begin by looking at a few examples of the ACT *ay* UV construction.

##### (180) **The Hunger Games: *Catching Fire* (Reyes 2012a:187)**

**Context:** After the announcement of the *Quarter Quell*, a special 75th anniversary *Hunger Games* in which Katniss must compete again, she wakes up severely hung over. After vomiting several times she takes a shower as her mother and her sister, Prim, appear. Despite trying to maintain a façade of strength, Katniss bursts into tears and is soothed by her mother and Prim:

“I have to be strong. I struggle into an upright position, push my wet hair off my throbbing temples, and brace myself for this meeting. They appear in the doorway, holding tea and toast, their faces filled with concern. I open my mouth, planning to start off with some kind of joke, and burst into tears. So much for being strong. My mother sits on the side of the bed and Prim crawls right up next to me and they hold me, making quiet soothing sounds, until I am mostly cried out.” (Collins 2009:180)

*“Kailangan kong maging matatag. Pinilit kong umupo nang matuwid, hinawi ko ang basang buhok ko mula sa kumikirot kong mga sentido, at inihanda ang aking sarili para sa paghaharap na ito. Lumitaw sila sa pintuan, may hawak na tsa at tostadong tinapay, puno ng pag-aalala ang mga mukha. Ibinuka ko ang aking bibig, binabalak na magbiro pero bumulalas ako ng iyak. Tama na ang pagpapanggap ko na matatag. Umupo ang aking ina sa gilid ng kama at pagapang na nagtungo sa tabi ko si Prim. Niyakap nila ako, inaalo sa mahinang boses, hanggang sa halos maiiyak ko na ang lahat.”*  
(Reyes 2012a:187)

*Pagkatapos ay k(um)uha si=Prim ng=tuwalya...*  
then INV ⟨AV.RLS⟩take NOM=Prim GEN=towel  
Then, Prim got a towel...

*at t(in)uyo-∅ ang=buhok=ko, s(in)u~suklay-∅*  
and ⟨RLS⟩dry-UV<sub>in</sub> NOM=hair=1SG.NOM ⟨RLS⟩IPFV~brush-UV<sub>in</sub>  
*ang=mga=buhol,...*  
NOM=PL=knot

.....and dried my hair, combed out the knots...

*habang [ang=akin-g ina]<sup>CT</sup> ay h(in)ikayat-∅=ako-ng*  
while NOM=1SG.DAT-LK mother INV ⟨RLS⟩persuade-UV<sub>in</sub>=1SG.NOM-LK  
*inum-in ang=tsa at kain-in ang=tostado-ng tinapay.*  
drink-UV<sub>in</sub> NOM=tea and eat-UV<sub>in</sub> NOM=toasted-LK bread  
... while my mother persuades me to drinking tea and eating toast bread.

In this context, Katniss is clearly the topic. This section is devoted to describing her reaction to the announcement of the *Quarter Quell* and the subsequent realization that she will have to participate in another *Hunger Games*. When her mother and Prim show up, it is described how they sooth her and help her calm down. In the target sentence Katniss' mother and Prim appear as contrastive topics describing their actions on the topic, Katniss. The QUD could be formulated as “*What is done to Kaniss next?*” with the subquestions “*What does Prim do to her?*” and “*What does Katniss's mother do to her?*”. This leaves us with the following information-structural packaging:

- (181) ...[*ang=akin-g ina*]<sup>CT</sup> ay [*h(in)ikayat-∅*]<sup>FOC</sup>=[*ako*]<sup>TOP</sup>-ng...  
NOM=1SG.DAT-LK mother INV ⟨RLS⟩persuade-UV<sub>in</sub>=1SG.NOM-LK  
...my mother persuades me...



According to hypothesis 4, a fronted actor of an undergoer voice verb should be focal, which is not the case<sup>6</sup>. Furthermore, hypothesis 5 would predict an actor-voice verb for this information-structural configuration, which we don't find either. Thus, this sentence violates two of our hypotheses at once.

This example is far from being the exception: counterexamples for hypothesis 4, e. g. where a contrastive-topic actor is *ay*-fronted and followed by an undergoer voice verb, are easy to find in the data. Let us examine one more example of this:

(182) **The Hunger Games: *Mockingjay* (Reyes 2013:315)**

**Context:** Katniss and her accomplices are being attacked by genetically engineered creatures called *muttations* or *mutts*.

“Yes, we can eventually kill them, only there are so many, an endless supply pouring from the pipe, not even hesitating to take to the sewage. But it's not their numbers that make my hands shake so. No mutt is good. All are meant to damage you.” (Collins 2010:311)

“*Oo, sa huli ay mapapatay rin namin sila, iyon nga lang, masyado silang marami, hindi maubos-ubos ang lumalabas mula sa tubo, ni hindi man lang nag-aalinlangan na lumusong sa kanal. Ngunit hindi ang bilang nila ang nagpanginig sa mga kamay ko. Walang mabait na mutt.*” (Reyes 2013:315)

*Ang=lahat ay ni-likha-∅ para ma-pinsala-∅=ka.*

NOM=all INV RLS-create-UV<sub>in</sub> to ABIL.RLS-harm-UV<sub>in</sub>=2SG.NOM

All were created to harm you.

*[Ang=iba]<sup>CT</sup> ay [pa~patay-in]<sup>FOC</sup>=*[ka]<sup>TOP</sup>, katulad ng=mga=unggoy.**

NOM=other INV IPFV~kill-UV<sub>in</sub>=2SG.NOM like GEN=PL=monkey

Some kill you, like the monkeys.

*[Ang=iba]<sup>CT</sup> ay [si~sira-in]<sup>FOC</sup> [ang=isipan=mo]<sup>TOP</sup>, katulad*

NOM=other INV IPFV~destroy-UV<sub>in</sub> NOM=mind=2SG.GEN like

*ng=mga=trackerjacker.*

GEN=PL=trackerjacker

Others destroy your mind, like the trackerjackers.

<sup>6</sup> The information-structural concepts used in the RRG framework are build on the definitions used by Lambrecht (1994), which treat contrastive topics as a type of topic and keep it distinct from foci. Other approaches, however, suggest analyzing contrastive topics as a focus embedded within a topic. (See Erteschik-Shir [2007:48–49] or Krifka and Musan [2012:30–31] for details.) However, this is still very different from the narrow-focus configuration we saw e. g. in (174). Furthermore, the examples presented in this suggest that ACT *ay* UV does not differ from ACT *ay* AV and UG *ay* UV in the way hypothesis 4 suggests.

In this example, Katniss and her team are under attack by genetically engineered monsters, *mutt(ation)s*, created by the Capitol. She is attempting to explain why this particular attack is so terrifying. The first statement given in this example is that all *mutts* are created to damage you. The next two address the QUD *What do they do to you?* using a classic contrastive topic structure consisting of two parallel sentences: the first describes the strategy of one group of *mutts*; the second then addresses *the others* – in Tagalog using *ang iba ay...ang iba ay*. As the question suggests, the verbs are in narrow focus and the undergoer *you* is topical, although in the *ang=isipan=mo* ‘your mind’ is strictly speaking only a part of the undergoer referent. Thus, just like the previous example, this also violates both hypothesis 4, but also the second rule of hypothesis 5.

Conversely, we can also find cases of focal *ay*-fronted actors followed by an actor voice verb:

(183) **The Hunger Games: *Catching Fire* (Reyes 2012a:139)**

**Context:** Katniss’ mother, daughter of a pharmacist, treats many people in District 12 with remedies she makes herself. However, she is running out of supplies and the forest, where she could replenish her reserves, is out of bounds.

“Her stocks of remedies are running so low, though, that soon all she’ll have to treat the patients with is snow. The woods, of course, are forbidden. Absolutely. No question.” (Collins 2009:132)

“*Paubos na nang paubos ang mga nakaimbak niyang gamot at hindi magtatagal ay tanging niyebe na lang ang magagamit niya sa panggagamot. Ip-inagbabawal na siyempre ang kagubatan. Walang pasubali. Walang tanong-tanong.*” (Reyes 2012a:139)

*Maging si=Gale ay hindi=na nag-tangka=pa-ng p(um)asok*  
 even NOM=Gale INV NEG=NOW AV.RLS-try=yet-LK ⟨AV⟩enter  
*doon ngayon.*

DEM.DIST.DAT now

Even Gale doesn’t try to enter them anymore now.

In this case, it is difficult to construct an adequate QUD based on the surrounding context. The woods in question here have always been off limits. It is known, however, that Katniss and her friend Gale used to frequently sneak into the woods to hunt and collect fruits and herbs. The statement that now even Gale no longer attempts to enter the forest is used here to emphasize how much more strictly rules are being enforced now. That the actor is in narrow focus is, however, clear since it is the semantic associate of the focus-sensitive particle *maging* ‘even’.

One could argue that the woods as a possible source for desperately needed medical herbs are the topic here, while the predicate is part of the background. It is neither part of the focus since it is not part of the scope of the focus-sensitive particle, nor is it part of the topic as the actual act of entering the woods was previously merely implied but not even explicitly mentioned: “The woods, of course, are forbidden”. Thus we have the following structure here:

- (184) *Maging* [*si=Gale*]<sup>FOC</sup> *ay hindi=na* [*nag-tangka=pa-ng p(um)asok*]<sup>BG</sup>  
 even NOM=Gale INV NEG=now AV.RLS-try=yet-LK (AV)enter  
 [*doon*]<sup>TOP</sup> *ngayon*.  
 DEM.DIST.DAT now  
 Even Gale doesn’t try to go in there anymore now.

This time, we have a focal fronted actor followed by an actor-voice verb – in Kroeger’s terms, an *ay*-fronted subject, which according to hypothesis 4 should be topical. This shows again that whether a fronted element is focal or topical does not depend on whether it is a subject or a non-subject (Kroeger 1991).

Additionally, the first rule of hypothesis 5 would also predict undergoer voice for this information-structural configuration, which suggests that this too may be too strong a generalization.

For completeness, it should be noted, that focal *ay*-fronted undergoers are possible as well:

(185) **The Hunger Games: *Catching Fire* (Reyes 2012a:118)**

**Context:** After Katniss’ friend Gale was publicly whipped, her mother is treating his wounds in their house. Katniss asks her whether she will be able to save him. Too absorbed in treating Gale’s severe injuries, she does not respond and completely ignores her. Gale’s mother, Hazelle, who has heard of the incident, rushes in, sits down and takes her son’s hand:

“Hazelle arrives, breathless and flushed, fresh snow in her hair. Wordlessly, she sits on a stool next to the table, takes Gale’s hand, and holds it against her lips.” (Collins 2009:112)

“*Dumating si Hazelle, humihingal at namumula, may sariwang niyebe sa kanyang buhok. Tahimik na umupo siya sa isang bangko sa tabi ng mesa, kinuha ang kamay ni Gale, at inilapit iyon sa kanyang mga labi.*” (Reyes 2012a:118)

*Maging siya ay hindi b(in)ati-∅ ng=akin-g ina.*  
 even 3SG.NOM INV NEG (RLS)greet-UV<sub>in</sub> GEN=1SG.DAT-LK mother

“My mother doesn’t acknowledge even her.” (Collins 2009:113)

In this example, we have an *ay*-fronted undergoer associating with the focus-sensitive particle *maging* ‘even’, which indicates that it is focal. Like in the previous

example, the QUD is difficult to deduce from the context in the usual way, as it appears to answer the question *Who else does Katniss' mother not acknowledge (apart from Katniss herself)?*. How this question fits into the context becomes a little clearer when we understand this portion of text as a statement about *how* absorbed Katniss' mother is in treating Gale's severe injuries. We have already heard that she is too absorbed to acknowledge her daughter's question. This makes it more plausible to ask the question *Who else or what else does she not acknowledge due to being too focused on the treatment?*.

## 4.5 Summary and Outlook

Our examination of Tagalog *ay*-inversion began in Section 4.1 with an overview of the uses recorded in the literature and how they are used in our data. We discussed first the *ay*-inversion of arguments and of adverbials and adverbial clauses. These are by far the most common cases in our data, together making up 92% of the *ay*-inversions in the *Hunger Games* data set. We then turned to less frequent uses, such as the possessor ascension construction and the *ay*-inversion of pseudo-verbs and modal particles.

We then observed that *ay*-inversion of both an argument and an adverbial, although possible, does not occur at all in our data. When two or more *ays* occur in one sentence, they were usually in separate clauses. We also saw that *ay*-inversion of both arguments and adverbials also occur in subordinate clauses, such as *that*-clauses or relative clauses. We even find *ay*-marked adverbials within RPs. Finally, we looked into combinations of *ay*-inversion with other inversion constructions: aside from the reversed *ang*-inversion we can also find *ang*-inversion or adjunct inversion in addition to an *ay*-fronted argument.

Section 4.2 then gave an overview of the information-structural properties of *ay*-inversion as they have been discussed in the literature. It is regarded by many as a topic-marking construction although focal *ay*-marked arguments are also observed. Throughout these first two sections, we collected several hypotheses and questions regarding *ay*-inversion, which were then tested in a case study using our data in Section 4.4:

1. Does the added processing effort for the ACT *ay* UV construction make it less frequent than ACT *ay* AV and UG *ay* UV? ✓
2. Are actors of transitive verbs *ay*-fronted more frequently than undergoers? ✓  
... or vice versa? ✗
3. Is *ay*-inversion of arguments of transitive verbs more frequently found with actor voice than with undergoer voice? ✗  
... or vice versa? ✓

4. The construction ACT *ay* UV is used to convey (narrow) focus on the actor. ACT *ay* AV and UG *ay* UV, on the other hand, mark the fronted expression as topic. Thus, the information-structural properties of the fronted argument depend on whether or not its semantic role matches the voice marker on the verb. ✗
5. The construction ACT *ay* V UG occurs when the undergoer has the non-default information-structural value ‘topic’. The selection of voice then depends on the information-status of the actor and the verb:
- [ACT]<sup>FOC</sup> *ay* [V]<sup>BG</sup> [UG]<sup>TOP</sup> → UV (✗)
  - [ACT]<sup>CT</sup> *ay* [V]<sup>FOC</sup> [UG]<sup>TOP</sup> → AV ✗

The data showed that the patterns ACT *ay* AV and UG *ay* UV each account for around 40 % of *ay*-fronted arguments of transitive predicates, while ACT *ay* UV only accounted for 18 %. This is compatible with our first hypothesis, although ACT *ay* UV is by no means rare in our data.

In our data, 61 % of the *ay*-fronted arguments of transitive predicates were actors. On the other hand, when considering the voice form of the predicate, undergoer voice was more common: 54 % of the predicates were marked for under voice and 3 % were bare verb roots.

Of course, larger studies with balanced corpora are necessary to corroborate these findings in general, since this case study mostly reflects the speaking habits of one person (or a few people, if one includes the field work data). It is, however, encouraging and suggests we are on the right track.

As for hypothesis 4, we saw several examples of ACT *ay* AV in which the actor was a contrastive topic as well as examples of UG *ay* UV and ACT *ay* UV with narrow focus on the fronted RP. This strongly suggests that this hypothesis is false. The rules formulated under hypothesis 5 are somewhat more tricky since they are far more specific. We saw one example that contradicted the first rule, which by itself could be an exceptional case or could indicate that we are dealing with a preference rather than a rule. This is a matter for future research. Regarding the second rule, we discussed two examples, which the rule would have predicted actor voice, but we found undergoer voice instead and the data offered several more such examples, suggesting that this rule needs to be revised.

A common feature of the *ay*-inversions in which the *ay*-marked RP was focal was that they all involved a focus-sensitive particle. This is true both for the examples discussed from our data as well as the examples taken from the literature. All involved *kahit* or *maging* ‘even’, *din* ‘also’, or the negative polarity item *ni*. In fact, when looking through the other *ay*-inversions in the data, this observation appears to extend to other *ay*-fronted elements as well:

(186) **The Hunger Games: *Catching Fire* (Reyes 2012a:35)**

**Context:** Katniss is taking a bath in preparation for her make-over before the publicity events leading up to the *Quarter Quell*. She immerses herself completely in the water and fantasizes about being in the lake in the forest by District 12 where she used to swim as a child. The sounds of the Capitol drag her back into reality.

*Maging* [*sa=ilalim ng=tubig*]<sup>FOC</sup> *ay na-ri-rinig=ko*  
 even DAT=underneath GEN=water INV UV.RLS-IPFV~hear=1SG.GEN  
*ang=tunog ng=komosyon.*  
 NOM=sound GEN=commotion

Even underwater I can hear the sounds of commotion.

This sentence expresses how noisy it is in the Capitol by responding to the implicit question *Where can the commotion (of the Capitol) be heard?*. In the response, we have the adverbial *sa=ilalim ng=tubig* ‘underwater’ in narrow focus associating with the focus-sensitive particle *maging* ‘even’.

Based on these observations, we can form the following hypothesis:

**Hypothesis**

An *ay*-fronted constituent is only focal if it associates with a focus sensitive-particle

More interesting aspects for future research lie in the realization of the non-fronted argument. Table 4.3 shows some numbers on this subject matter for the *Hunger Games* data. For each combination of fronted argument and voice form, the table shows which case marker the other non-fronted macrorole argument received or whether it was dropped all together. The counts in the *other*-column represent cases that did not fit into the other categories, such as clausal complements. Beginning with the ACT *ay* AV construction, we see that in most cases (78%), the undergoer argument was realized overtly by either a *ng*-phrase (45%) or a *sa*-phrase (35%).

**Tab. 4.3:** Voice selection and realization of non-fronted macrorole argument in *ay*-inversions in the *Hunger Games* data

	<i>ang</i> NP	<i>ng</i> NP	<i>sa</i> NP	∅	other
<b>Fronted Actor</b>					
ACT <i>ay</i> AV	—	137	100	21	45
ACT <i>ay</i> UV	99	—	—	5	23
<b>Fronted Undergoer</b>					
UG <i>ay</i> UV	—	74	—	184	1

The use of differential case marking in Tagalog has been described for Tagalog by Latrouite (2016) and is linked to the referential properties of the undergoer.

Moving on to the ACT *ay* UV construction, we would expect to find here that the other macrorole is always overt since otherwise, without having two *ang*-marked arguments, the fronted argument would be interpreted as the undergoer. For the most part, this is indeed the case. There are, however, 5 cases in the *Hunger Games* data with no overt undergoer. Three of these are in relative clauses where the zero-undergoer is coreferential with the head of the relative clause. This is obligatorily done in a regular Tagalog relative clause, except here, we have an *ay*-fronted actor:

(187) **The Hunger Games: *Mockingjay* (Reyes 2013:364)**

*Ilan-g mga=bagay na kahit ako ay hindi ma-lagpas-an.*  
 some-LK PL=thing LK even 1SG.NOM INV NEG ABIL-survive-UV<sub>an</sub>  
 Some things that even I can't survive.

In a regular relative clause without *ay*-inversion, the undergoer of the relative clause, which is coreferential with the head of the relative clause *bagay* 'thing', would be zero marked:

(188) *Ilan-g mga=bagay na hindi=ako ma-lagpas-an.*  
 some-LK PL=thing LK NEG=1SG.NOM ABIL-survive-UV<sub>an</sub>  
 Some things that I cannot survive.

However the addition of the focus-sensitive particle *kahit* 'even' taking the actor *ako* as its associate, requires it to be *ay*-inverted, which leads to the structure we see above. In the other two cases, verbs semantics and context are sufficient to determine that the fronted constituent is not the undergoer.

This now leads us to the most interesting case: fronted undergoer with an undergoer-voice predicate. Here we encounter the surprising result that the majority (71%) have a zero-coded actor, while only a little less than one third (29%) have an overt *ng*-marked actor. Looking into the English original of these sentences reveals that many of them translate English passive constructions, i. e. sentences, in which the actor has been backgrounded:

(189) **The Hunger Games: (Reyes 2013:2)**

**Context:** Katniss is standing amid the ruins of her former home in District 12. She cannot believe what she is seeing and entertains the thought this may be a hallucination due to the pain medication she is currently taking or her concussion.

"I use a technique one of the doctors suggested. I start with the simplest things I know to be true and work toward the more complicated. The list begins to roll in my head... My name is Katniss Everdeen. I am seventeen

years old. My home is District 12. I was in the Hunger Games. I escaped. The Capitol hates me.” (Collins 2010:4)

“*Ginamit ko ang isa sa mga technique na iminungkahi ng doktor. Nagsimula ako sa maliliit na bagay na alam kong totoo hanggang sa mas komplikado. Nagsimulang gumulong ang listahan sa aking isipan... Ang pangalan ko ay Katniss Everdeen. Ako ay labimpitong taong gulang. Ang tahanan ko ay sa District Twelve. Nasa Hunger Games ako. Nakatakas ako. Kinamumuhian ako ng Kapitolyo.*” (Reyes 2013:2)

*Si=Peeta ay g(in)awa-Ø-ng bilanggo.*

NOM=Peeta INV (RLS)make-UV<sub>in</sub>-LK prisoner

“Peeta was taken prisoner.”

*(In)i~isip ng=lahat na siya ay patay=na.*

(RLS)IPFV~think GEN=all COMP 3SG.NOM INV dead=already

“He is thought to be dead.”

It is known at this point that it was the Capitol who took Peeta and some other tributes as prisoners, but it is currently not relevant. Katniss is simply listing things she knows and is sure of. The actor is not important to her at this point since she is listing information about Peeta<sup>7</sup>. Thus, we have a given, known actor, who is backgrounded. This licenses passive in English and is translated using the *UG ay UV* construction with a zero-coded actor in Tagalog.

(190) **The Hunger Games: *Catching Fire* (Reyes 2012a:87)**

**Context:** Katniss encounters the Gamemaker Plutarch Heavensbee at a social gathering during her Victory Tour and asks him whether he is already planning the arena for the 75th *Hunger Games*, the so-called *Quarter Quell*:

“Are you planning the Quarter Quell Games already?” I say. ‘Oh, yes. Well, they’ve been in the works for years, of course.’” (Collins 2009:82)

“*Pinaghahandaan mo na ba ang Quarter Quell Games?’ sabi ko. ‘Ah, oo. Ang totoo ay ilang taon nang pinagpaplanuhan ang mga iyon.*” (Reyes 2012a:87)

*Ang=mga=arena ay hindi i-t(in)a~tayo sa=isa-ng araw=lang.*

NOM=PL=arena INV NEG UV<sub>i</sub>-(RLS)IPFV~build DAT=one-LK day=only

“Arenas aren’t built in a day.” (Collins 2010:82)

<sup>7</sup> Since she began with statements about herself and has now moved on to Peeta, the *ay*-inversion may be interpreted as a marker of a topic shift, however the pronoun *siya* referring to Peeta is also *ay*-fronted in the next sentence and most of the preceding sentences in her list involve *ay*-inversion, making this a less likely explanation.



This is clearly an in-universe version of the saying *Rome wasn't built in a day*, which features a passive construction in English. In Tagalog, we find again an *ay*-fronted undergoer followed by an undergoer-voice verb and a zero-marked actor.

An explanation of this phenomenon could be hypothesized along the following lines: As already stated by Latrouite and Riester (2018), it is unsurprising that a special marking is chosen when both actor and undergoer have non-default information-structural values. As their “standard values” are topical for the actor and focal for the undergoer, they argue that this would mean the reverse case, i. e. focal for the actor and topical for the undergoer. In fact, another possibility for the actor to have a non-standard information-structural value is if it is backgrounded or absent. This, together with the topical status of the undergoer argument would explain, why we find an information-structurally marked construction, such as *ay*-inversion. Thus, I would formulate a tentative hypothesis for future research:

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**Hypothesis**

If the undergoer is topical and the actor is unknown or irrelevant and thus backgrounded and coded by zero, then the structure

$$[UG]^{TOP} ay [V_{UV}]^{FOC} [\emptyset_{ACT}]$$

is used.

---

This would also explain why this construction has been referred to as a passive (Kroeger 1991:57 citing Cooreman, Fox, and Givón 1984), which one of my consultants did as well saying it lacked the assertiveness and agentivity of the canonical sentence just as passives do in English<sup>8</sup>.

Notice that a similarly marked construction is not necessary to background the undergoer as actor voice does this enough already: the status of the undergoer argument of an actor-voice verb has been disputed (Nagaya 2012) and it has been analyzed as an antipassive by supporters of the ergative hypothesis (Nolasco 2005).

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<sup>8</sup> Nagaya (2006a:98) notes that zero-coding of the actor can have a passive-like agent-defocussing function in Tagalog in general, even without *ay*-inversion of the undergoer. He provides examples where zero-coding is used for generic or unknown actors similar to the examples we discussed above.



## 5 Towards a Description of *ay*-inversion in Role and Reference Grammar

In this chapter, we will investigate *ay*-inversion from the point of view of Role and Reference Grammar. We will begin in Section 5.1, by looking at previous RRG-accounts of Tagalog structures in general and *ay*-inversion in particular. It has been proposed that *ay*-inversion is not a single construction, but rather at least two distinct constructions with different syntactic and information-structural properties (Latrouite and Van Valin 2020). In Section 5.2, we will see how the proposed syntactic analyses fare at describing the *ay*-inversions in our data. Finally, we will observe the important role focus sensitive particles such as *kahit* ‘even’, *maging* ‘even’, *din* “also”, or the negative polarity item *ni* play for focal *ay*-marked phrases and that focus domains apparently do not extend across an occurrence of *ay*. In Section 5.3, we will see how this can be modeled in the focus projection of RRG.

### 5.1 Tagalog Clause Structure in RRG

Before getting into the structure of *ay*-inversion, we need to look at the big picture and discuss the structure of the Tagalog clause in somewhat more general terms. Several publications have discussed possible RRG-accounts of Tagalog clause structure. Dery (2007) tries to determine the focus structure of various Tagalog constructions using a questionnaire. In his paper, he proposes possible information-structure projections as well as syntactic projections in RRG terms. Nagaya (2007) and more recently Latrouite and Van Valin (2020) on the other hand focus more on the syntactic structure and thus provide a more detailed analysis of the morpho-syntactic evidence for the structures they propose.

#### 5.1.1 Basic Sentence Structure

##### 5.1.1.1 Syntactic Structure

The structure of the default word order, i. e. the verb-initial word order, is fairly straightforward (see e. g. Latrouite and Van Valin 2020:2). The basic syntactic template is shown in Figure 5.1. The core contains first of all the nucleus, which in turn contains the predicating element itself. This is followed by the appropriate number of argument nodes corresponding to the valency of the verb. Periphery elements can be added to modify various layers of the clause. In the case of the previously

discussed movable adverbs, these would be considered predicate regardless of their position.

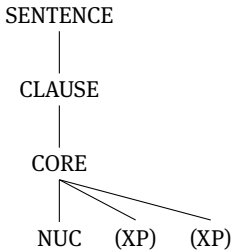


Fig. 5.1: Syntactic template for a Tagalog sentence with canonical word order

### 5.1.1.2 Information Structure

In terms of the information-structural projection, there is less consensus in the literature. Nagaya (2007) claims that the clause-initial element is obligatorily interpreted as focal, proposing the notion of an obligatory focus domain (OFD). The actual focus domain may extend beyond the clause-initial element to include arguments. Thus, the canonical word order, according to Nagaya (2007), can code predicate focus or sentence focus, while narrow focus on an argument or focus on both arguments is excluded in this analysis.

This analysis is, however, in conflict with the observation made by Kaufman (2005) and Dery (2007) that arguments in narrow focus may stay in-situ for various reasons. For one, speakers may want to avoid the exhaustivity implication that goes with the narrow-focus *ang*-inversion as in the following case:

(191) **Dery (2007:388–389)**

*K(um)ain ng=ano si=Mark?*

⟨AV.RLS⟩ GEN=what NOM=Mark

Mark ate what?

- a. <sup>?</sup> *Pansit ang=k(in)ain-∅ ni=Mark.*  
 noodles NOM=⟨RLS⟩eat-UV<sub>in</sub> GEN=Mark  
 Noodles were what Mark ate.
- b. *K(um)ain ng=pansit si=Mark.*  
 ⟨AV.RLS⟩ GEN=noodles NOM=Mark  
 Mark ate noodles.

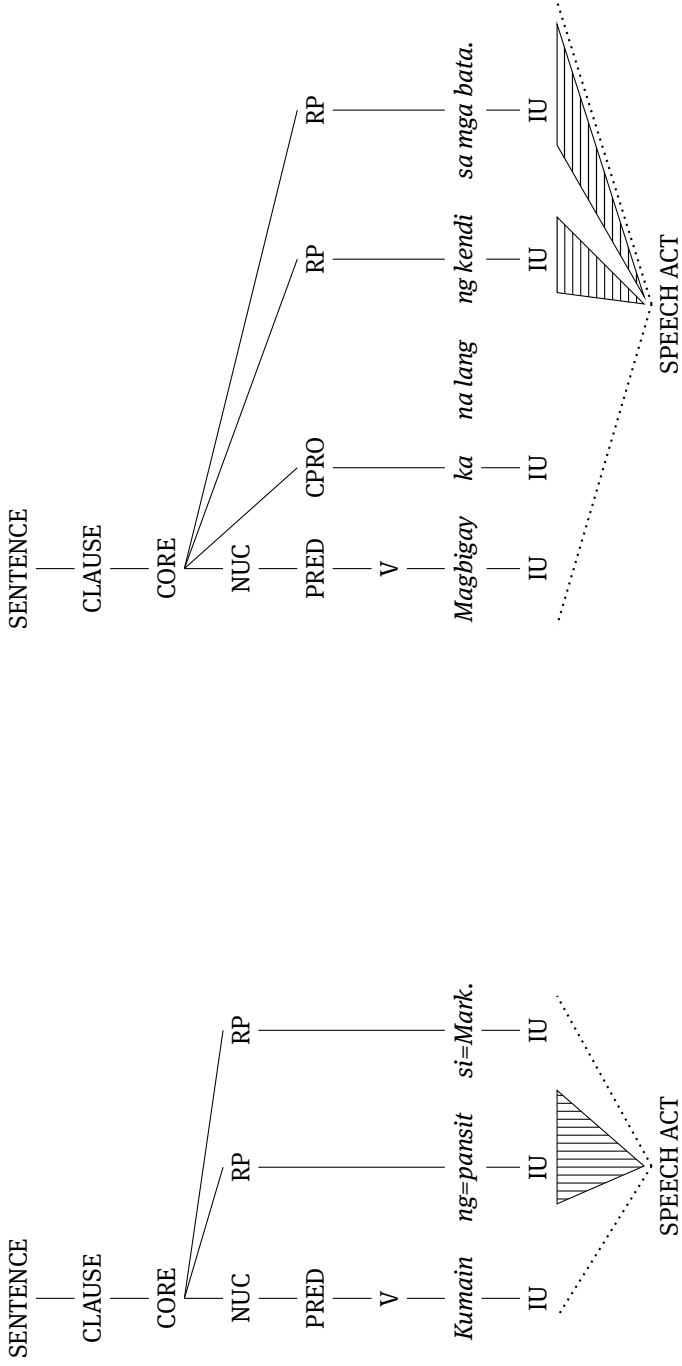


Fig. 5.2: In-situ focus on arguments

Upon hearing the response in (a), a listener would believe that Mark ate noodles and nothing else as suggested by the *wh*-cleft translation. To avoid this implication, the speaker can choose the verb-initial structure shown in (b), where the focal argument remains in-situ. According to Nagaya and Hwang (2018), in-situ narrow focus is only possible if, as in (191), the focused RP is *not* the agent argument. Additionally, they found that their speakers used prosodic cues to mark the presence of focus in the sentence. Specifically, F0 was higher than it was in an “all-old” context, i. e. “*Did Mark eat noodles? – Yes, Mark ate noodles.*” Their study however, did not conclusively show whether there is a difference in prosody between the sentence-focus, predicate-focus, and narrow-focus conditions.

The double focus construction mentioned by Kaufman (2005) is another example that is incompatible with the OFD proposed by Nagaya (2007):

(192) **Kaufman (2005:187)**

*Dapat=ba-ng mag-bigay ng=pera sa=mga=guro?*  
 should=Q-LK AV-give GEN=money DAT=PL=teacher  
 Should one give money to the teachers?

*Hindi, mag-bigay=ka=na=lang ng=kendi sa=mga=bata.*  
 no AV-give=2SG.NOM=now=just GEN=candy DAT=PL=child  
 No, just give candy to the children.

In this example, there is contrastive (corrective) focus on both the theme argument and the goal argument. Applying *ang*-inversion to one of the arguments is infelicitous as it would imply narrow focus and explicitly exclude the other argument from the focus domain. Since Tagalog does not allow *ang*-fronting of both arguments to mark them both as focal, there is, in fact, no alternative to leaving both of them in-situ. Thus, the focus domain explicitly does not include the part of the clause described by Nagaya (2007) as the obligatory focus domain. Note however that just as in (191), the actor argument is not part of the actual focus domain (see Nagaya and Hwang 2018:378).

### 5.1.2 Inversion Constructions

Let us now turn to Tagalog’s information-structurally marked non-verb-initial constructions and see how they have been accounted for in RRG. Before getting into the details of the individual constructions, however, let us have a look at how clitics are used in Tagalog as a tool to diagnose the syntactic position a constituent is in.

Tab. 5.1: Tagalog's non-pronominal clitics (according to Kaufman 2010:9)

Category	Clitic	Free	Translation
Aspect	= <i>na</i>	–	'already'
	= <i>pa</i>	–	'still'
Focus	= <i>din</i>	–	'also'
	= <i>man</i>	–	'even'
	= <i>naman</i>	( <i>naman</i> )	'switch topic'
	= <i>nga</i>	–	'emphasis'
	= <i>lang/=lamang</i>	<i>lamang</i>	'only'
	= <i>talaga</i>	<i>talaga</i>	'emphasis'
Politeness	= <i>po</i>	–	'politeness'
	= <i>ho</i>	–	'politeness'
Mood	= <i>pala</i>	–	'surprise'
	= <i>yata</i>	–	'perhaps'
	= <i>sana</i>	<i>sana</i>	'hopefully'
	= <i>nawa</i>	<i>nawa</i>	'hopefully'
	= <i>ba(ga)</i>	( <i>baga</i> )	'question marker'
Evidential	= <i>daw</i>	–	'reported speech'

Second position clitics are often used in RRG to identify the clause boundary, as their host will typically be the first element of the clause. This makes them a handy diagnostic tool to distinguish the LDP from clause-internal syntactic positions. Kaufman (2010:11–14), however, notes that not all clitics behave the same, specifically the pronoun-clitics (see Table 5.1) behave differently from non-pronominal clitics. This can be seen in the following example:

(193) Kaufman (2010:12) (glosses and orthography adjusted for consistency)

[*Sa=dalawa=ba-ng malaki-ng palabas*]=*silá* *li~litaw?*  
 DAT=two=Q-LK    big-LK    show=3PL.NOM IPFV~appear  
 Will they appear in TWO BIG SHOWS?

Citing Halpern's theory of clitic placement, Kaufman (2010) suggests that the phrase shown in brackets in the example above is moved to the position between the non-pronominal clitic *ba* 'Q' and the pronominal clitic *silá* '3SG.NOM'. Thus, the derivation process has provided the pronoun clitic *silá* with a suitable host, the first syntactic constituent of the clause. The clitic *ba*, on the other hand, has not and thus undergoes prosodic inversion with the first prosodic word – crucially, a phonological, not a syntactic entity. Although Kaufman (2010:194) ultimately ends up rejecting this analysis after discussing examples it cannot explain, his final analysis still suggests that the placement of the clitics shown in Table 5.1 is

primarily based on prosodic considerations, while the pronoun clitics are sensitive to syntactic considerations. As a consequence, Latrouite and Van Valin (2020) argue that only the pronoun clitics should be used to determine where the clause boundary is. It should also be noted that, as shown in Table 5.1, some of the clitics have (homophonous) free forms. That being said, let us now turn to the inversion constructions found in Tagalog.

### 5.1.2.1 Adjunct Inversion

For adjunct inversion there is a quite clear consensus, that the fronted adjunct is in the PrCS (Dery 2007:393<sup>1</sup>; Nagaya 2007:353–354; Latrouite and Van Valin 2020:9–11). Since the PrCS houses fronted focal constituents and *wh*-question words in many languages (including English), this analysis is not very surprising. Consider the evidence for the syntactic analysis based on the following example:

(194) **Latrouite and Van Valin (2020:10)**

*Kahapon=siya t(um)awa sa=kanya.*  
 yesterday=3SG.NOM (AV.RLS) DAT=3SG.DAT  
 He laughed at him yesterday.

First, the displaced adjunct precedes the core and is immediately followed by the second-position clitics, particularly the diagnostic pronominal clitics. Furthermore, the adjunct cannot be followed by a pause, which would be indicative of a left-detached element. Finally, since it is usually used for narrow focus on the adjunct, it is part of the assertion, thus, it must be in the scope of the illocutionary force operator and thus, it must be clause-internal. This makes the PrCS the prime candidate for its syntactic position. See Figure 5.3 for the syntactic and focus projections of this example.

In terms of information structure, Dery (2007) confirms with a question-answer pair in his questionnaire that this construction is compatible with narrow focus on the displaced adjunct. His study, however, shows that consultants accept a response with in-situ focus as well. This is shown in the following example:

(195) **Dery (2007:383)**

*Kailan s(in)untok-∅ ni=Ronald si=Mark?*  
 when (RLS)punch-UV<sub>in</sub> GEN=Ronald NOM=Mark  
 When did Ronald punch Mark?

<sup>1</sup> Dery (2007) only analyses the *wh*-question words corresponding to adjuncts as being in the PrCS. He considers the focal adjuncts to just be regular predicate elements. However, he does not give an explanation for this distinction.



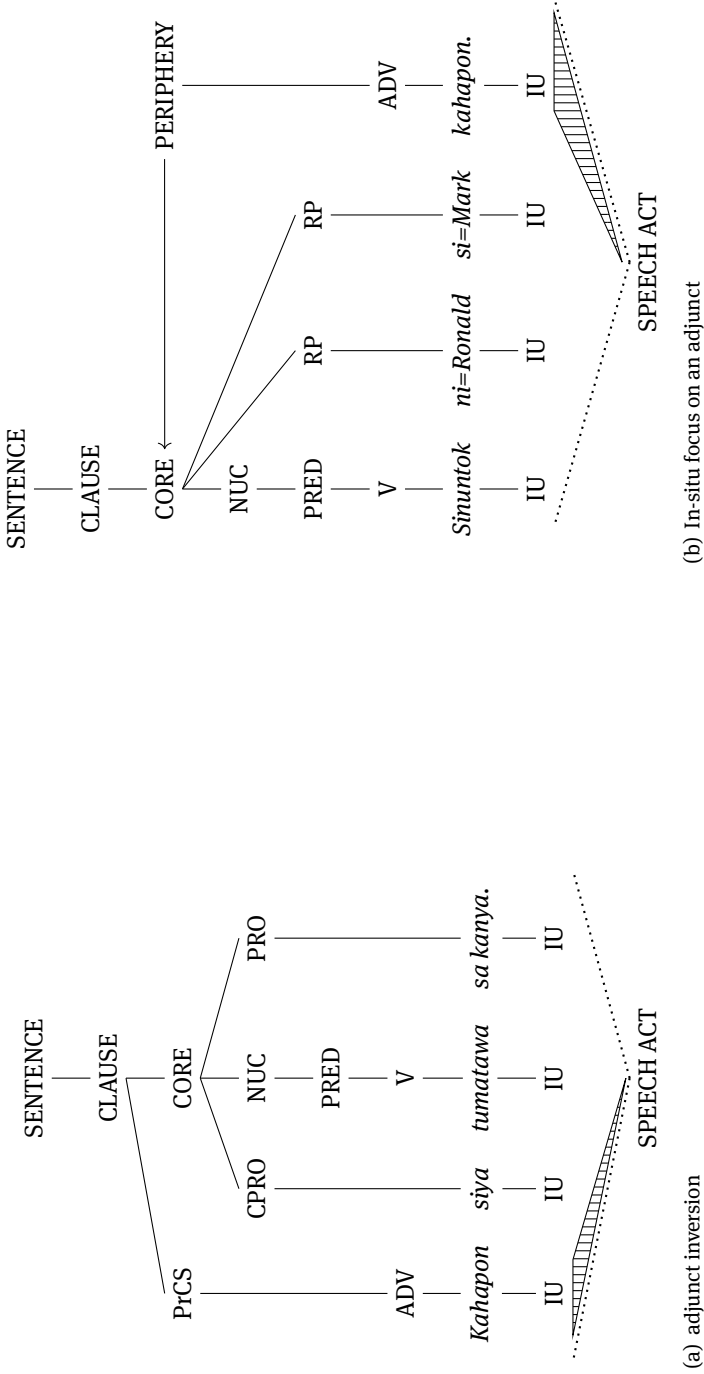


Fig. 5.3: Syntactic and focus projection of adjunct inversion and in-situ focus on an adjunct

*S(in)untok-∅ ni=Ronald si=Mark kahapon.*  
 ⟨RLS⟩punch-UV<sub>in</sub> GEN=Ronald NOM=Mark yesterday  
 Ronald punched Mark yesterday.

According to Dery's questionnaire, the response is equally acceptable when the adverbial *kahapon* 'yesterday' is placed before or after the verb. This may be the reason he represents it as a periphery element regardless of its position.

Nagaya (2007) and Latrouite and Van Valin (2020) treat the question words which are obligatorily clause-initial on par with the fronted adjuncts. Nagaya (2007) claims that adjunct fronting is a narrow-focus construction and furthermore obligatory to express narrow focus on an adjunct. This contradicts the findings of Dery's (2007) study. Latrouite and Van Valin (2020) agree that the construction is mostly found to express narrow focus on the displaced adjunct, but note that so far, no corpus studies have been done on this construction making it impossible to preclude the possibility of the construction having additional functions.

### 5.1.2.2 *ang*-Inversion

For *ang*-inversion, the consensus is that we have a narrow focus construction featuring a fronted RP which is the nucleus of the clause. Consider the following example and its proposed structure in Figure 5.4:

(196) **Latrouite and Van Valin (2020:9)**

*Siya ang=t(um)a~tawa.*  
 3SG.NOM NOM=⟨AV.RLS⟩IPFV~laugh  
 It is he who is laughing.

The fronted RP functions as the predicate of the sentence, taking as its complement another RP. This second RP is marked by the case particle (CSP) *ang*, which they consider to be a reference phrase marker. They argue for the clausal status of the RP-internal constituent based on the presence of the voice marker ⟨*um*⟩, which they consider a clausal status marker (affirmative active) (Latrouite and Van Valin 2020:9). This analysis also explains why negation is possible both for the fronted focal RP and within the clause contained in the second RP:

(197) **Latrouite and Van Valin (2020:9)**

- a. *Hindi=siya ang=t(um)a~tawa.*  
 NEG=3SG.NOM NOM=⟨AV.RLS⟩IPFV~laugh  
 It isn't he who is laughing.

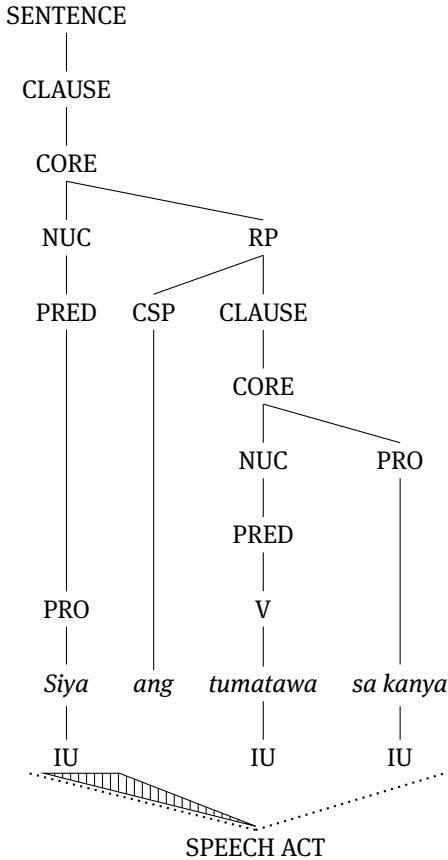


Fig. 5.4: Syntactic and focus projection of an adjunct inversion and *ang*-inversion

- b. *Siya ang=hindi t(um)a-tawa.*  
 3SG.NOM NOM=NEG <AV.RLS>IPFV~laugh  
 It is he who isn't laughing.

Information structurally, *ang*-inversion is understood to be a narrow-focus construction. To a certain extent it can be used for completive focus in response to a *wh*-question (Kaufman 2005; Nagaya 2007; Latrouite 2020), although this is not accepted as completely natural by all speakers (Dery 2007) and it would appear that reversed *ang*-inversion is preferred (Nuhn 2019). Despite it being first and foremost a narrow-focus construction, Nagaya (2007:354) indicates the PFD to be the entire clause suggesting that additional foci may occur elsewhere in the clause. See Figure 5.4 for syntactic and focus projections of the *ang*-inversion shown above.

### 5.1.2.3 *ay*-Inversion

Now, finally turning to *ay*-inversion, we find a much more complicated situation. Nagaya (2007) explicitly excludes *ay*-inversion from his considerations as he considers it to be a construction of formal speech, citing Schachter and Otones (1972). Dery (2007) claims *ay*-inverted elements to be in the PrCS, again without much syntactic evidence for his analysis. Latrouite and Van Valin (2020), give a far more detailed analysis of this construction and conclude that *ay*-inversion is not a single construction but rather there are several *ay*-inversions with distinct syntactic structures and information-structural properties.

The first syntactic analysis they discuss is the LDP. Clearly, the LDP is a prime candidate for *ay*-inverted constituents as they bear all the hallmarks of a left-detached constituent. First, when a PrCS-element co-occurs, the *ay*-inverted element appears first:

(198) **Latrouite and Van Valin (2020:12)**

*Si=May ay kailan=ba ba~balik dito?*  
 NOM=May INV when=Q IPFV~come.back DEM.PROX.DAT  
 As for May, when will she come back here?

Furthermore, the *ay*-inverted element is often followed by a distinctive pause or the *ay* itself is replaced by a pause in spoken Tagalog. According to Latrouite and Van Valin (2020) (citing p. c. from Kroeger), the referent of the *ay*-fronted RP can be taken up clause-internally with a coreferential resumptive pronoun when the *ay* is omitted and replaced by a pause. Further judgments by consultants as well as examples from the *Hunger Games* data have shown that this is also possible with an overt *ay*, thus strengthening the case for the LDP<sup>2</sup>. We have already seen this in examples (171) and (172) in the previous chapter, which are repeated here:

(199) *Ang=bata ay b(in)ili-Ø=niya ang=isda at ang=tatay ay*  
 NOM=child INV (RLS)buy-UV<sub>in</sub>=3SG.GEN NOM=fish and NOM=father INV  
*ang=gulay=naman ang=b(in)inili-Ø=niya.*  
 NOM=vegetables=PTCL NOM=(RLS)buy-UV<sub>in</sub>=3SG.GEN

As for the child, he bought the fish and as for the father, it was vegetables that he bought.

---

<sup>2</sup> Although there do seem to be some restrictions regarding the use of resumptive pronouns, given that some constructions such as the following were rejected by consultants:

\* *Ako ay na-tu~tulog=ako.*  
 1.SG.NOM INV STAT.RLS.-IPFV~sleep=1SG.NOM  
*intended:* As for me, I am sleeping.

So, clearly resumptive pronouns are possible but not in all cases, implying some constraints, the nature of which needs to be investigated in future research.

(200) **The Hunger Games (Reyes 2012b:326)**

...*samantalang ako ay alam=ko kung ano ang=kakabit*  
 while 1SG.NOM INV know=1SG.GEN COMP what NOM=connected  
*na kahulugan=niyon.*

LK meaning=DEM.DIST.GEN

...while I, I know the hidden meaning behind it.

For further discussion of these examples, refer to page 130.

Further evidence that *ay*-inverted constituents are clause-external stems from the fact that they are impenetrable to the diagnostic pronominal clitics:

(201) **Kaufman (2010:197) (glosses and orthography modified for consistency)**

*Sa=Maynila(\*=sila) ay(\*=sila) nag-aral=sila nang*  
 DAT=Manila(=3PL.NOM) INV(=3PL.NOM) AV.RLS-study=3PL.NOM LK  
*araw-araw.*

daily

In Manila, they studied every day.

Neither the fronted phrase *sa=Maynila* ‘DAT=Manila’ nor the inversion marker *ay* are suitable hosts for the pronominal clitic *sila* ‘3PL.NOM’. The only possible host in (201) is the predicate *nag-aral* ‘AV.RLS-study’. Similarly, *wh*-question words are barred from being *ay*-fronted:

(202) **Kaufman (2005:184)**

\* *Saan ay p(um)unta=ka?*  
 where INV (AV.RLS)go=2SG.NOM  
*intended: Where did you go?*

This again is consistent with the LDP-analysis since they would be outside the scope of the assertable/questionable in a clause-external position, such as the LDP.

Finally, the observation that multiple *ay*-marked constituents can appear sentence-initially requires a syntactic position that can be iterated. This rules out the PrCS but is compatible with the LDP.

Latrouite and Van Valin (2020) then argue that there is another *ay*-inversion construction with a distinct syntactic structure, which they refer to as the *ni-ay*-inversion. We have already seen an example of this construction previously, but it is repeated here for clarity:

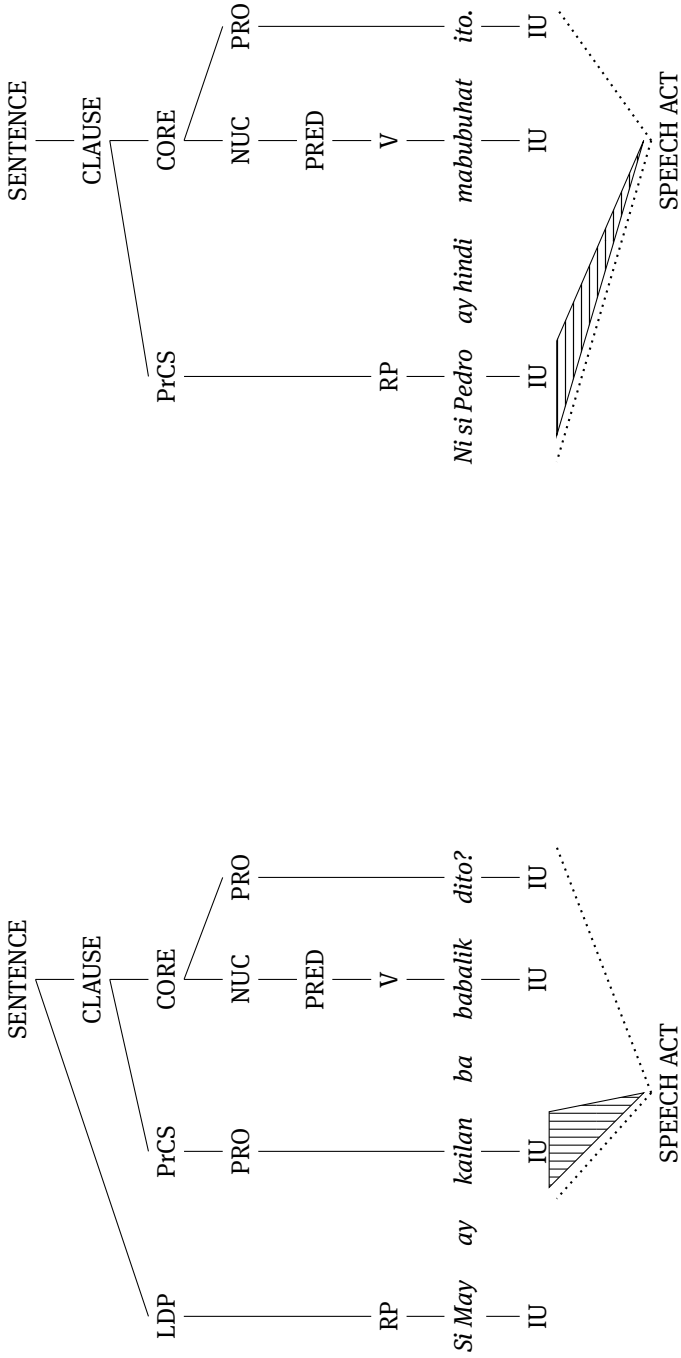


Fig. 5.5: The two distinct syntactic structures of *ay*-inversion as described by Latrouite and Van Valin (2020)

(203) **Schachter and Otones (1972:492)**

*Ni=si=Pedro ay hindi ma-bu~buhat-∅ ito.*

NPI=NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM

Even Pedro cannot lift this.

In this case, the fronted element is clearly not topical but focal and as opposed to the previously discussed *ay*-inversion, which is subject to information-structural constraints, but nevertheless optional, the *ni-ay*-inversion is obligatory for actors. They take this as evidence that this construction should be treated as distinct from *ay*-inversion. Since the negative polarity item must be within the scope of negation, the *ni-ay*-RP must be clause-internal. This makes the PrCS a prime candidate for its syntactic position. Figure 5.5 shows the syntactic and information structure projection proposed for *ay*-inversion and *ni-ay*-inversion.

## 5.2 Applying the Analyses to Data

In the previous section, we have seen that the structure of *ay*-inversion has been discussed in the literature and there is evidence for the analysis that there is no single *ay*-inversion construction but rather at least two constructions with distinct syntactic and information-structure projections. This section focuses on how these analyses hold up in face of the data and figuring out which uses of the of *ay*-inversion we have seen in Chapter 4 can be dealt with and which require some additional work.

### 5.2.1 *ay*-Inversion in the Left-Detached Position

As we have seen, an argument can be made for an analysis locating the displaced argument in an *ay*-inversion in the LDP, at least in some cases. The same can be said for *ay*-fronted adverbials, since they can co-occur with fronted arguments and their order is interchangeable:

(204) **Schachter and Otones (1972)**

a. *Kami'y bukas ay pu~punta.*

1PL.EXCL.NOM=INV tomorrow INV IPFV~go

As for us, tomorrow, we will go.

b. *Bukas ay kami'y pu~punta.*

tomorrow INV 1PL.EXCL.NOM=INV IPFV~go

Tomorrow, as for us, we will go.

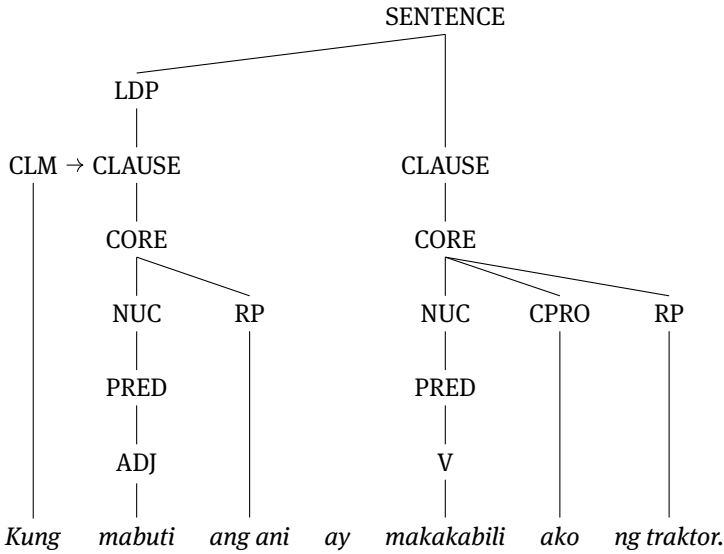
The lack of an ordering constraint makes it at least plausible that the two elements occupy iterations of the same syntactic position, the LDP.

This analysis can easily be extended to describe fronted subordinate adverbial clauses, as well, since the LDP can house an entire clause or even a sentence (Van Valin 2005:193). Thus, a sentence such as the following can be accounted for using a syntactic structure shown in Figure 5.6:

(205) **Latrouite and Van Valin (2020)**

*Kung mabuti ang=ani ay maka-bi~bili-Ø=kami*  
 if good NOM=harvest INV ABIL-IPFV~buy-UV<sub>in</sub>=1PL.EXCLNOM  
*ng=traktor.*  
 GEN=tractor  
 If the harvest is good, we will be able to buy a tractor.

Here, the entire fronted conditional clause sits in the LDP and is followed by the main clause with canonical word order.



**Fig. 5.6:** Syntactic projection of an *ay*-fronted conditional clause. The entire clause sits in the LDP.

Latrouite and Van Valin (2020) also describe the possessor ascension construction as raising to LDP and thus subsume it under this syntactic structure. Since exam-



ples of this construction are difficult to come by, it is not surprising, that there is not much evidence to back up this analysis.

Finally, it is noteworthy that not all fronted adverbial phrases can be explained as displacement to the LDP. Just like arguments, adverbials can also be *ay*-fronted and occur as the semantic associate of a focus-sensitive particle, as seen already in example (186) repeated here as example (206):

(206) **The Hunger Games: *Catching Fire* (Reyes 2012a)**

*Maging sa=ilalim ng=tubig ay na-ri-rinig=ko*  
 even DAT=underneath GEN=water INV UV.RLS-IPFV~hear=1SG.GEN  
*ang=tunog ng=komosyon.*  
 NOM=sound GEN=commotion  
 Even underwater, I can hear the sounds of commotion.

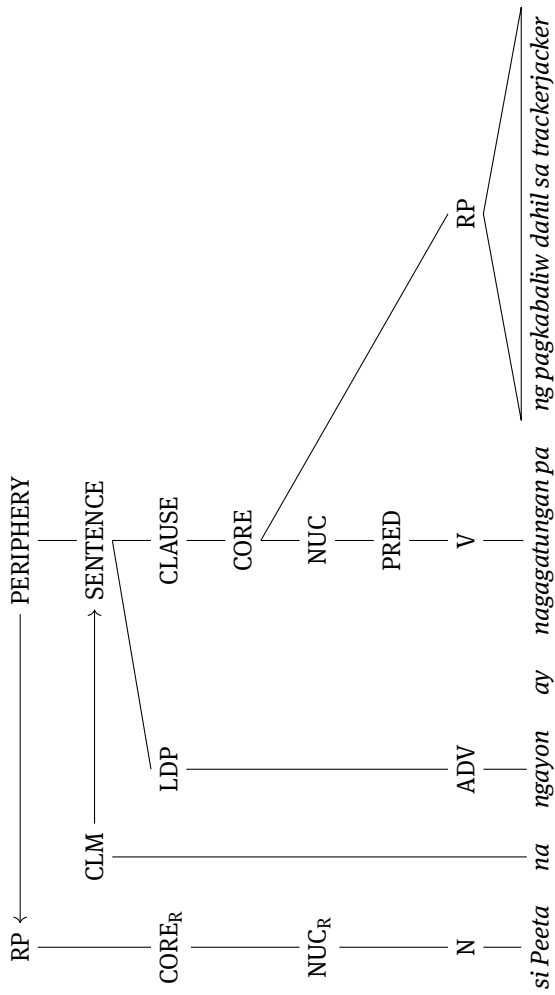
Here, it is presupposed that the speaker can hear the sound of commotion in general. The function of this sentence in the discourse is to elaborate on *how* loud the sound is. This is done by specifying a location where the sound is still audible. The main QUD being “*How loud is the sound of the commotion?*” with the subquestion addressed in this sentence “*Where is the commotion audible?*”. The answer is given by the *ay*-fronted adverbial *sa=ilalim ng=tubig* ‘under water’ with the focus sensitive particle *maging* ‘even’ added to indicate that it is unexpected for the sound to be loud enough to be heard under water. The occurrence of focus in an *ay*-fronted adverbial is, of course, incompatible with the LDP-analysis, since the focal phrase needs to be part of the assertion and thus in a clause-internal position.

Another problematic case are *ay*-inverted adverbials or even arguments within subordinate clauses. We have already seen several examples of this in section 4.1.5, four of which (148–150, 159) are repeated here:

(207) **The Hunger Games (Reyes 2012b:139; Collins 2008:134)**

[[*Nang [sa=wakas]?* *ay t(um)ahimik*  
 when DAT=end INV <AV.RLS>become.quiet  
*ang=mga=manonood*]<sub>CLAUSE</sub>]<sub>LDP</sub> *ay b(um)ulong=siya*  
 NOM=PL=viewers INV <AV.RLS>whisper=3SG.NOM  
*ng=pasasalamat.*  
 GEN=thanks

When, finally, the audience quiets down, he whispers (some words of) thanks.



**Fig. 5.7:** Syntactic structure of the RP *si=Peeta* 'NOM=Peeta' and the accompanying non-restrictive relative clause in (209) following Van Valin (2005:222) (The first junct in the relative clause was omitted for simplicity.)

(208) **The Hunger Games: *Mockingjay* (Reyes 2013:154)**

[*Ang=isipin* [*na* [*si=Peeta*]<sub>? ay</sub> *hawak=niya* [...]]<sub>CLAUSE</sub>]<sub>LDP</sub> *ay*  
 NOM=thought COMP NOM=Peeta INV hold=3SG.GEN INV  
*masama.*

*bad*

The thought that Peeta is in his possession [...] is bad.

(209) **The Hunger Games: *Mockingjay* (Reyes 2013:281)**

*Ngunit* [*si=Peeta*, *na* [*lagi=naman-g malakas at* [*ngayon*]<sup>ADV</sup> *ay*  
 but NOM=Peeta LK always=PTCL-LK strong and now INV

*na-ga-gatung-an=pa ng=pagkabaliw dahil*  
 ABILRLS-IPFV~fuel-UV<sub>an</sub>=yet GEN=insanity because  
*sa=trackerjacker*]<sup>REL</sup> ]<sup>ARG</sup>,  
 DAT=trackerjacker

*ay na-gawa-Ø-ng i-tukod ang=paa sa=tiyan ni=Mitchell...*  
 INV ABIL.RLS-do-UV<sub>in</sub>-LK UV<sub>i</sub>-position NOM=foot DAT=belly GEN=Mitchell

But Peeta, who was always strong and now is fueled by tracker-jacker insanity, positions his feet under Mitchell's belly...

(210) **The Hunger Games (Reyes 2012b:351)**

*Ito* [*ang=tunog na*, [*salamat kay=Rue*, *ay*  
 this.NOM NOM=sound LK thanks DAT=Rue INV

*nag-pa-pa-uwi gabi-gabi sa=mga=trabahante*  
 AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home every.evening DAT=PL=workers  
*ng=taniman sa=District Eleven*]<sup>REL</sup> ]<sup>RP</sup>.  
 GEN=orchard DAT=District Eleven

This was the sound that, thanks to Rue, called home the workers of the orchards in District Eleven every evening.

In the first example (207), we see an *ay*-fronted temporal adverbial clause introduced by the subordinating conjunction *nang* ‘when’. Within the subordinate clause we find the fronted framesetter *sa=wakas* ‘finally’. Then, in example (208), the argument *ang=isipin* ‘the thought’ of the predicate *masama* ‘bad’ is *ay*-fronted. The RP *ang=isipin* is further explained by a subordinate *that*-clause, in Tagalog introduced by the linker *na*. Within this subordinate clause the undergoer argument *Peeta* is *ay*-fronted with two coordinate predicates following the *ay*, only one of which is shown here for simplicity. Similarly, we also saw *ay*-fronted expressions occurring within both a non-restrictive (209) and a restrictive (210) relative clauses.

It is unusual for a language to allow left-detached elements to occur in subordinate clauses. This is why in RRG, the LDP is taken to be part of the sentence but not part of the clause. Following Latrouite and Van Valin (2020), however, the *ay*-marked phrases in the subordinate clauses of examples (207–210) would be considered to be in the LDP if they weren't in embedded clauses. The argument *si=Peeta* 'NOM=Peeta' in (208) is the topicalized undergoer argument of the two predicates following the *ay*, *sa=wakas* 'finally', *ngayon* 'now', and *salamat kay=Rue* 'thanks to Rue' in (207), (209), and (210) are all framesetting topics.

Tagalog is, however, not the only language in which this unusual situation occurs: Matić, Putten, and Hammon (2016) investigate the properties of left-detached constituents in the three unrelated languages Tundra Yukaghir, Avatime, and Whitesands and find that Avatime, too, allows fronted arguments in complement clauses similar to (208) (Matić, Putten, and Hammon 2016:359).

In (209), the *ay*-marked framesetter *ngayon* 'now' is in a *non-restrictive* relative clause, which makes these examples less problematic than (207) and (209). Since non-restrictive relative clauses assert additional information about the head noun, they are assumed to have their own illocutionary force operator in RRG. Thus, they are taken to be *sentences* in the RP-level periphery and not *clauses* (Van Valin 2005:222–223). Consequently, they have an LDP, which in the case of (209) could house the *ay*-marked adverbial *ngayon* 'now'. This gives us the syntactic structure shown in Figure 5.7 for the RP *si=Peeta* 'NOM=Peeta' and the non-restrictive relative clause.

The adverbial clause in (207), the complement clause in (208), and the restrictive relative clause in (210), however, are typically taken to be embedded *clauses* and not *sentences*. In these cases, we do not have an LDP at our disposal, which poses a problem for this analysis.

To resolve this problem, Matić, Putten, and Hammon (2016:363) suggest analyzing these cases as sentential subordination. This juncture-nexus type is already part of the RRG-framework, but currently only assumed for cases in which the left- or right-detached position houses an entire sentence (Van Valin 2005:192). While one could argue that this is enough to cover (207), it is insufficient for (208) and (210). So, this analysis would require stipulating that sentential subordination is not limited to the LDP and result in the syntactic structures shown in Figures 5.8–5.10.

That being said, the LDP can account for 'regular' framesetting adverbials as well as adverbials used as contrastive (frame-setting) topics:

(211) **The Hunger Games: *Catching Fire* (Reyes 2012a:229)**

**Noong nakaraang taon ay p(in)ag-usap-an=namin**  
 when last year INV (RLS)APPL-converse-UV<sub>an</sub>=1PLEXCL.GEN

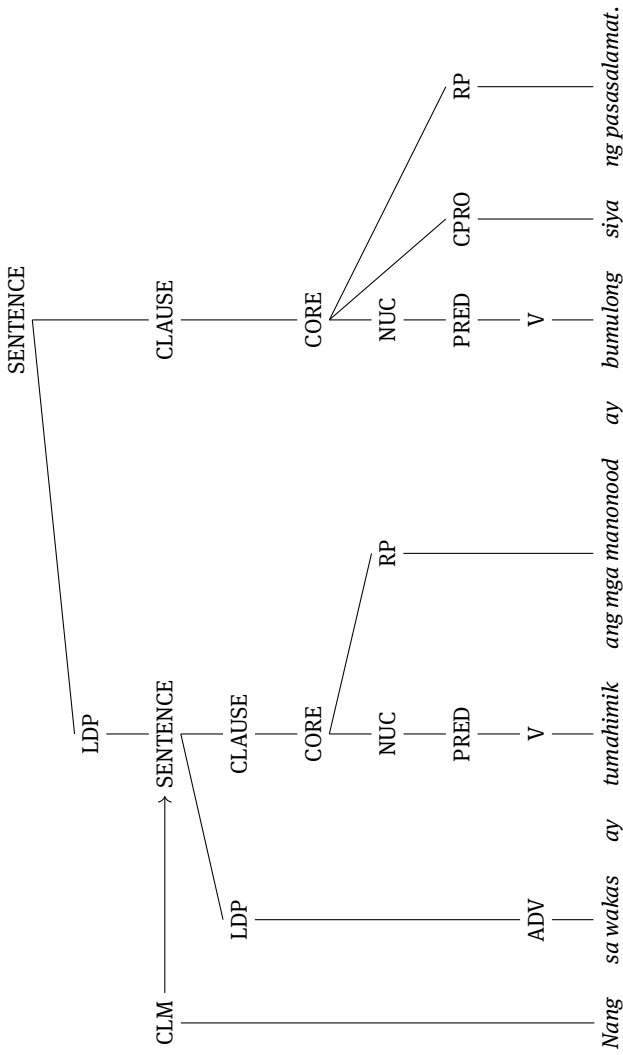
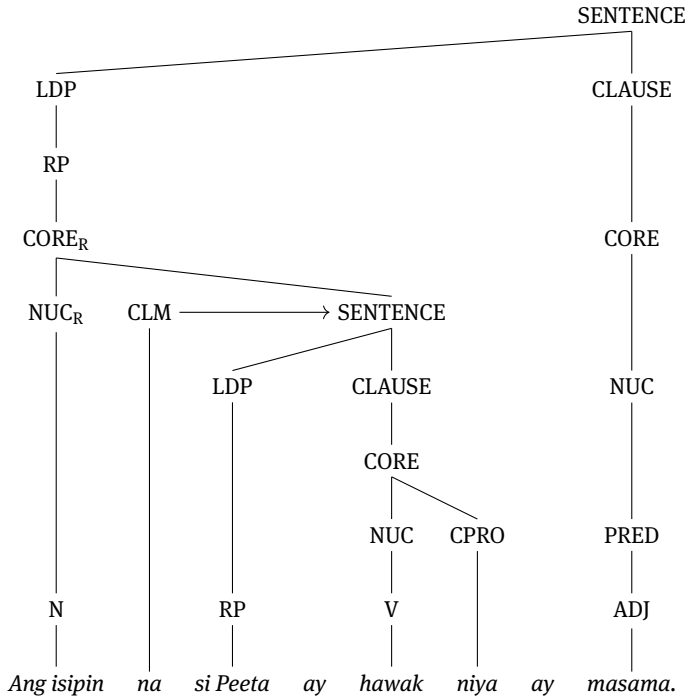


Fig. 5.8: Syntactic structure of example (207), representing the adverbial clause as an embedded sentence following Matic, Putten, and Hammon (2016)



**Fig. 5.9:** Syntactic structure of example (208), representing the complement clause as an embedded sentence (following Matic, Putten, and Hammon 2016) within the CORE<sub>N</sub>

*ang=bawat kalahok, pero ngayon-g gabi ay panaka-naka=lang*  
 NOM=each participant but now-LK evening INV occasionally=only  
*ang=komento=namin.*  
 NOM=comment=1PL.EXCL.GEN

Last year we chattered away about each contestant, but tonight there’s only the occasional comment.

Here, the two temporal adverbials set two contrasting time frames for the following matrix clauses, in which the protagonists dealt differently with the introduction of the other *Hunger Games* tributes.

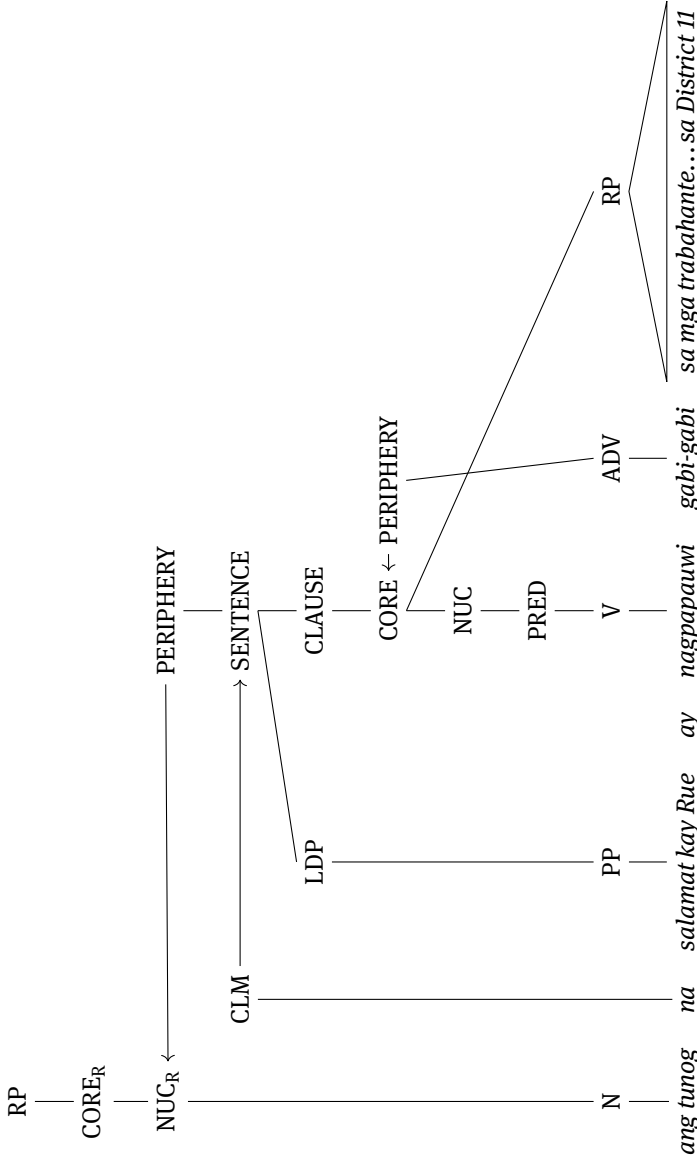


Fig. 5-10: Syntactic Structure of example (210), representing the restrictive clause as an embedded sentence (following Matic, Putten, and Hammon 2016), modifying NUC<sub>R</sub> [Van Valin 2005:222]

## 5.2.2 LDP-*ay* vs. PrCS-*ay*

### 5.2.2.1 *ay*-Inversion and PrCS Elements

An important argument for the LDP-analysis was relative position of *ay*-fronted elements compared to PrCS-elements, such as narrow-focus adverbials in adjunct inversion or *wh*-words that target such adverbials. The consensus in most analyses (Kaufman 2005; Latrouite and Van Valin 2020) is that *wh*-words generally follow *ay*-inverted constituents. Our data, however, shows one exception: when asked to combine a *wh*-word that would be in the PrCS with a case of *ni-ay*-inversion, two out of three consultants independently used the following structure:

- (212) *Bakit kahit si=Pedro ay hindi ma-bu~buhat ito?*  
 why even NOM=Pedro INV NEG ABIL-IPFV~lift DEM.PROX.NOM  
 Why couldn't even Pedro lift this?

This was elicited by asking the consultants to simply translate the English sentence. For clarification, the context was supplied that Pedro is known to be particularly strong and the speaker is surprised he was unable to lift something and wanted to know the reason, i. e. was it really that heavy or was Pedro tired, sick or had he broken his arm or something of the sort. The third consultant produced a different structure (see below), but confirmed that this construction was fine, as well. Additionally, this sentence was judged grammatical by two more consultants.

Looking into the data, we see that similar structures occur even with *ay*-inversions that do not involve focus-sensitive particles, i. e. which would usually be analyzed as *ay*-marked topics in the LDP:

- (213) **The Hunger Games (Reyes 2012b:62)**  
*Bakit=ba [ang=dulo ng=mga=pangungusap=nila] ay tunog-patanong?*  
 why=Q NOM=end GEN=PL=sentence=3PL.GEN INV sound-question  
 Why do the ends of their sentences go up as if they're asking a question?

- (214) **The Hunger Games: Mockingjay (Reyes 2013:122)**  
*Kaya bakit [ang=lahat] ay nag-da~dala sa=akin*  
 so why NOM=all INV AV.RLS-IPFV~carry DAT=1SG.DAT  
*ng=panibagong sundot ng=budhi?*  
 GEN=fresh pang GEN=grief  
 So why does everything bring on a fresh pang of grief?

- (215) **The Hunger Games (Reyes 2012b:62)**  
*Bakit=ba [kapag nag-sa~salita*  
 why=Q when AV.RLS-IPFV~speak



*ang=mga=tao-ng=ito]*                      *ay napaka-tinis ng=bores?*  
 NOM=PL=person-LK=DEM.PROX.NOM INV INT-high.pitch GEN=voice

Why do these people speak in such a high pitch? (*literally*: Why, when these people speak, is the voice very high pitched?)

The first two examples show *ay*-fronted arguments, that of an intransitive predicate in (213) and the actor in (214), which are both preceded by the question word *bakit* ‘why’. In (215), we have an adjective predicate marked by the intensive prefix *napaka-*, which takes a single genitive marked argument. Sandwiched between the predicate *napakatinis* and the question word *bakit* we have an entire *ay*-fronted subordinate clause. As argued in the previous section, in the absence of the particle *ni* or any other focus-sensitive particle, previous analyses would treat these *ay*-marked phrases as being in the LDP – that is, if it weren’t for the question word *bakit* preceding them. Although it may be tempting to draw conclusions regarding the syntactic structure from the occurrence of the question marker clitic =*ba* in (213) and (215), recall that *ba* does not always cliticize to the same host as do the diagnostic pronoun clitics (see ex. 193). It is, thus, of little help to us here. It is, however, crucial to notice that *all* of these examples involve the question word *bakit* ‘why’. Indeed speakers judge (212) ungrammatical if the question word is switched out for another *wh*-word targeting a peripheral modifier:

- (216) \* *Saan kahit si=Pedro ay hindi ma-bu~buhat-∅ ito?*  
 where even NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM  
 Where couldn’t even Pedro lift this?
- (217) \* *Kailan kahit si=Pedro ay hindi ma-bu~buhat-∅ ito?*  
 when even NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM  
 When couldn’t even Pedro lift this?

In these cases, our consultants chose to split the question up into two separate clauses instead:

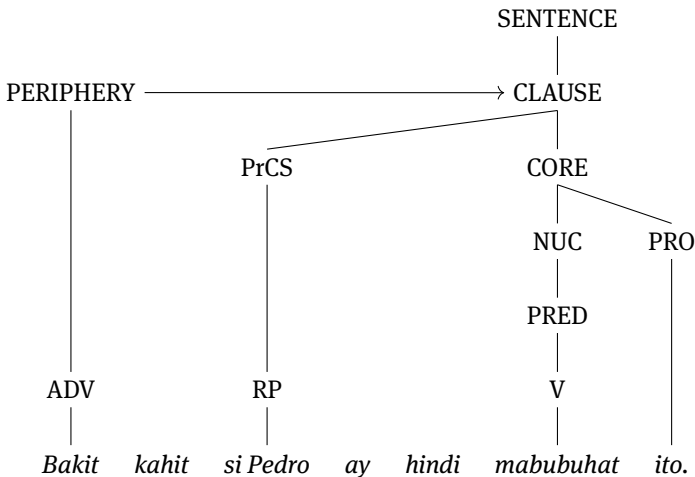
- (218) *Saan/kailan(=ba) na kahit si=Pedro ay hindi ma-bu~buhat-∅*  
 where/when(=Q) LK even NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub>  
*ito?*  
 DEM.PROX.NOM  
 Where/when was it that even Pedro couldn’t lift this?

Unlike *bakit* ‘why’, the question words *saan* ‘where’ and *kailan* are followed by the linker *na*, which introduces a subordinate clause that houses the remainder of the question.

The ungrammaticality of (216) and (217), suggest that the question word and the *ay*-marked argument are competing for the PrCS. Thus, we can tentatively

assume that the RP *kahit si=Pedro* ‘even Pedro’ is in the PrCS in (212), while the question word *bakit* ‘why’ is in a different syntactic position.

Van Valin (2005:194–195) argues that there is a crucial difference between adjuncts, e. g. adverbial clauses, that supply temporal (targeted by *kailan* ‘when’) or spatial (targeted by *saan* ‘where’) information and adjuncts that supply causal information (targeted by *bakit* ‘why’): while the former spatio-temporally situate the event described by the core, the latter supplies a reason for the event expressed by the *entire* clause. As a result, *because*-clauses are taken to be instances of ad-clausal subordination, i. e. a clause in the predicate modifying the clause level, whereas, for instance, an adverbial clause introduced by *after* would be in the core-periphery, i. e. ad-core subordination.



**Fig. 5.11:** Syntactic structure of the *bakit*-question shown in example (212) following Van Valin (2005:195)

Applying this analysis to the question word *bakit* ‘why’ would give us the syntactic structure shown in Fig. 5.11. The question word is situated in the predicate modifying the clause-layer. This analysis not only provides a plausible syntactic position for the question word *bakit*, but also nicely explains the word-order: since the question word is in the clause-level periphery, it seems only natural for it to precede the PrCS, which is part of the clause.

The examples shown in (213) and (214) can be tackled analogously. Example (215) is also unproblematic, since the PrCS can house a subordinate clause (Van Valin 2005:193). However, it stands to reason that omitting the question word *bakit*

‘why’ in (213–215) should not change the syntactic structure of the remainder of the sentence. So, the *ay*-marked constituents should be in the PrCS regardless of whether they are preceded by *bakit* ‘why’ or not. In the previous section, on the other hand, we saw evidence that *ay*-fronted arguments and subordinate clauses can be in the LDP. This raises the question, how these two constructions differ, i. e. 1. when is an *ay*-fronted argument or clause in the LDP and when is it in the PrCS?, 2. how can we tell without other LDP-elements or the question *bakit* ‘why’ as diagnostic tools?, and 3. how do the two constructions differ in terms of semantics and/or information-structural properties?

### Diachronic Sidenote on *bakit* ‘why’

Aside from being the only *wh*-word to precede *ay*-marked constituents in our data, Kaufman (2010:189) has noted that this particular question word also behaves exceptionally with respect to clitics: while it can attract second position pronominal clitics, this is *not* obligatory as it would be with other question words:

(219) **Kaufman (2010:188–189)**

- a. *Saan/kailan/paano=ka pu~punta(\*=ka)?*  
 where/when/how=2SG.NOM IPFV~go=2SG.NOM  
 Where/when/how are you going?
- b. *Bakit(=ka) p⟨um⟩unta(=ka)?*  
 why=2SG.NOM ⟨AV.RLS⟩go=2SG.NOM  
 Why did you go?

The diachronic reason he presents for this phenomenon is that *bakit* is derived from the question word *bakin* ‘why’ which took a clausal complement headed by the conjunction *at*. This construction can be found in the literature as late as the beginning of the 20th century. Thus, the ‘historical’ version of the previous example would be:

(220) **Kaufman (2010:189)**

- Bakin at(\*=ka) p⟨um⟩unta=ka?*  
 why CONJ=2SG.NOM ⟨AV.RLS⟩go=2SG.NOM  
 Why did you go?

Here, the conjunction *at* is unable to attract pronominal clitics like *ka* and thus the only place for the pronoun is immediately following the predicate of the complement clause. When *bakin at* was contracted to *bakit* it gained the ability to host clitics but the other, more conservative version, leaving the clitic in-situ still exists. Furthermore, substituting the historical version of *bakit* in (212) would give us:

- (221) *Bakin at kahit si=Pedro ay hindi ma-bu~buhat-∅ ito?*  
 why CONJ even NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM  
 Why is it that even Pedro couldn't lift this?

This bi-clausal structure supports the analysis that *bakit* 'why' targets the reason for the event expressed by the clause and not by the core. Notice also how similar (221) and (218) are in structure.

### 5.2.2.2 Topical vs. Focal *ay*

Latrouite and Van Valin (2020:17, Table 3) distinguish two constructions involving *ay*: 1. *ay*-inversion with the inverted phrase in the LDP functioning as a (frame-setting) topic, and 2. *ni-ay*-inversion with the *ay*-marked phrase in the PrCS functioning as a (contrastive) focus. We have already seen that instead of the negative polarity item *ni* found in *ni-ay*-inversion, we can also have other focus-sensitive particles in similar *ay*-inversion constructions. The focus-sensitive *kahit* and *maging*, both meaning *even*, can also accompany an *ay*-fronted constituent and take it as their semantic associate. Furthermore, the additive particle *din* can associate with *ay*-fronted RPs. A common denominator of these particles is that, unlike *ang*-inversion that implies exhaustivity, they explicitly require non-exhaustive focus<sup>3</sup>: the additive particle comes with the presupposition that the background portion of the sentence is true for other elements of the focus set, as well. The same is true for the particles meaning 'even', except that they additionally convey a sense of unexpectedness that the comment is true for referent of the focus of the sentence.

Consider, for instance, the simple declarative version of (212):

- (222) *Kahit si=Pedro ay hindi ma-bu~buhat-∅ ito*  
 even NOM=Pedro INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM  
 Even Pedro couldn't lift this.

**Presupposition:** There are other people that couldn't lift this.

The sentence consists of the focal RP *si Pedro* and the background following the inversion marker *ay*. The scalar additive *kahit* 'even' evokes the presupposition that the property described by the background portion of the sentence is also true for others, i. e. there are other people besides *Pedro* who also cannot lift 'this'. The exhaustivity of an *ang*-inversion with focus on the RP *si=Pedro*, however, would imply that *Pedro* is the only one for whom this is true – the exact opposite.

<sup>3</sup> Thanks to Dr. Anja Latrouite for pointing me in the direction of additive focus here.

Conversely, few cases of focal *ay*-fronted RPs have been attested without an explicit focus-sensitive particle. Latrouite and Riester (2018) present the following example of this kind in a translation task designed to elicit narrow actor focus:

(223) **Latrouite and Riester (2018:268)**

*Ang=mga=pusa(=rin) ay nang-hu~huli at nag-ka~kain*  
 NOM=PL=cats=also INV AV.RLS-IPFV~chase and AV.RLS-IPFV~eat  
*ng=mga=daga.*  
 GEN=PL=rat  
 Cats also catch and eat rats.

Most of their consultants actually did *not* produce the additive particle in this sentence despite it being present in the English text they were asked to translate and although including the particle is perfectly grammatical and idiomatic as attested by the consultants who *did* include it. Latrouite and Riester (2018:269) attribute the absence in many translations to the *ay*-inversion construction, which apparently in itself “already conveyed an additive-focus reading” (Latrouite and Riester 2018:269).

Thus, it appears to be the case that focal *ay*-fronted constituents are either overtly accompanied by a focus-sensitive particle that gives a non-restrictive focus reading, i. e. the presupposition that the comment of the sentence is true for other cases as well. If this is not made overt by a particle, then the use of *ay*-inversion construction in itself appears to convey this.

This focus reading doesn’t seem to be tied to the macrorole of the fronted RP nor to the voice in the clause following the *ay*. We have already seen examples of focal *ay*-fronted actors and undergoers and we have seen this accompanied by all possible voice forms in the clause following the *ay*. I thus propose that the focal use of *ay*-inversion is actually tied to the non-exhaustive/additive focus reading and/or the use of focus sensitive particles rather than macroroles or voice selection.

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**Hypothesis**

An *ay*-marked XP is focal when it associates with one of the focus-sensitive particles *kahit*, *maging* ‘even’, or *din* ‘also’ (or if a similar additive reading is intended). It is topical otherwise.

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Finally, I would like to draw attention to an observation that appears to tie all attested uses of *ay*-inversion together. We have seen cases of topical *ay*-marked constituents with the actual focus domain in the portion after the inversion marker and we have seen cases of *ay*-marked constituents in narrow focus usually associating with a focus-sensitive particle. However, it does not seem to happen that the actual focus domain extends beyond an occurrence of the marker *ay*.

**Hypothesis**

The AFD never extends across an occurrence of *ay*.

That is, it does not happen that parts of the AFD are before and other parts after an occurrence of *ay*. If there are multiple AFDs, i. e. contrastive and completive focus, then this applies to each of these AFDs. We will explore the implications of this observation in the following section.

**5.3 Information-Structure Projection**

In the previous section, we formulated the observation that the AFD never extends beyond an occurrence of the inversion marker *ay*. Absence of evidence is, of course, not the same as evidence of absence. Thus, it would be possible that AFDs *can* in fact extend beyond *ay* but this is just particularly rare. Speaker judgments would, thus, be the tool of choice in such a case, since an ungrammaticality or infelicity judgment would help us to rule out this possibility. Indeed, our consultants rejected the following question-answer pair:

(224) *Ano ang=nangyari sa=isda na i-ni-lagay=ko sa=mesa?*  
 what NOM=AV.RLS.happen DAT=fish LK UV<sub>i</sub>-RLS-put=1SG.GEN DAT=table  
 What happened to the fish I put on the table?

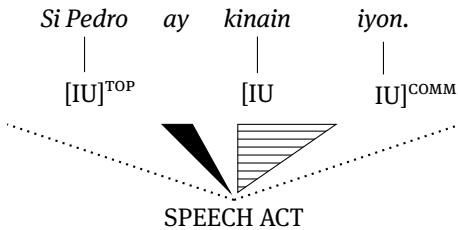
?? *Si=Pedro ay k(in)ain-∅ iyon.*  
 NOM=Pedro INV ⟨RLS⟩eat-UV<sub>in</sub> DEM.DIST.NOM  
*intended:* Pedro ate it.

and immediately suggested the verb-initial construction

(225) *K(in)ain-∅ ni=Pedro (ang=isda).*  
 ⟨RLS⟩eat-UV<sub>in</sub> GEN=Pedro NOM=fish  
 Pedro ate the fish.

Upon further questioning, consultants conceded that the *ay*-inversion was actually “fine”, as well, and there was no real difference between the two. Such a judgment, however, must be taken with a grain of salt for two reasons: 1. felicity judgments are notoriously difficult to get from non-linguist consultants since the concept of being ‘infelicitous’ is difficult to explain without linguistic background knowledge on the part of the consultant and 2. some speakers learn at school that *ay*-inversion is the ‘correct’ word order while the verb-initial construction is deemed colloquial. Therefore, I would tend to trust the speakers’ first intuition, which was to reject the *ay*-inversion in this question-answer pair.

Let us thus assume as a working hypothesis that the inversion marker *ay* functions as a sort of barrier that forbids AFDs from extending beyond them and investigate how this could be modeled in RRG's information structure projection and how this holds up to the data at hand.



**Fig. 5.12:** Focus projection of example (226). The black triangle represents the interruption in the PFD caused by the inversion marker *ay*. Any AFD is restricted to either the left or the right side of this barrier making it infelicitous in the context of example (224).

This hypothesis can be captured in the information-structure projection by assigning sentences containing the inversion marker *ay* a discontinuous PFD. The first part covers the part of the sentence preceding the *ay*, the second covers the part following it. The gap in the PFD would then prevent the AFD from crossing the boundary set by the inversion marker. Thus, a typical *ay*-inversion construction such as the following example could be assigned a focus projection as shown in Figure 5.12.

- (226) *Si=Pedro ay k(in)ain-∅ iyon.*  
 NOM=Pedro INV (RLS)eat-UV<sub>in</sub> DEM.DIST.NOM  
 Pedro ate it.

The barrier in the PFD provided by the inversion marker *ay*, however, rules out the focus domain required to be felicitous in the example shown above. Thus, this sentence would require additional processing effort on the part of the hearer (in the form of accommodations, e. g. ‘the fish is available for comment and we both take it as given that Pedro did something to it’) to be understood, which reduces its acceptability.

Following Balogh (2020), the focus projection is the natural place to represent focus-sensitive particles since they operate on the AFD. The following example would thus be represented as shown in Figure 5.13.

- (227) *Kahit ang=tatay ay hindi ma-bu~buhat-∅ ito.*  
 even NOM=father INV NEG ABIL-IPFV~lift-UV<sub>in</sub> DEM.PROX.NOM  
 Father, he cannot lift this.

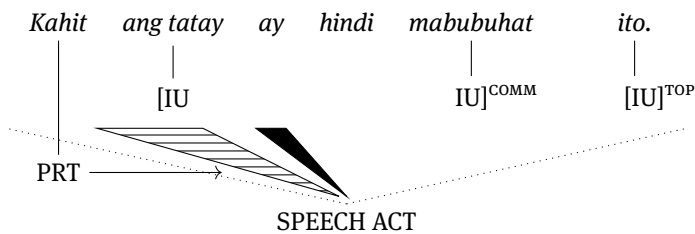
The particle *kahit* ‘even’ is represented in the focus projection by the node PRT with an arrow pointing toward the AFD, with which the particle associates. Balogh (2020) also discusses constraints specific to Hungarian and English on the relative position of the focus-sensitive particle and the focus domain it associates with. In both languages, topical material cannot intervene between the particle and the AFD. To capture this, she represents the topic-comment distinction, as well, using brackets and the labels TOP(IC) or COMM(ENT) on the information unit nodes. Consequently, she renames the “focus projection” “information structure projection” to reflect that both the focus-background distinction and the topic-comment distinction are now represented.

Similar to the constraint barring topical material from intervening in Hungarian and English, I propose for Tagalog the constraint that the inversion marker *ay* cannot intervene between a focus-sensitive particle and its semantic associate, i. e. the particle and the focus domain its semantic associate belongs to must be on the same side of the inversion marker *ay*.

This accounts for the observation made by Latrouite and Riester (2018) regarding the placement of the additive particle *din* using the tools of RRG. They generalize that the particle follows the verb when both the verb and one of the arguments is the semantic associate, but it follows the argument for a narrow additive focus reading. The relevant examples from their study are the following:

(228) **Latrouite and Riester (2018:267,268,271,272)**

- a. [*nang-hu~huli*]<sup>FOC</sup>=*din=sila*      [*ng=malaki-ng daga*]<sup>FOC</sup>.  
 AV.RLS-IPFV~catch=also=3PL.NOM GEN=big-LK    mouse  
 (When they have the chance,) cats also catch big mice (=rats).
- b. [*Ang=mga=pusa*]<sup>FOC</sup>=*din ay h(in)u~huli-∅=sila*.  
 NOM=PL=cat=also      INV ⟨RLS⟩IPFV~catch-UV<sub>in</sub>=3PL.NOM  
 Our cats also catch them.



**Fig. 5.13:** Focus projection of (227). The focus-sensitive particle *kahit* is represented by the node PRT in the focus projection. The arrow indicates its scope.



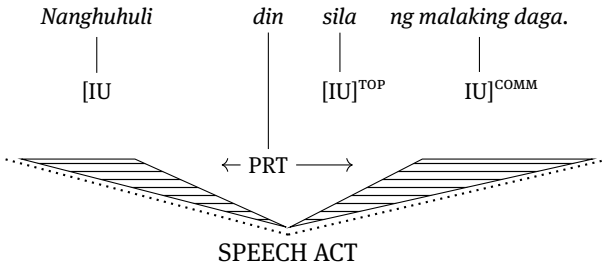
- c. *At* [*ang=atin-g*                    *mga=alaga-ng pusa*]<sup>CT</sup> *ay*  
 and NOM=1PL.INCL.DAT-LK PL=pet-LK    cat    INV  
 [*h(um)u~huli*]<sup>FOC</sup>=*rin*    *ng=daga*.  
 ⟨AV.RLS⟩IPFV~catch=also GEN=rat  
 And also our cats catch rats.
- d. [*H(in)u~huli-∅*]<sup>FOC</sup>=*rin*    *ang=mga=daga ng=mga=pusa*.  
 ⟨RLS⟩IPFV~catch-UV<sub>in</sub>=also NOM=PL=rat    GEN=PL=cat  
 Also cats catch rats.

These examples collect the relevant examples presented by Latrouite and Riester (2018). In each case, I have marked the semantic associate of the additive particle as the focus of the sentence for clarification. We see two examples, (a) and (d), that are verb initial. In (a) we have broad focus on the actor and the verb. That is, the presupposition is in place that cats also do other things. For (d), on the other hand, we have the presupposition that various harmful things happen to rats. One could construe the cats as being part of the focus as well, giving us a similar broad focus structure as in (a). Latrouite and Riester (2018), however, construe this as a contrastive topic, as the cats are contrasted with other actors/effectors that have harmful effects on rats. Thus, they analyze this as narrow focus on the verb.

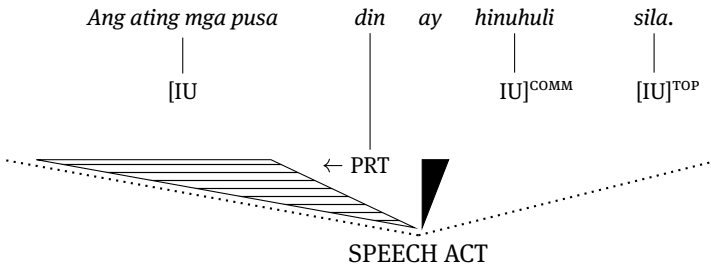
Finally, (b) and (c) both involve *ay*-inversion and differ in the position of the additive particle – in (b) it is before the verb immediately following the actor, in (c) it follows the verb and is, thus, after the *ay*. The context for (c) is the same as for (d). The property of the actor being a contrastive topic is even clearer here due to the *ay*-inversion and additional judgments by a consultant that we not only have a contrastive topic here but also a topic shift to cats. In (b), we have a clear case of narrow actor focus as the previous context lists the other natural enemies that catch rats and this sentence adds that the properties of catching rats is also true for cats.

Latrouite and Riester (2018) conclude from this that the position of the additive particle *rin/din* relative to the predicate is what determines its scope. If the verb is part of the scope, the particle follows the verb. If the focus is on one of the arguments, it will follow the argument. This would necessarily trigger *ay*-inversion since as a second position clitic, the additive particle would otherwise have to follow the verb.

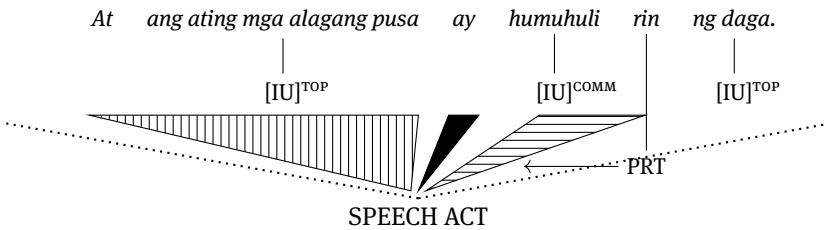
In the account presented here, these different interpretations would be explained using the focus projections as shown in Figure 5.14. In (a) and (d), there is no *ay* in the way of the particles action and it can happily take scope in either direction allowing for both narrow focus on the verb (d) and broad focus encompassing both the verb and an argument (a). In (c) the *ay*-fronted actor is explicitly excluded from the scope of the additive particle by the inversion marker *ay*. In (b), we find



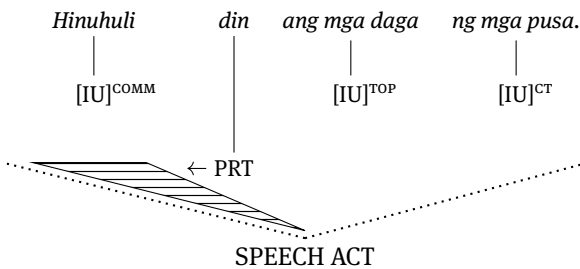
(a) *din* after verb in canonical word order, broad focus



(b) *ay*-inversion, *din* after *ay*-fronted argument



(c) *ay*-inversion, *din* after verb



(d) *din* after verb in canonical word order, narrow verb focus

**Fig. 5.14:** Information-structure projections of the examples (based on analysis by Latrouite and Riester 2018:267–272)



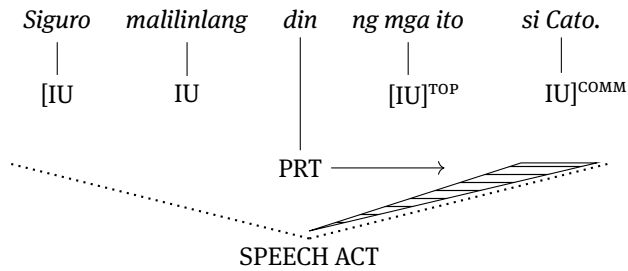


Fig. 5.16: Focus projection of example (229)

*siguro ma-li-linlang-Ø=din ng=mga=ito [si=Cato]<sup>FOC</sup>.*  
 maybe ABIL-IPFV~deceive-UV<sub>in</sub> GEN=PL=DEM.PROX.NOM NOM=Cato  
 If they fooled Foxface, maybe they can fool Cato as well.

Here, the background is clearly outlined by the initial conditional clause, making it clear that the narrow focus of the matrix clause is in fact *si=Cato* ‘NOM=Cato’. Therefore, despite immediately following the verb, the scope of the additive particle does *not* include the verb but only the undergoer. See Figure 5.16 for the focus projection of this example. Note also that, unlike Balogh (2020) finds for Hungarian, Tagalog allows topical material intervening between the focus-sensitive particle *din* and its semantic associate.

### Remarks

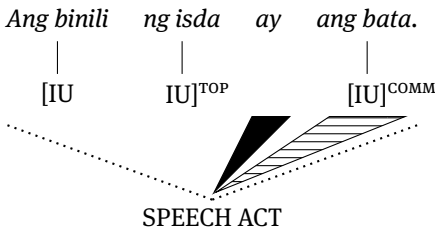
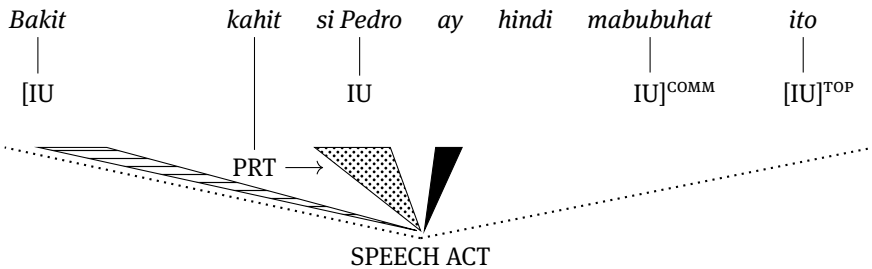
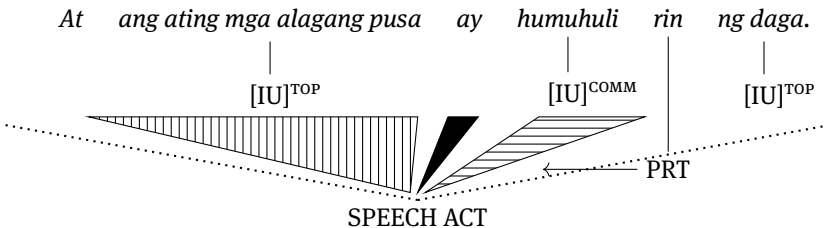
Before concluding this section, I would like to draw attention to the fact that the account previously presented is compatible with other observations mentioned in this thesis.

### Reversed *ang*-Inversion

The reversed *ang*-inversion construction is a narrow-focus construction (Nuhn 2019), which we will discuss in more detail in chapter 7. The inversion marker *ay* separates the background preceding it from the narrow focus following it. An example of a focus projection of a reversed *ang*-inversion can be seen in Figure 5.17.

### *wh*-Word preceding *ay*

Having both *wh*-word and a focus-sensitive particle with semantic associate preceding *ay*, as in example (212) discussed above, presents no problem within the

(a) Focus projection of reversed *ang*-inversion(b) Focus projection of *ay*-inversion with *wh*-word and focal argument preceding inversion marker(c) Focus projection with contrastive topic before *ay***Fig. 5.17:** Focus projections that can also be tackled with this account.

focus projection since this doesn't involve a focus domain extending beyond the *ay*. A possible focus-projection is shown in Figure 5.17. The question word *bakit* 'why' receives completive focus (horizontally striped focus domain), while the focus-sensitive particle *kahit* 'even' associates with the focus domain corresponding to the phrase *si=Pedro* 'NOM=Pedro'. The question *Why couldn't even Pedro lift this?* presupposes that *even Pedro couldn't lift this*. In particular, the association of the focus-sensitive particle with the phrase *si=Pedro* 'NOM=Pedro' must be contextu-

ally given, making this an instance of *second-occurrence focus* (see e. g. Baumann 2014). This is indicated in Figure 5.17 by the dotted focus domain and explains why the particle *kahit* ‘even’ associates with the focus domain that belongs to the phrase *si=Pedro* ‘NOM=Pedro’ and not the one that belongs to the question word *bakit* ‘why.’

### Contrastive Topic = Focus within Topic

As mentioned before, contrastive topics have been described as a focus within a topic (e. g. Krifka and Musan 2012:30; Erteschik-Shir 2007:48–49). Put simply, the contrastive topic has properties of a topic in the sense that the speaker is trying to add to the hearers knowledge regarding the topic referent. At the same time, the element of contrast is a focal property as it singles this particular topic out from a larger set. While this is currently not reflected in the focus projection of RRG, this could be done without creating problems with this account. A simple way to do this is suggested in 5.17 using the tools described by Balogh (2020). Instead of labeling the IU corresponding to the phrase *ang ating mga alagang pusa* ‘our domestic cats’ with CT for contrastive topic as in Figure 5.14c, (the corresponding IU is simply labeled TOP), while simultaneously being in contrastive focus as indicated by the AFD with vertical stripes below it. There can still be an information focus in the comment part of the sentence that follows the marker *ay*, which in this case associates with the focus-sensitive particle *rin* ‘also’. This poses no problem, since we have two different focus domains, neither of which extends beyond the inversion marker.

## 5.4 Conclusion

This chapter began with a brief look at the syntactic structure of the basic predicate-initial word order and then moved on to the inversion constructions. Here, *ay*-inversion is particularly challenging since it allows fronting of various types of constituents and varies in its information-structural properties: the fronted element can be either topical or focal and there is no clear consensus in the literature when which is the case.

Latrouite and Van Valin (2020) discuss the topical use as well as one of the focal uses involving the negative polarity item *ni*, which they refer to as *ni-ay*-inversion. Since the latter is obligatory for actors, while *ay*-inversion for (framesetting-)topics appears to be largely optional, they treat it as a distinct construction with its own syntactic structure. They conclude that the framesetting topics are housed in the LDP while the fronted element in a *ni-ay*-inversion is in the PrCS.

In Section 5.2, we had a look at the *ay*-inversions found in the data to see which of them can be accounted for with these analyses. We saw that *ay*-fronted phrases associate with focus sensitive particles other than the negative polarity item *ni*, such as *din* ‘also’ and *kahit/maging* ‘even’. Following a similar line of reasoning as Latrouite and Van Valin (2020) laid out for *ni-ay*-inversion, the *ay*-marked constituent should be in the PrCS, as well. We also saw that not only arguments but *ay*-marked framesetting adverbials can also associate with focus-sensitive particles. Revisiting the instances of *ay*-inversion within subordinate clauses already mentioned in chapter 4, we saw that these can be accounted for by assuming that they, in fact, occur in subordinate *sentences*, not *clauses*, as proposed by Matić, Putten, and Hammon (2016).

Then, we turned to several examples involving the question word *bakit* ‘why’, which can precede both *ay*-marked constituents associating with a focus-sensitive particle as well as (framesetting) topics. This contrasts with other question words targeting adjuncts, such as like *kailan* ‘when’ and *saan* ‘where’. They are taken to be in the PrCS and cannot precede *ay*-marked constituents (Kaufman 2005; Nagaya 2007). Since *because*-clauses are assumed to be in the clause-level periphery rather than the core-level periphery, we were able to account for *bakit* ‘why’ occurring before *ay*-marked elements. However, this required stipulating that *ay*-marked (framesetting-)topics are not always in the LDP, but appear in the PrCS in these cases.

Finally, based on observations in the data and backed-up by judgments, we formulated the following two hypotheses,

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#### Hypotheses

1. An *ay*-marked XP is focal when it associates with one of the focus-sensitive particles *kahit*, *maging* ‘even’, or *din* ‘also’ (or if a similar additive reading is intended). It is topical otherwise.
  2. The AFD never extends across an occurrence of *ay*.
- 

and saw how this could be modeled RRG’s information-structure projection.

Before concluding this chapter, let us once more return to the syntactic projection. In contrast to the seemingly clear-cut account of *ay*-inversion on the focus-projection, the syntactic projection is much more complicated. In this section, we will look into the problems in some more detail and look at possible solutions. Before a complete syntactic account of *ay*-inversion can be given, however, more research will surely need to be done.

Latrouite and Van Valin (2020) have already remarked that most likely more than one syntactic structure is associated with what is commonly simply referred to as *ay*-inversion. They base this conclusion on two observations: 1. the different information-structural properties of *ay*-inverted elements (topical vs. focal) and

2. the fact that *ay*-fronting of actors in connection with the negative polarity item *ni* is obligatory, while *ay*-inversion of arguments in other contexts is largely optional. This raises the question, how many distinct syntactic structures are needed to cover all uses of *ay*-inversion. As we have seen above, many of the uses of *ay*-inversion can be dealt with using the two syntactic positions LDP and PrCS as proposed by Latrouite and Van Valin (2020). Despite not all of the focal *ay*-inversions being obligatory, we must situate them in the PrCS since they are focal and thus must be clause-internal. This is, therefore, the only possible syntactic position for them without assuming the existence of additional syntactic positions in the Tagalog clause. We also saw that topical *ay*-marked constituents must be analyzed as being in the PrCS, e. g. when they are preceded by the question word *bakit* ‘why’, which raises the question, in what aspects the LDP-*ay* and the PrCS-*ay* constructions differ.

Another aspect of *ay*-inversion that has hardly been discussed is that of operators that are realized before *ay*. We have seen that pseudo-verbs such as *kailangan* and *dapat* ‘should’ or even the optative clitic *sana* can appear before *ay*. Sentences such as the following, have not yet received very much attention:

(230) **The Hunger Games (Reyes 2012b:373)**

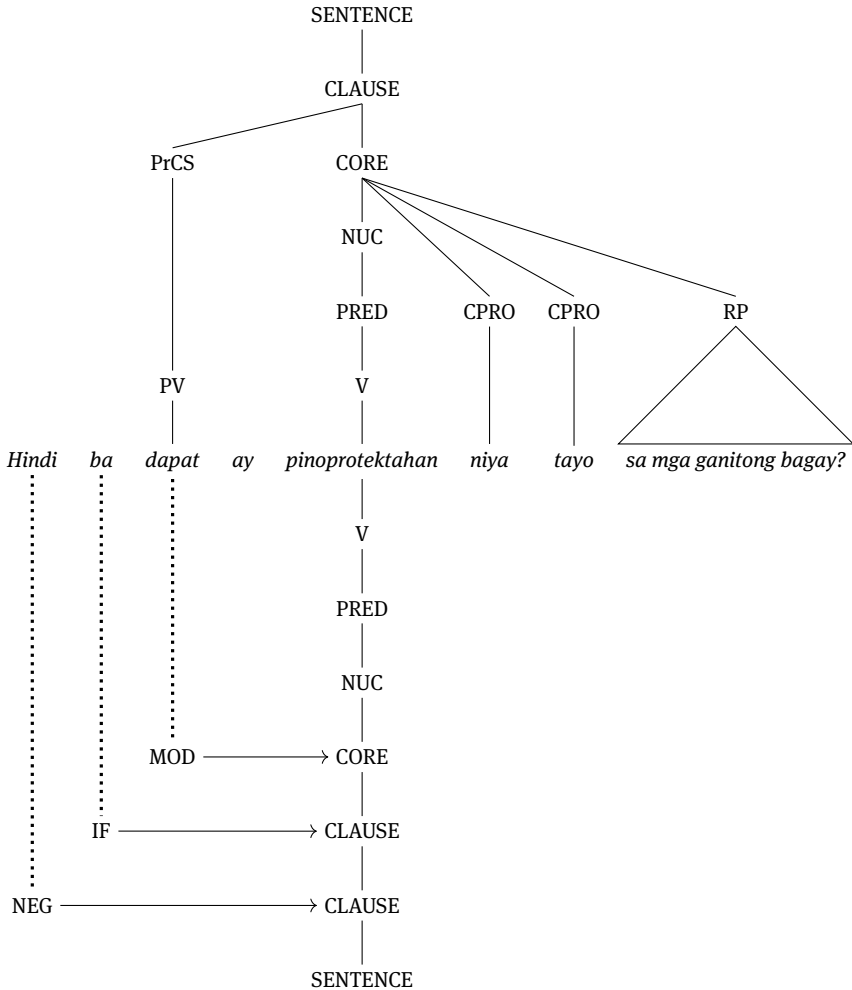
*Hindi=ba dapat ay p(in)o~protektah-an=niya=tayo*  
 NEG=Q should INV ⟨RLS.⟩IPFV~protect-UV<sub>an</sub>=3SG.GEN=1PL.INCL.NOM  
*sa=mga=ganito-ng bagay?*  
 DAT=PL=such-LK thing  
 Isn't he supposed to protect us from this sort of thing?

Situating the pseudo-verb *dapat* ‘should’ in the PrCS, as shown in Figure 5.18, would be a straightforward analysis. Because it is in the scope of negation and of the illocutionary-force operator, here the question marker *ba*, and because it is a core-level operator, *dapat* should be in a clause-internal position. Since it precedes the core and is neither an argument nor a periphery element, this makes the PrCS the obvious choice. This analysis, however, does not explain the position of the pronoun clitics *niya* ‘3SG.GEN’ and *tayo* ‘1PL.INCL.NOM’, which we would expect to appear right after *hindi* ‘NEG’ or right after *dapat* ‘should’, but certainly not after *pinoprotektahan* ‘protect.RLS.IPFV.UV<sub>an</sub>’.

Furthermore, according to Schachter and Otones (1972), the inversion marker *ay* in (230) can be replaced by the linker *na* resulting in the following construction:

(231) *Hindi=ba dapat na p(in)o~protektah-an=niya=tayo*  
 NEG=Q should LK ⟨RLS.⟩IPFV~protect-UV<sub>an</sub>=3SG.GEN=1PL.INCL.NOM





**Fig. 5.18:** Syntactic and operator projection of example (230) involving an *ay*-fronted pseudo-verb

*sa=mga=ganito-ng bagay?*  
 DAT=PL=such-LK thing

Isn't supposed to be (the case) that he protects us from this sort of thing?

In this case, it seems more natural to see the clause introduced by *na* 'LK' as an argument of the pseudo-verb *dapat* 'should', which functions as the predicate of the matrix clause. This results in the structure shown in Figure 5.19. This leaves us with



the question whether the two versions (230) and (231) behave differently enough to justify having such a different syntactic structure. Notice also that this analysis explains the position of the pronoun clitics, as they belong to a subordinate clause where they indeed follow the clause-initial element.

Finally, we are left with another operator-related question: how to treat clausal operators that occur within *ay*-fronted constituents. We have seen that the question marker *ba* can occur within *ay*-fronted elements. This is explained by Kaufman (2005) as a process of phonological inversion. This relies on the idea that these markers are base-generated clause-initially and finally end up where they are in

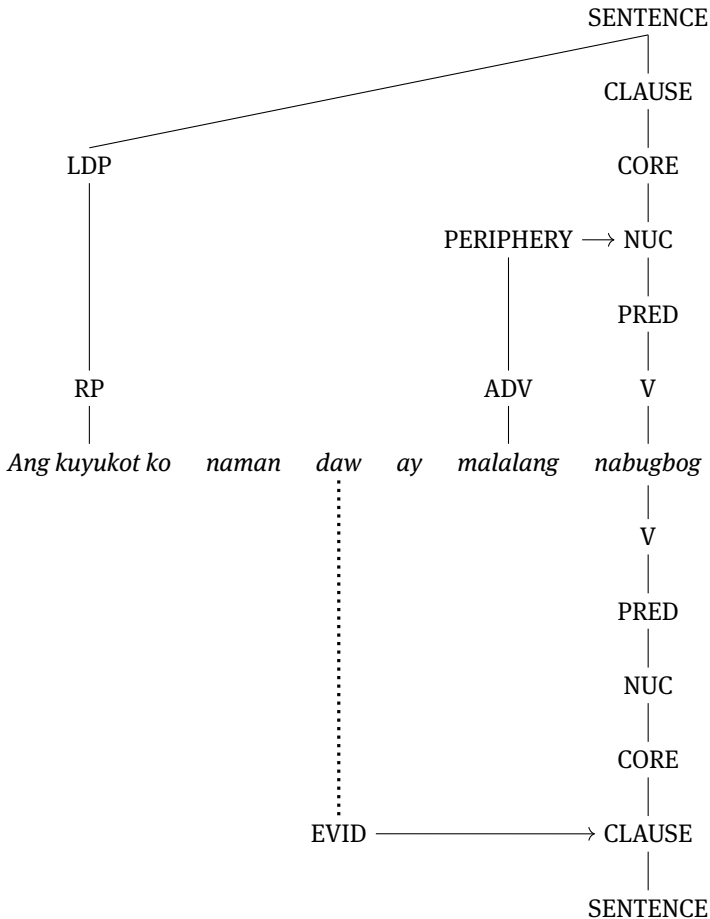


Fig. 5.20: Syntactic and operator projection for evidential operator *daw* ‘HSY’ preceding *ay*

the derivation process. Since RRG does not rely on such derivation processes, we still need a way to explain the fact that some clitics occur before *ay* in the first place. Then, when they occur in *ay*-fronted constituents analyzed as being in the LDP, we must explain how it can be that a clause-level operator appears in a clause-external position. Another such clitic is the hearsay marker *daw*, analyzed in RRG as a clause-level operator:

(232) **The Hunger Games: Catching Fire (Reyes 2012a:163)**

*Ang=kuyukot=ko=naman=daw ay malala-ng nabugbog.*

NOM=tailbone=1SG.GEN=PTCL=HSY INV bad-LK bruised

My tailbone, on the other hand, (she says) is seriously bruised.

If this sentence were to be reformulated as a *yes/no*-question by adding the question marker *ba*, the only acceptable position to our consultants was for *ba* to appear between *ko* ‘1SG.GEN’ and the contrastive particle *naman*. Thus, we would have both the illocutionary force operator and an evidential operator in an *ay*-fronted constituent. According to Van Valin (2005:9), illocutionary force and evidentials are “sentential in nature”, but are nevertheless described as clausal operators. This might be a good argument to indeed treat them as sentential operators.

## 6 Reference Tracking, Topic Chains, and *ay*-Inversion

In this chapter, we will turn our attention to reference tracking, a phenomenon that has been cross-linguistically linked to aspects of information structure. In Tagalog, in particular, Nagaya (2006a) and Nagaya (2006b) found the topicality (or non-topicality) of a referent to be a relevant factor for speakers in choosing which anaphoric device to use when coding a given referent.

We will begin with some typological remarks and cross-linguistic findings in section 6.1 before discussing Nagaya's findings in detail in section 6.2. Then, we will introduce the frame account of reference tracking by Balogh (2018) in section 6.3. Section 6.4 is concerned with the application of this account to Tagalog and the formulation of the necessary language specific constraints based on Nagaya's description. In this context, we will also discuss some worked-out examples. This attempt at capturing reference tracking in a formal framework will also reveal what aspects of the language are not yet sufficiently understood.

Finally, in section 6.5, we will investigate whether so-called topic marking via *ay*-inversion interacts with reference tracking comparing it to the role topic marking plays in languages such as Hungarian (as discussed by Balogh 2018) and Japanese (Shimojo 2011). I will argue that the kind topic marked by *ay*-inversion is distinct from the topic Nagaya (2006b) talks about in the context of pronominalization.

### 6.1 General Remarks on Reference Tracking

#### 6.1.1 A Brief Typology of Reference-Tracking Systems

Put very briefly, the term *reference tracking* covers “the various linguistic devices by means of which a language can indicate whether reference is being made to the same or to a different participant” (Comrie 1999:335). The most obvious way to do this would be to use full noun phrases all the time, which could eliminate virtually any referential ambiguity. Natural languages, however, tend to use pronouns or even zero marking to code given information and have thus developed systems to keep track of the referents involved in the discourse. Foley and Van Valin (1984:325) group these systems into four categories:

1. Switch Function
2. Switch Reference
3. Gender
4. Inference

A given language can make use of several of these systems; they are by no means mutually exclusive. Before focusing on Tagalog in the next section, let us briefly look at some examples for each of them. For a more detailed discussion see Foley and Van Valin (1984:325–360).

### 6.1.1.1 Switch Reference

The basic idea of a switch reference system is to signal co-reference or non-co-reference of the pivots of adjacent clauses. This occurs most often in verb-final languages where a morpheme on the verb signals whether the subject of the following clause will remain the same or not (Van Valin and LaPolla 1997:287).

(233) **Barai (Foley and Van Valin 1984:342 citing Olson 1981)**

- a. *Fu juare me-na fae kira.*  
 3SG garden make-SEQ.SR fence tie  
 He made a garden and then tied a fence.
- b. *Fu juare me-mo fu fae kira.*  
 3SG garden make-SEQ.DR 3SG fence tie  
 He<sub>i</sub> made a garden and then he<sub>j</sub> tied a fence.

In (233b), the suffix *-na* on the verb indicates that the referent of the pivot is the same in both clauses. Changing it to *-mo*, shown in (233a), marks a change in referents. As the indices *i* and *j* in the translation suggest, the two pronouns *fu* ‘3SG’ are interpreted as referring to distinct individuals. It is not uncommon for languages to use portmanteau morphemes to signal switch reference as well as semantic relations between the clauses as in the examples above, the markers also signal that the events described in the two clauses occur after each other, i. e. in sequence.

### 6.1.1.2 Switch Function

Switch function systems, first described by Foley and Van Valin (1984), are in a sense the inverse case of switch reference systems. Switch reference functions mark whether the referent of the pivot stays the same or not, while switch function systems use a voice system to mark a change in the semantic function of the pivot, while keeping its referent constant. This is one of the reference-tracking mechanisms present in English:

(234) **Foley and Van Valin (1984:354)**

- [*John<sub>i</sub> went to work*] and [*∅<sub>i</sub> talked to his boss*]  
 and [*∅<sub>i</sub> was given a promotion.*]

In this example, the referent *John* is tracked through three consecutive clauses. In the second clause we find the active verb *talked*. Since active is the unmarked voice in English it indicates *same function*, i. e. the referent *John* is the actor in this clause just as he was in the first. In the third clause, the switch to the passive voice indicates a change in function – *John* is now the undergoer.

### 6.1.1.3 Gender

Languages that use grammatical gender systems divide nouns into distinct classes, often based on sex, animacy, shape or even phonological properties of the noun. Pronouns then cross-reference the grammatical gender or noun class of the referent which aids in identifying the correct referent. In addition to switch function, gender is another mechanism used in English: third person pronouns show a three-way gender distinction based on sex and animacy – *he* (masculine), *she* (feminine), *it* (inanimate/non-human).

### 6.1.1.4 Inference

Finally, inference is used in all languages to some extent. This is particularly true of languages spoken in Southeast Asia, such as Thai, Japanese, or Korean, where zero anaphora are used extensively. Co-reference is often determined by complex sociolinguistic factors and the use of an elaborate honorific system. Here, the inference system has, as Foley and Van Valin (1984:324) put it, “been elevated to the status of a fine art”.

Coherence relations between sentences can be used to capture some aspects of inference in reference tracking. Their relevance has been noted by Kehler (2002) and Kehler (2004), Asher and Lascarides (2003), and Kertz, Kehler, and Elman (2006), among others. To briefly illustrate this effect, consider the following example:

(235) **Kertz, Kehler, and Elman (2006:1606)**

*Dennis narrowly defeated Isaac and*

- |                                   |          |
|-----------------------------------|----------|
| a. ...Lilly congratulated him.    | RESULT   |
| b. ...Lilly utterly trounced him. | PARALLEL |

In (235a), the congratulation event is a plausible result of the defeating event in the first part of the sentence. Resolving the object pronoun *him* as coreferential with *Dennis*, therefore, establishes a likely causal relationship between the two sentences. In (235b), on the other hand, the semantic similarity of *defeat* and *trounce* stands out. The parallelism suggests parallel co-reference, i. e. that the object pronoun *him* is coreferential with the object *Isaac* of the previous clause.

As a final example of inference, I would like to mention the *Common Sense Preference* (Kameyama 1996; Kehler 2002), which states that “anaphoric devices

are preferably resolved in a way that results in a plausible interpretation” (Kehler 2002:177). This means that in cases where the usual preferences for anaphora resolution lead to an interpretation that is in contrast with the listeners knowledge of the world, these preferences can be overridden in favor of a more plausible interpretation.

### 6.1.2 Reference Tracking in the Local and Extended Domain

Next, let us turn to another typologically relevant observation made by Comrie (1999). While comparing reference-tracking strategies across languages, he distinguishes between the local and the extended domain. The local domain can typically be thought of as a predicate together with its arguments, i. e. the intraclausal domain, while the extended domain refers to larger stretches of discourse, where he is concerned with interclausal or intersentential reference tracking. In languages that distinguish different levels of markedness in the domain of pronouns, such that more marked pronouns indicate co-reference (e. g. English reflexives: *him* vs. *himself*), then the most marked form will be used in the most local domains while less marked forms are found in less local domains. Consider, for instance, the following examples:

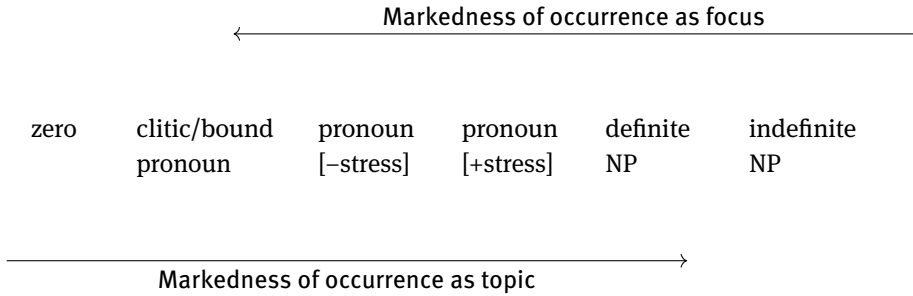
(236) **Comrie (1999:338)**

- a. *John<sub>i</sub> saw himself<sub>i</sub> in the mirror.*
- b. *John<sub>i</sub> heard steps behind him<sub>i</sub>.*
- c. *John<sub>i</sub> told Mary to make him<sub>i</sub> some tea.*

In the most local domain, i. e. two arguments of the same predicate, English requires the use of the reflexive pronoun to indicate co-reference of actor and undergoer as shown in (236a). Moving beyond the domain of the predicate and its arguments, we find the regular object pronoun used in (236b) and (236c). Comrie (1999:341) explains this as follows: as we conceptualize the world, the most natural case of an event involving several participants is for an agent to act on a distinct patient or, in other words, for the two arguments of the verb describing this event to be non-coreferential. Deviations from what is expected license or even require the use of more marked coding for the arguments.

In the extended domain, the expectation is quite the opposite: in a coherent discourse speakers expect referential continuity or topic continuity. As a result, in case of referential/topic continuity, speakers will resort to a less marked choice of referring expression reserving more marked choices for referent or topic switches. Figure 6.1 shows how different forms of referring expression are ranked regarding





**Fig. 6.1:** Markedness of referent coding options for topics and focus (Image: reproduced from Van Valin and LaPolla 1997:205, Fig. 5.2)

the markedness when coding topics or foci. The least marked form for a topic is thus zero coding followed by different types of pronouns and finally full noun phrases (Van Valin and LaPolla 1997:204–205). The cut-off points between local and extended domain are subject to cross-linguistic variation. The following Russian example by Comrie (1999) features a rather small extended domain:

(237) **Russian (Comrie 1999:343, cyrillic added, glosses modified)**

- a. *Юра хочет передать часы дяде.*  
*Jura хоčet p'er'edat' časy d'ad'e.*  
 Yura.NOM want.3SG give.INF watch.ACC uncle.DAT  
 Yura wants to give the watch to Uncle.
- b. *Юра хочет чтобы ты передал часы дяде.*  
*Jura хоčet čtoby ty p'er'edal časy d'ad'e.*  
 Yura.NOM want.3SG that 2SG.NOM give.PST watch.ACC uncle.DAT  
 Yura wants you to give the watch to Uncle.

When the actor of both *xot'et* 'want' and *p'er'edat* 'give' is the same, as in (237a), it requires only one mention of the actor *Yura* and the second verb *p'er'edat* is in the infinitive form. To express to different actors for the two verbs, both must be overtly expressed as in (237b), and the construction requires a dependent clause in the subjunctive mood<sup>1</sup>.

Moving on to more extended domains, consider the following Hungarian example. It consists of an initial clause followed by several possible continuations (238a–238d):

<sup>1</sup> The subjunctive mood uses the past form of the verb combined with the subjunctive marker *by*, which is here fused to the conjunction *čtoby*.

(238) **Hungarian (Balogh 2018:34)**

*A kisleány kergette a békát,*  
the boy chased the frog.ACC

[The boy]<sup>TOP</sup> chased the frog,

- a. *aztán elugrott egy fáágra.*  
and.then jumped.away a branch.SUBL  
and then he (=the boy) jumped away to a branch.
- b. # *aztán a kisleány elugrott egy fáágra.*  
and.then the boy jumped.away a branch.SUBL  
and then the boy jumped away to a branch.
- c. *aztán a béka elugrott egy fáágra.*  
and.then the frog jumped.away a branch.SUBL  
and then the frog jumped away to a branch.
- d. *aztán az elugrott egy fáágra.*  
and.then that jumped.away a branch.SUBL  
and then that one (=the frog) jumped away to a branch.

The first clause of (238), mentions two noun phrases: the actor *a kisleány* ‘the boy’, which is in a special syntactic position marking it as topic, and the undergoer *a békát* ‘the frog’, which appears post-verbally. The continuation shown in (238a) features a zero-coded subject that is interpreted as referring to the boy. This is exactly what we would expect: since a zero is the least marked expression for a topic according to Figure 6.1. Since the expectation for the extended domain is topic continuity, the zero refers to the referent marked as topic in the previous clause.

If on the other hand the overt demonstrative pronoun *az* ‘that’ is added to the continuation, as in (238d), it is interpreted as non-coreferential with the previous topic. Furthermore, the realisation of the demonstrative in the topic position in (238d) indicates that the topic has now shifted and the frog is now the new topic. As shown in (238c), the demonstrative can be replaced by a full noun phrase referring to the frog. Using a more marked expression such as a full noun phrase in the topic position to refer to the boy is, however, infelicitous, as shown in (238b). The preferred interpretation would be that the speaker is referring to a different boy, if this were permitted by the context.

Similar patterns can be found in other languages, such as Japanese (Shimojo 2005; Shimojo 2016), where the particle *wa* is used to mark topics in a topic shift or an episodic shift, while continuing topics are typically zero-coded.

Furthermore, Comrie (1999) notes that his generalization for the extended domain even applies to switch-reference systems: if there is a difference in marked-

ness between SR-marking and DR-markers, the unmarked case will always be the SR-case, while DR will be more marked. Even in our example (233a) above, we see that when the referent switches between the two clauses, an additional pronoun is required in the second clause.

## 6.2 Reference Tracking in Tagalog

In this section, we will look into the reference-tracking devices used in Tagalog. We will focus primarily on the quantitative work and analysis presented by Nagaya (2006a) and Nagaya (2006b), beginning with Comrie's (1999) distinction of local versus extended domains and how this manifests in Tagalog. Then, we will explore how participants are tracked across more extended stretches discourse. It is Nagaya's analysis of these mechanisms that we will subsequently attempt to model using frame semantics.

### 6.2.1 Local vs. Extended Domains

#### 6.2.1.1 Local Domain

As can be expected according to Comrie's (1999) generalization, within the local domain, Tagalog has special markers to indicate coreference, such as the marker *sarili* 'self':

(239) **Nagaya (2006b) (with modified glosses)**

*P*⟨*in*⟩*uri*-∅      *ni*=*Darling*<sub>*i*</sub>    *ang*=*kanya-ng*    *sarili*<sub>*i*</sub>.  
 ⟨RLS⟩praise-UV<sub>*in*</sub> GEN=Darling NOM=3SG.DAT=LK self  
 Darling praised himself.

Here, actor and undergoer are the same. The first instance, representing the actor, is coded by *ni*=*Darling* 'GEN=Darling', while the marker *sarili* is used to code the coreferential undergoer of the clause. That this is limited to the local domain can be seen in the following example (240), which shows, that *sarili* requires an antecedent within the same clause:

(240) **adapted from Nagaya (2006b)**

*Alam* *ni*=*Dodong*<sub>*i*</sub>    *na*    *p*⟨*in*⟩*uri*-∅      *ni*=*Josh*<sub>*j*</sub>    *ang*=*kanya-ng*  
 know GEN=Dodong COMP ⟨RLS⟩praise-UV<sub>*in*</sub> GEN=Josh NOM=3SG.DAT=LK  
*sarili*<sub>*i*/*j*</sub>.  
 self  
 Dodong knows that Joshua praised himself.

*Joshua*, the actor argument of the complement clause is thus available as a referent, but *Dodong*, as an argument of the matrix clause, is not.

In certain cases, the choice of voice affix can be used, as well, to indicate coreference of two arguments of the same verb. For certain verbs, the actor-voice affix *mag-* gives a reflexive reading (Nagaya 2004:61):

(241) **Nagaya (2006b) (with modified glosses)**

- a. *Nag-ahit si=George ng=bigote.*  
 AV.RLS-shave NOM=George GEN=beard  
 George shaved himself.
- b. *⟨In⟩ahit-∅ ni=George ang=bigote.*  
 ⟨RLS⟩shave-UV<sub>in</sub> GEN=George NOM=beard  
 George shaved (someone's) beard.

Although not explicitly mentioned, *George* is taken to have shaved himself in the first example, while in the second one, it is implied that there is a person different from *George* whose beard he shaved. Thus, the undergoer voice *ahit-in* 'shave-UV<sub>in</sub>' is not inherently reflexive, nor is the alternative actor voice form *⟨um⟩ahit* '⟨AV⟩shave' (Pittman 1966:12).

### 6.2.1.2 Extended Domain

As discussed before (see sec. 6.1), referential continuity is expected and thus less marked in the extended domain (Comrie 1999). To some extent, this is true for Tagalog: arguments can be omitted, i. e. zero marked, under coreference with an argument of the preceding clause:

(242) **Ramos and Cena (1990:151) (glosses added)**

- Na-pa-hampas-∅ ang=kotse<sub>i</sub> ni=Mario; sa=poste,*  
 ABIL.RLS-CAUS<sub>PA</sub>-hit-UV<sub>in</sub> NOM=car GEN=Mario DAT=pillar
- at pagkatapos, na-pa-banga-∅=pa ∅<sub>i</sub> ∅; sa=pader.*  
 and then ABIL.RLS-CAUS<sub>PA</sub>-collide-UV<sub>in</sub>=still DAT=wall
- Mario hit a pillar with his car and then [he] crashed [it] into the wall.

In the first clause of (242), actor and undergoer are coded by overt full noun phrases, while in the second clause both are dropped under co-reference with the arguments of the preceding clause. Note also the presence of zeros in the following subordinate clauses:

(243) **Nagaya (2006b) (with modified glosses)**

a. *T⟨um⟩akbo ang=bata para b⟨um⟩ili ∅ ng=isda.*

⟨AV.RLS⟩run NOM=child to ⟨AV⟩buy GEN=fish

The child ran to buy fish.

b. *H⟨in⟩imok-∅=ko si=**Romio**<sub>i</sub> na sampal-in ∅<sub>i</sub>*

⟨RLS⟩persuade-UV<sub>in</sub>=1SG.GEN NOM=**Romio** COMP spank-UV<sub>in</sub>

*si/ni=Dodong.*

NOM/GEN=Dodong

I persuaded Romio to spank Dodong / to be spanked by Dodong.

The Tagalog *para*-clause is often translated using a purpose clause as shown in (243a). In RRG, English purpose clauses are analyzed as core junctures, in which the two cores obligatorily share the actor argument (see Van Valin 2005:188). Hence the actor of the purpose clause is not considered to be zero coded. This is an important point since the annotation frameworks Ref Ind and GRAID we will discuss below (see sec. 6.5.1), do not posit a zero here in English either since an overt actor in the purpose clause, realized by a full NP or any kind of pronoun, is not an option. In Tagalog, however, it is possible to include an overt pronoun for the actor:

(244) **Ramos and Cena (1990)**

*Nag-pa-plastik-surgery si=**Carmen**<sub>i</sub> para*

AV.RLS-CAUS<sub>PA</sub>-plastik-surgery NOM=**Carmen** to

*b⟨um⟩ati=**siya**<sub>i</sub>.*

⟨AV⟩become.beautiful=3SG.NOM

Carmen had plastic surgery in order for her to become beautiful.

Here, the actor *Carmen* is taken up by the overt pronoun *siya* ‘3SG.NOM’ in the *para*-clause. To do this in English, we have to resort to the rationale clause shown in the translation. It is even possible for the arguments of the two clauses to have no referents in common at all.

(245) **Schachter and Otones (1972)**

*Para hindi ma-gutom ang=**mga=bata**<sub>i</sub>, nag-dala=**kami**<sub>j</sub>*

to NEG STAT-hungry NOM=PL=child AV.RLS-bring=1PL.EXCL.NOM

*ng=**tinapay**<sub>k</sub>.*

GEN=bread

We brought bread so that the children don’t get hungry.



subordinate clauses *can* be expressed overtly, which, as we will see in section 6.5.1.2, is an important criterion for positing a zero-coded argument in the annotation of our data<sup>2</sup>.

### 6.2.2 Tracking Participants through Discourse

Moving on to even larger domains, let us now investigate how referents are tracked through larger stretches of discourse.

Following the typological analysis by Foley and Van Valin (1984), there are four large groups of reference-tracking mechanisms: 1. switch reference, 2. switch function, 3. gender, and 4. inference. Since gender is not a grammatical category in Tagalog, it is out as a reference-tracking technique. Furthermore, there are no switch-reference markers of the type described by Foley and Van Valin (1984), ruling out this possibility as well. Finally, we have also seen in examples (243b), (246), and (247) that the voice system is not generally used as a switch-function: the highlighted referring expressions in each of the examples are interpreted as coreferential despite a switch in their semantic role and no switch in voice.

As in most languages, once a referent has been introduced to the discourse, it can be referred to using one of the anaphoric devices Tagalog has at its disposal. We have already seen that Tagalog has three options:

1. personal pronouns,
2. demonstrative pronouns, and
3. zero anaphora.

Remember that personal pronouns and demonstrative pronouns are both second position clitics.

The question is how these devices are used to track different referents through the discourse. Some analyses have been put forth in the literature regarding how the appropriate anaphoric device is selected. Ramos and Cena (1990:149), for example, propose that “[i]f the antecedent is actor, a pronoun is used, otherwise the demonstrative equivalent is used.” Though they remark that there are exceptions to this rule, we will see in the following, that this analysis – though arguably a good rule of thumb in a pedagogical setting – is too simplistic for linguistic purposes. A similar generalization by Himmelmann (1999:258) proposes that the actor of an undergoer-voice verb must be realized as a personal pronoun. Furthermore, he claims (Himmelmann 1999:236) that zero anaphora is generally possible for

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<sup>2</sup> This applies to *upang*-clauses as well. The conjunction *upang* is slightly more formal than *para*, but other than that the two can be used interchangeably (Schachter and Otones 1972:478).

*ang*-marked arguments. Nagaya (2006a) provides a more fine grained analysis, which he backs up with convincing quantitative data based on a textcorpus elicited using the well-known *Pear Story*.

One of Nagaya's core observations is that speech-act-participants (SAPs) behave differently from non-speech-act-participants. Let us begin with the SAPs and how they are coded.

### 6.2.2.1 Coding of Speech-Act-Participants

Speech-act-participants in Nagaya's terms are any first and second person referents, i. e. the referents that are actually participating in the discourse. They are overwhelmingly coded by personal pronouns in his corpus: 96.9 % for first person referents and 100 % for second person referents (Nagaya 2006a:89). Furthermore, speakers judge the omission of first and second person personal pronouns as ungrammatical:

#### (249) Nagaya (2006a:92) (with modified glosses)

- a. *Tawag-an=mo=\*(ako)!*  
call-UV<sub>an</sub>=2SG.GEN=1SG.NOM  
Call me!
- b. *Tawag-an=mo=(siya)*  
call-UV<sub>an</sub>=2SG.GEN=3SG.NOM  
Call him/her!

In (249a), the first person pronoun cannot be omitted while preserving the meaning of the sentence. If it is omitted, the missing argument is interpreted as a third person referent as shown in (249b). There, the pronoun coding the third person undergoer is optional and can be omitted without changing the meaning of the sentence. Similarly the second person pronoun coding the actor cannot be dropped from such imperatives (Nagaya 2006a:93), nor the first person pronoun from exhortatives, such as

#### (250) Nagaya (2006a:92) (with modified glosses)

- K(um)ain=\*(tayo) sa=KFC!*  
<AV>eat=1PL.INCL.NOM DAT=KFC  
Let's eat at KFC!

To be clear, this is not only true for constructions with marked illocutionary force such as exhortatives and imperatives, but also for regular declarative statements such as the following:



(251) **Nagaya (2006a:91) (with modified glosses)**

**A:** *Ano 'ng=nang-yari sa=iyo?*  
 what NOM=AV.RLS-happen DAT=2SG.DAT  
 What happened to you?

**B:** *Na-traffic\*(=ako).*  
 STAT.RLS-traffic=1SG.NOM  
 I was stuck in traffic.

The first person pronoun *ako* '1SG.GEN' in the response by speaker B cannot be dropped without changing the interpretation of the sentence to a dropped third person argument. So, to sum up:

---

**Coding of SAPs in Tagalog (Nagaya 2006a)**

Speech-act-participants are (almost) always overtly realized by a personal pronoun. Omission is practically always ungrammatical.

---

### 6.2.2.2 Coding of Third Person Referents

Third person referents are much more diverse than SAPs. While the latter are practically always highly animate, the former can range from highly animate referents, such as humans, to completely inanimate objects. Quite unsurprisingly, the situation here is more complex than for SAPs.

Nagaya (2006b) finds that topicality is a decisive factor for the coding of third person referents: If they are topical, a personal pronoun is preferred, otherwise a demonstrative pronoun or zero anaphora is chosen. The fact that animate referents are coded by personal pronouns far more often than by demonstratives or zero anaphora is simply a side effect of animates being topics more frequently than inanimates.

Indeed Nagaya (2006a) finds that for animate referents (all of which are human in his corpus) personal pronouns are the most common anaphoric device accounting for 66.1 % of the references (compared to 16.1 % for lexical NPs and 17.8 % for zero anaphora). For inanimates, on the other hand, demonstratives and zero anaphora account for 37.4 % and personal pronouns for only 7 % (the remaining 56.6 % are lexical NPs). However, speakers happily code animate referents using demonstratives or zero anaphora:

(252) **Nagaya (2006a:96) (with modified glosses)**

a. *H(in)a~hanap-∅ ng=bata ang=nanay=niya.*  
 ⟨RLS⟩IPFV~UV<sub>in</sub> look.for GEN=child NOM=mother=3SG.GEN  
 The child was looking for his/her mother.

- b. *Tapos, na-kita=niya*      <sup>??</sup>*siya*      / *ito*      /  $\emptyset$  *sa=kusina*.  
 then UV.RLS-see=3SG.GEN 3SG.NOM this.NOM DAT=kitchen  
 Then he/she [child] found her / this /  $\emptyset$  in the kitchen.

Both the demonstrative or zero anaphora are acceptable for the mother in this example, as she is currently not the topic. Using a personal pronoun for both referents is, however, ungrammatical or at the least very awkward.

Conversely, inanimates can be realized by a personal pronoun provided they are sufficiently topical, as in the following example:

(253) **Nagaya (2006a:97) (with modified glosses)**

- a. ... *b(in)igy-an=ako*      *ng=gift*    *ng=mother=ko*,  
 (RLS)give-UV<sub>an</sub>=1SG.NOM GEN=gift GEN=mother=1SG.GEN  
*father=ko*,      *saka kuya=ko*,      *silang tatlo*. [...]   
 father=1SG.GEN and elder.brother=1SG.GEN, 3PL.NOM-LK three  
 ...I was given a gift by my mother, father, and elder brother, the three  
 of them. [...]
- b. *libro=siya*      *ng=fairy tales*.  
 book=3SG.NOM GEN=fairy tales  
 It was a book of fairy tales.
- c. *Tapos, simula 10 years old=ako*      *hanggang ngayon*  
 then since 10 years old=1SG.NOM until now  
*b(in)a~basa- $\emptyset$ =ko=pa=rin=siya*.  
 (RLS)IPFV~read-UV<sub>in</sub>=1SG.GEN=still=also=3SG.NOM  
 Then, ever since I was 10 years old, I have still been reading it.

In this case, the entire paragraph is dedicated to the gift, giving it a sufficiently topical status to be coded by a personal pronoun. While this is the only example discussed explicitly, Nagaya (2006a:89) lists a total of 9 cases of personal pronouns used to code inanimate referents, which together account for 6.8% of the third person personal pronouns in his data set. Animate non-human referents, on the other hand, appear to be completely absent from his study. In our data, a personal pronoun is used in one of the *Vater & Sohn* stories to refer to an inanimate entity, again in the context of gift giving:

(254) **2018-10-Gift**

**Context:** To console his crying son, the father holds up the arrow from the broken sculpture his son was about to give him. Showing it to his son, he explains:

“Even though your gift for me broke, I can still use this as a cleaner and

clean my pipe with it.

*“Kahit man masira ang isang bagay na ginawa mo, [...] maigagamit natin din ito sa paglinis ng aking pipa, para magamit ko ang pipe na ito.*

*Dahil sa=isa-ng gamit na ito, helpful=siya*  
 because DAT=one-LK use LK DEM.PROX.NOM helpful=3SG.NOM  
*sa=buhay=ko.*  
 DAT=life=1SG.GEN

Because of this one use, it is helpful in my life.”

In this section of the narrative, the father is trying to convince his son that his gift will still enrich his life despite most of it being broken. The topic of his explanation is clearly the arrow coming from the sculpture, since he is providing his son with information about it, how he can use it and that it will be useful for him. Following Nagaya’s line of reasoning, this allows the speaker to use a personal pronoun to refer to the arrow.

### Remark concerning the term ‘topic’

Nagaya (2006a:94) defines a topic in this context as “a presupposed participant with which the discourse is concerned” and a non-topic as “any presupposed participant which is not a topic”, citing Gundel (1988) and Lambrecht (1994) for further details<sup>3</sup>. In Philippine Linguistics, the *ang*-marked argument of a clause is often referred to as a topic. Clearly though, these are distinct topic notions since, as we have seen above, the *ang*-marked argument can be omitted and *ng*-marked actors in undergoer-voice sentences are happily pronominalized. In previous chapters of this work, we have discussed the inversion marker *ay*, which has been analyzed as a topic marker. We will see later on that this again, is another distinct type of topic, which does not necessarily coincide with either of the other two: *ay*-marked topics are not necessarily pronominalized in subsequent discourse, nor does the *ay*-marked topic necessarily correspond to the macrorole that is cross-referenced on the verb (even if it is *ang*-marked). Thus, when it is necessary to make the distinction, I will use the terms ‘pronoun-topic’ and ‘*ay*-topic’.

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<sup>3</sup> This can be restated using the term *tail*, which is defined by Vallduví (1990:57–59) as the part of the background that it not the link (≈ topic). Thus, Nagaya’s ‘non-topics’ would be referents that are part of the tail. However, this would explicitly exclude focal referents, which is not the case in Nagaya’s definition. While a zero-coded non-topic cannot be the focus of an utterance (Van Valin and LaPolla 1997:205), it would at least be conceivable for one coded by a demonstrative. So far, however, I have not been able to find a single example of this.

Turning back to Nagaya's findings, they can be summarized in the following way:

---

**Coding of (presupposed) third person referents in Tagalog (Nagaya 2006a)**

Personal pronouns are preferred for topical third-person referents. Demonstratives and zero anaphora are chosen for non-topics.

---

As a result, the topic can be traced through discourse by following the personal pronouns, i. e. topic chains appear as pronoun chains in Tagalog. Given the markedness scale from Foley and Van Valin (1984) we saw above (Fig. 6.1), this is unusual: since zero anaphora is possible in Tagalog, the unmarked referential expression for a continuing topic would be zero anaphora. However, this is not the case. Rather, zero anaphora (or demonstratives) are used to track a non-topic (in Nagaya's terminology) even across multiple clauses:

(255) **Nagaya (2006a:101) – Genesis 4:8 (with modified glosses)**

- a. *Isa-ng araw ni-lapit-an ni=Cain ang=kanya-ng kapatid.*  
one-LK day RLS-approach-UV<sub>an</sub> GEN=Cain NOM=3SG.DAT-LK sibling  
One day, Cain approached his brother.
- b. *Wika niya, "Abel, mamasyal=tayo."*  
word 3SG.GEN Abel AV.go.for.a.walk=1PL.INCL.NOM  
He [Cain] said, "Abel, let's go for a walk."
- c. *S⟨um⟩ama=naman=ito,*  
⟨AV.RLS⟩accompany=indeed=this.NOM  
This [Abel] accompanied,
- d. *ngunit pagdating sa=kabukira 'y p⟨in⟩atay-∅=niya=ito.*  
but arriving DAT=field INV ⟨RLS⟩kill-UV<sub>in</sub>=3SG.GEN=this.NOM  
but, arriving in the field, he [Cain] killed this [Abel].

(256) **2016-11-Frog1**

**Context:** While trying to catch the frog, the boy slipped and fell into the pond. His attempt was unsuccessful: the frog is sitting in front of him on a lily pad.

- a. *T⟨in⟩ingn-an=niya ang=frog.*  
⟨RLS⟩look-UV<sub>an</sub>=3SG.GEN NOM=frog  
He looked at the frog.
- b. *So, ang=frog, parang ⟨in⟩a~asar-∅=∅=siya.*  
so NOM=frog kind.of ⟨RLS⟩IPFV~make.fun.of-UV<sub>in</sub>=∅=3SG.NOM  
So, the frog is kind of making fun of him [boy].

- c. *Naka-tingin=lang*  $\emptyset$  *sa=kanya*.  
 AV.RLS-look=only DAT=3SG.DAT  
 It [frog] just looked (back) at him [boy].
- d. *B<in>igla- $\emptyset$ =niya* *ang=frog*.  
 <RLS>startle-UV<sub>in</sub>=3SG.GEN NOM=frog  
 He [boy] had startled the frog.
- e. *Ku~kun-in* *dapat= $\emptyset$ =niya* *ng=kamay=niya*,  
 IPFV~take-UV<sub>in</sub> should= $\emptyset$ =3SG.GEN GEN=hand=3SG.GEN  
*t<um>alon*  $\emptyset$  *sa=kabila*.  
 <AV.RLS>jump DAT=other.side  
 He [boy] must have been about to grab it [frog] with his hands, when it [frog] jumped away.

This makes the term ‘non-topic’ a little odd, since the referent is clearly currently under discussion although it may not be as salient as the referent of the personal pronoun. Thus, I would suggest the term ‘secondary topic’ for Nagaya’s non-topics and ‘primary topic’ or simply ‘topic’ for what he refers to as topic.

Thus, we can say:

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**Finding (Nagaya 2006b)**

In Tagalog, (*primary*) *topic chains*, i. e. chains involving a primary topic, are realized as *pronoun chains*.

---

**Remark regarding Comrie (1999)**

We have seen that the more marked personal pronoun in Tagalog is used to indicate topic chains, referential continuity over a longer stretch of discourse rather than the less marked zero anaphora. In discussions, it has been suggested to me, that unlike in the generalization by Comrie (1999) discussed in the previous section, Tagalog marks referential continuity in the extended domain rather than referential discontinuity.

Following this line of reasoning, one would conclude, that Tagalog takes referential discontinuity to be the expectation and one would expect the occurrence of zero anaphora to indicate a topic switch. This would be the inverse behavior compared to languages such as Hungarian or Lakhota (Balogh 2018), in which a zero morpheme indicates a continuing topic and an overt NP or pronoun is understood as a topic shift. However, we have already seen that this is not the case: although the referent of the zero is in general different from the referent of the personal pronouns preceding it, this referent does not necessarily *become* the topic. In fact, as shown in the example above, it can remain a non-topic and as

such be tracked through an extended stretch of discourse. Furthermore, the topic chain can even continue with the personal pronoun still referring to the same entity as before.

I find this behaviour rather reminiscent of languages that exhibit a fourth person, as discussed by Foley and Van Valin (1984:333). Here, two distinct pronouns exist that are both used for third person referents, traditionally labeled *proximate* and *obviative*. When two such referents occur in one sentence, one of the referents is chosen to be proximate and the other one is obviative. Consider the following example from Plains Cree and compare it to the Tagalog case:

(257) **Plains Cree (Foley and Van Valin 1984:336 citing Wolfart 1973)**

- a. *Nāpēw-∅ atim-wa wāpam-ēw ēsipwehtē-t.*  
 man-PROX dog=OBV see-DIR-3PROX CNJ-leave-3PROX  
 The man saw the dog as he [the man] left.
- b. *Nāpēw-∅ atim-wa wāpam-ēw ēsipwehtē-yit.*  
 man-PROX dog=OBV see-DIR-3PROX CNJ-leave-3OBV  
 The man saw the dog as it [the dog] left.

(258) **Tagalog (Nagaya 2006a:101)**

- a. *S(in)ipang-an ni=Adan ang=kanya-ng asawa at ito ay*  
 ⟨RLS⟩lay.with-UV<sub>an</sub> GEN=Adan NOM=3SG.DAT-LK spouse and this INV  
*nag-dalantao.*  
 AV.RLS-become.pregnant  
 Adan lay with his spouse, and this [his spouse] became pregnant.
- b. *S(in)ipang-an ni=Adan ang=kanya-ng asawa at siya*  
 ⟨RLS⟩lay.with-UV<sub>an</sub> GEN=Adan NOM=3SG.DAT-LK spouse and 3SG.NOM  
*ay nag-dalantao.*  
 INV AV.RLS-become.pregnant  
 Adan lay with his spouse, and he [Adan] became pregnant.

Changing the proximative marker *-t* on the verb to the obviative *-yit* in Cree changes the referent of the actor argument of the verb *leave*. Similarly, changing the demonstrative in the second clause in Tagalog to a personal pronoun changes the referent of the actor<sup>4</sup> argument of the verb from the spouse to Adan himself, despite this being prohibited by world knowledge.

<sup>4</sup> Actor in the sense that this argument is cross-referenced on the verb by an actor voice prefix. Semantically, this would be an undergoer.

## 6.3 Frame Semantic Modeling of Discourse Referents and Reference Tracking

In this section, I will introduce a frame semantic model developed by Balogh (2018) that is capable of modeling anaphora resolution and notions relevant to it, such as topicality and discourse coherence relations. Since the general notions of frame semantics have already been introduced in chapter 2.5, we will begin immediately with the definitions Balogh (2018) uses to extend the frame definitions by Kallmeyer and Osswald (2013). Then, we will see an example of how this model captures anaphora resolution in Hungarian using language specific constraints before applying it to Tagalog in the following section to develop the corresponding constraints for Tagalog.

In his study, Nagaya (2006b) supplies quantitative data regarding speakers' preferences in coding different types of referents in Tagalog. The next step in understanding the processes relevant to anaphora resolution is to capture these preferences in a cognitively plausible formal framework. The model introduced by Balogh (2018) is ideal for this purpose for several reasons. First, it builds on frame semantics, a formalism that is already being used by Kallmeyer and Osswald (2013) in their formalization of RRG for computer-linguistic purposes. Thus, it is compatible with the framework already introduced and used in this work. Furthermore, as described by Balogh (2018), this approach has an advantage over previous models of reference tracking in capturing phenomena such as bridging anaphora and inference based reference tracking invoking information from the immediate common ground or even world knowledge. Since Tagalog has no gender system, no switch reference system, and doesn't make use of its voice alternations in a switch function system in the classical sense, having good capabilities for describing inference-based processes can be expected to be advantageous. Finally, the very formal characteristics of this framework make it sensitive to gaps in our knowledge and can help figure out where and what kind of additional research is necessary.

### 6.3.1 Basic Definitions and Mechanisms

In her model, Balogh (2018) represents discourse on two levels. Put simply, the first component contains a frame representation of the immediate common ground (ICG) that is successively updated with the new information from each sentence of the discourse. The second component records the sentence level contributions while logging the discourse coherence relations between them.

The general common ground (GCG) is taken to be a set of constraints, coming e. g. from world knowledge, which, for simplicity, is not represented in its entirety. Rather the necessary parts are only included in representations as needed.

### 6.3.1.1 Discourse Referents

The model retains the idea of discourse referents from Discourse Representation Theory (DRT). A sentence such as

(259) **Balogh (2018:10)**

*A girl slapped a man.*

evokes three discourse referents: one for the *girl*, one for the *man*, and one for the finite verb *slapped*. They are represented as *referent-concept pairs*, i. e. as an ordered pair  $\langle r_x, f[x] \rangle$  consisting of the discourse referent  $r_x$  and a frame  $f[x]$  with a base node labeled  $x$  containing information on this discourse referent.

(260)  $\langle r_x, \text{child } \textcircled{x} \xrightarrow{\text{GENDER}} \textcircled{\text{female}} \rangle$

(261)  $\langle r_y, \text{adult } \textcircled{y} \xrightarrow{\text{GENDER}} \textcircled{\text{male}} \rangle$

(262)  $\langle r_e, \textcircled{1} \xleftarrow{\text{AG}} \textcircled{e} \xrightarrow{\text{PAT}} \textcircled{2} \rangle$   
*slap*

### 6.3.1.2 Sentence-Level Representation

Moving on to the sentence-level representations, the individual frames are unified according to the framework of Osswald and Kallmeyer (2018) (see section 2.5) to ensure correct syntactic and semantic composition. This leads to a single frame that captures the semantic content of the sentence. The discourse referents are simply collected in a set  $\mathcal{R}$ , leaving us with a preliminary version of the sentence-level representation of the form  $\langle \mathcal{R}, f \rangle$ .

(263)  $\langle \{r_x, r_y, r_e\}, \text{slap } \textcircled{e} \begin{matrix} \text{AG} \swarrow & \searrow \text{PAT} \\ \text{child } \textcircled{x} & \textcircled{y} \text{ adult} \\ \text{GEN} \downarrow & \text{GEN} \downarrow \\ \textcircled{\text{female}} & \textcircled{\text{male}} \end{matrix} \rangle$

In the next step, when unifying sentence-level representations into the main component of the ICG, it will be necessary to distinguish new and old referents. The old or anaphoric referents require resolution in the sense that the corresponding nodes must unify with nodes already present in the ICG frame. Thus, we split the

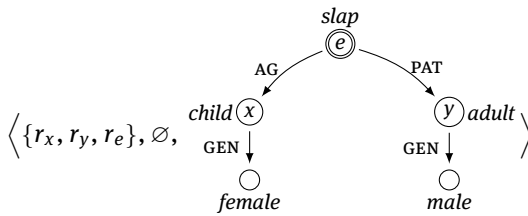


set  $\mathcal{R}$  into two sets, the set  $\mathcal{N}$  of new discourse referents and the set  $\mathcal{A}$  of anaphoric discourse referents. Clearly, the two sets are disjoint and their union is  $\mathcal{R}$ , i. e.  $\mathcal{R} = \mathcal{N} \dot{\cup} \mathcal{A}$ . For consistency, both the referent-concept pairs and the sentence-level representations are modified to ordered triples of the form  $\langle \mathcal{N}, \mathcal{A}, f \rangle$ :

(264) **referent-concept triples:**

- a.  $\langle \{r_x\}, \emptyset, \text{child } (x) \xrightarrow{\text{GENDER}} \text{female} \rangle$
- b.  $\langle \{r_y\}, \emptyset, \text{adult } (y) \xrightarrow{\text{GENDER}} \text{male} \rangle$
- c.  $\langle \{r_e\}, \emptyset, \textcircled{1} \xleftarrow{\text{AG}} \textcircled{e} \xrightarrow{\text{PAT}} \textcircled{2} \rangle$   
slap

(265) **sentence level:**



To illustrate how this would look for  $\mathcal{A} \neq \emptyset$ , let us consider a slightly modified sentence that involves a personal pronoun:

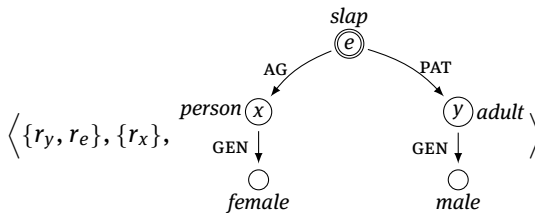
(266) She slapped a man.

Here, the pronoun *she* does not introduce a new discourse referent but rather refers to one that has already been introduced, i. e. is already present in the common ground. Thus, the relevant referent-concept triple – that of the girl – and the sentence-level representation look as follows:

(267) **referent-concept triples:**

- $\langle \emptyset, \{r_x\}, \text{person } (x) \xrightarrow{\text{GENDER}} \text{female} \rangle$

(268) **sentence level:**



### 6.3.1.3 Update Mechanism

The central component of the common ground is represented as an ordered pair  $\langle \mathcal{R}, \mathfrak{f} \rangle$ , where the set  $\mathcal{R}$  contains all the discourse referents that have been introduced to the discourse in previous moves and the frame  $\mathfrak{f}$  represents the semantic content of the previous discourse. The update mechanism can be defined recursively in the following way. We assume that the initial context  $c_0 = \langle \emptyset, \mathfrak{f}_\epsilon \rangle$ . Thus, the set of already introduced discourse referents is still empty and the ICG frame component is the trivial frame, i. e. single, fully underspecified node. Assuming now that  $c_{n-1} = \langle \mathcal{R}_{n-1}, \mathfrak{f}_{n-1} \rangle$ , the representation of the main component of the ICG after the  $(n - 1)$ th step of the discourse, is given,  $c_n$  is constructed by update with sentence  $s_n = \langle \mathcal{N}_n, \mathcal{A}_n, \mathfrak{f}_s \rangle$  as follows:

$$(269) \quad c_n = c_{n-1}[s_n] := \langle \mathcal{R}_{n-1} \cup \mathcal{N}_n, \mathfrak{f}_{n-1} \sqcup \mathfrak{f}_s \rangle$$

That is, the newly introduced discourse referents are added to the set  $\mathcal{R}_{n-1}$  and the frame representations are unified. To capture that the newly introduced referents are indeed new, i. e. not present yet in the ICG frame representation, while the anaphoric referents are, we impose the following constraints on the frame-unification process.

1. For every  $r_x \in \mathcal{A}_n$  and corresponding base-labeled node  $x$  in  $\mathfrak{f}_s$  there is a base-labeled node  $y$  in  $\mathfrak{f}_{n-1}$  such that  $x \triangleq y$  in  $\mathfrak{f}_{n-1} \sqcup \mathfrak{f}_s$ .  
In words: For every anaphoric discourse referent,  $\mathfrak{f}_{n-1}$  must contain an appropriate node that the node in  $\mathfrak{f}_s$  corresponding to this discourse referent can unify with.
2. For every  $r_x \in \mathcal{N}_n$  and corresponding base-labeled node  $x$  in  $\mathfrak{f}_s$  and for all base-labeled nodes  $y$  in  $\mathfrak{f}_{n-1}$ ,  $\neg x \triangleq y$  holds in  $\mathfrak{f} \sqcup \mathfrak{f}_{n+1}$ .  
In words: The nodes in  $\mathfrak{f}_s$  corresponding to newly introduced discourse referents do not unify with nodes already present in  $\mathfrak{f}_{n-1}$ .

As mentioned above, a second ingredient is necessary to capture the full picture of discourse: the discourse-coherence relations between the sentence-level updates. Thus, the full representation of the local discourse context takes the following form (Balogh 2018:19):

$$(270) \quad \begin{array}{l} 1. \quad c_n = (\dots((c_0[s_1])[s_2])\dots)[s_n] = \langle \mathcal{R}_n, \mathfrak{f}_n \rangle \\ 2. \quad [s_1] \xrightarrow{\text{REL}_1} [s_2] \xrightarrow{\text{REL}_2} \dots \xrightarrow{\text{REL}_{n-1}} [s_n] \end{array}$$

Since the discourse relations only feature marginally in this work, I will not go into further detail and refer to Balogh (2018) for further details. I will only remark that discourse structure need not be linear as in the example above, but there can be a hierarchical organization.

### 6.3.1.4 Topic Set

One final ingredient is still missing before we will be able to model basic anaphora resolution: the topic set. It is well documented for many languages that topicality plays an important role in anaphora resolution and, as we have seen in the previous section, Tagalog is no exception. To be able to map a personal pronoun to the correct discourse referent, it is necessary to implement the notion of *topic* in this framework.

Balogh (2018) does this by introducing an additional set  $\mathcal{T} \subset \mathcal{R}$  (sentence level:  $\mathcal{T} \subset \mathcal{N} \cup \mathcal{A}$ ) that contains the current aboutness topic. Assuming that there can only be one topic,  $\mathcal{T}$  must be either a singleton or the empty set. This per se does not exclude conjoint topics. The case  $\mathcal{T} = \emptyset$  reflects the case ofthetic judgments, i. e. topicless sentences. New discourse referents are not generally excluded from topichood although this can easily be done by introducing a simple constraint at the sentence level if necessary.

How the aboutness topic is determined is highly language dependent. English has special syntactic constructions such as left dislocation (in combination with appropriate prosody) or ‘as for’-topicalization to mark topics. In absence of these, there is a preference for subjects to be topics. Hungarian has its sentence-initial topic position, other languages, such as Japanese (Shimojo 2016), Korean (Han 1999), or Tzotzil (Aissen 1987:17) have a dedicated morphological topic marker.

### 6.3.1.5 Interim Summary

Before we move on to an example of the entire framework in action, I would like to briefly summarize most important ingredients of the formalism.

---

#### Overview: Discourse Modeling in Frames

- **referent-concept triples:**
    - a.  $\langle \{r_x\}, \emptyset, f[x] \rangle$  (new referent)
    - b.  $\langle \emptyset, \{r_x\}, f[x] \rangle$  (anaphoric referent)
  - **sentence-level representation:** new and anaphoric referents are collected in separate sets; if an aboutness topic is present, it is represented in the (then non-empty) set  $\mathcal{T}$ , sentence-level frame representation through syntactic and semantic composition via frame unification.
    - a.  $\langle \mathcal{T}, \mathcal{N}, \mathcal{A}, f_s \rangle$  (explicit topic)
    - b.  $\langle \emptyset, \mathcal{N}, \mathcal{A}, f_s \rangle$  (topicless sentence)
  - **Representation of local discourse context / ICG:** One level to track the discourse referents, the current topic and the frame representation of the discourse; second level to collect the sentence representations and their discourse coherence relations.
    - a.  $c_n = (\dots ((c_0[s_1])[s_2]) \dots [s_n]) = \langle \mathcal{R}_n, f_n \rangle$
    - b.  $[s_1] \xrightarrow{\text{REL}_1} [s_2] \xrightarrow{\text{REL}_2} \dots \xrightarrow{\text{REL}_{n-1}} [s_n]$
-

### 6.3.2 Example: Basic Anaphora Resolution in Hungarian

Let us revisit the example (238) from Balogh (2018), which we have already discussed above. The example and its variations are repeated here as (271). They are based on a narration elicited using the first volume of the *Frog Stories* (Mayer 1967).

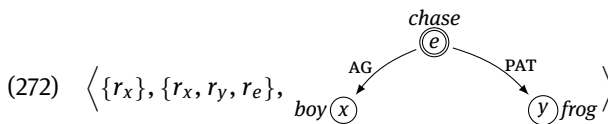
(271) **Balogh (2018:34)**

*A kisfiú kergette a békát,*  
the boy chased the frog.ACC

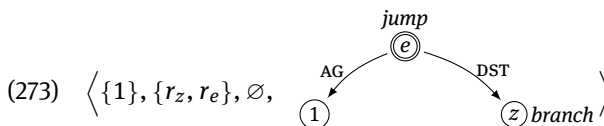
[The boy]<sup>TOP</sup> chased the frog,

- a. *aztán elugrott egy faágra.*  
and.then jumped.away a branch.SUBL  
and then he (=the boy) jumped away to a branch.
- b. # *aztán a kisfiú elugrott egy faágra.*  
and.then the boy jumped.away a branch.SUBL  
and then the boy jumped away to a branch.
- c. *aztán a béka elugrott egy faágra.*  
and.then the frog jumped.away a branch.SUBL  
and then the frog jumped away to a branch.
- d. *aztán az elugrott egy faágra.*  
and.then that jumped.away a branch.SUBL  
and then that one (=the frog) jumped away to a branch.

These are sufficient to demonstrate the basics of the formalism. Assume we start with the initial context  $\langle \emptyset, \emptyset, \emptyset, f_e \rangle$ . After updating with the first sentence, the local discourse context can be represented as follows:

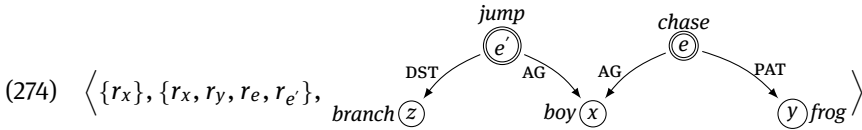


Let us begin with the continuation (271a), in which the subject is zero marked and interpreted as coreferential with the boy from the first sentence. At the sentence level, it is represented as follows:

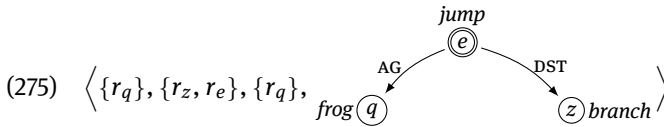


Since the subject is zero marked, the frame representation contains an uninstantiated agent argument. A language specific constraint now tells us that the node

corresponding to the zero marked argument must unify with the node corresponding to the topic referent in the ICG frame:



Next, let us turn to the case (271c), in which the frog appears in the designated topic position of the second sentence. In this case we get a sentence level representation with a non-empty topic set:



In this case, Balogh (2018) formulates another language specific rule:

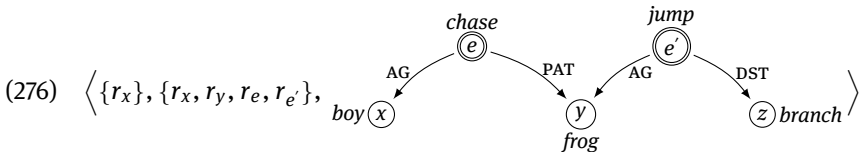
---

**Overt topic marking rule for Hungarian (Balogh 2018:36)**

In case  $\mathcal{T}_j$  in  $c$  and  $\mathcal{T}_k$  in  $s$  are both non-empty, then

- a.  $c[s] = \langle \mathcal{T}_k, \mathcal{R}, f_c \sqcup f_s \rangle$ , i. e. the referent marked as topic last is the current topic in the resulting context.
  - b.  $\mathcal{T}_i \neq \mathcal{T}_k$ , i. e. the overtly topic marked topic of  $s$  cannot be the same as the previous topic already recorded in  $\mathcal{T}_i$ .
- 

This leads us to the correct unification:



The second part of the overt topic marking rule also correctly rules out (271b) and analogously produces the correct result for (271d). Let us conclude by summarizing the language specific constraints for Hungarian:

---

**Language Specific Constraints for Anaphora Resolution in Hungarian**

1. **Zero Marking:** If  $s$  contains a zero-marked argument, then the node in  $f_s$  corresponding to this argument must unify with the node corresponding to the topic referent in the context frame  $f_c$ .
  2. **Overt Topic Marking Rule:** If  $\mathcal{T}_j$  in  $c$  and  $\mathcal{T}_k$  in  $s$  are both non-empty, then
    - (a)  $c[s] = \langle \mathcal{T}_k, \mathcal{R}, f_c \sqcup f_s \rangle$ , i. e. the referent marked as topic last is the current topic in the resulting context.
    - (b)  $\mathcal{T}_i \neq \mathcal{T}_k$ , i. e. the overtly marked topic of  $s$  cannot be the same as the previous topic already recorded in  $\mathcal{T}_i$ .
-

In the following section we will turn to Tagalog and see how this formalism can be applied to capture anaphora resolution and we will develop the necessary language specific constraints.

## 6.4 Formulation of Language-Specific Constraints for Tagalog

Let us begin this section by re-iterating the findings on Tagalog reference tracking that need to be captured and then step by step develop and formulate the constraints to tailor the frame-account to Tagalog.

One of the main findings described in the 6.2 was the unusual situation that topic continuity is signaled by the use of personal pronouns. As a result, a topic chain is realized in Tagalog as a pronoun chain. Second, demonstrative pronouns and zero anaphora are used for secondary topics, i. e. presupposed non-topics, so the current topic is excluded as a potential referent.

The expectation would be that anaphora resolution for personal pronouns in Tagalog should work similarly to the resolution of zero-marked arguments in Hungarian. In the Hungarian example, it was assumed that the referent of the zero-marked argument was previously mentioned and overtly syntactically marked as topic. As we will see later, this is not always the case in Tagalog. Thus, we will consider the coding of a referent by a personal pronoun to be in itself a form of topic-marking:

---

### Resolution of Personal Pronouns I

If a sentence  $s$  contains a third person personal pronoun referring to a referent  $r$ , then  $\mathcal{T} = \{r\}$  in the sentence representation as well as in  $c[s]$  after the update process..

---

Now, we can attempt to rewrite the first constraint from Hungarian in the following way:

---

### Resolution of Personal Pronouns II

If a sentence  $s$  contains a third person personal pronoun and  $\mathcal{T} \neq \emptyset$  in the context  $c$ , then the node in  $f_s$  corresponding to this argument must unify with the node corresponding to the topic referent in the context frame  $f_c$ .

---

For simplicity, let us just focus for now on the case  $\mathcal{T} \neq \emptyset$  as we turn to demonstratives and zero anaphora. As we have seen already, demonstratives and zero anaphora don't just refer to 'non-topics' once but can track a sort of secondary topic sometimes across several clauses. Thus, I propose introducing an additional

set  $\tilde{\mathcal{T}}$  to keep track of such referents.

---

#### Definition Update

An additional set  $\tilde{\mathcal{T}}$  is added to the ordered tuples at the sentence level and in the main component of the ICG. They now have the following forms:

- sentence level:  $\langle \mathcal{T}, \tilde{\mathcal{T}}, \mathcal{N}, \mathcal{A}, f_s \rangle$
- ICG level:  $\langle \mathcal{T}, \tilde{\mathcal{T}}, \mathcal{R}, f_c \rangle$

$\tilde{\mathcal{T}}$  can be either a singleton or the empty set and it must be disjoint from  $\mathcal{T}$ . If  $r \in \tilde{\mathcal{T}} \neq \emptyset$ , then  $r$  is called a secondary topic.

---

The frame components of the sentence-level and ICG representations remain unchanged as do the sets  $\mathcal{T}$ ,  $\mathcal{N}$ ,  $\mathcal{A}$ , and  $\mathcal{R}$ . The only new ingredient is the set  $\tilde{\mathcal{T}}$ , that we will use to track the secondary topic just as  $\mathcal{T}$  is used to track the topic. It is subject to the same requirement as  $\mathcal{T}$  in that it can contain no more than one referent. Furthermore, we require  $\tilde{\mathcal{T}} \cap \mathcal{T} = \emptyset$ , or in other words, that a referent cannot simultaneously be a topic and a secondary topic.

We have already seen the similarity to fourth-person systems, which could be treated the same way in this formalism. Furthermore, Dutch (Comrie 1999:345) and German (Foley and Van Valin 1984:395) also occasionally use demonstratives instead of personal pronouns to refer to different third person referents. This, too, could be modeled in this way.

Now that we have added the set  $\tilde{\mathcal{T}}$ , we have established the necessary infrastructure to formulate the constraints to capture the use of demonstratives and zeros:

---

#### Resolution of Demonstrative Pronouns and Zero Anaphora II

If a sentence  $s$  contains a demonstrative pronoun or a zero anaphor referring to a referent  $r$ , then

- $\tilde{\mathcal{T}} = \{r\}$  must hold at the sentence level as well as after the update process in  $c[s]$ .
  - if  $\tilde{\mathcal{T}} \neq \emptyset$  in  $c$ , then the node in  $f_s$  corresponding to this argument must unify with the node corresponding to the subordinate topic in the context frame  $f_c$ .
- 

Intuitively, one might be inclined to add a constraint generally forbidding referents coded by demonstratives or zero from being interpreted as referring to a referent in the topic set  $\mathcal{T}$  or referents coded by a personal pronoun from being interpreted as referring to an element of  $\tilde{\mathcal{T}}$ .

However, there are cases, such as the example below, in which a referent coded by a demonstrative or zero in one clause can be coded by a personal pronoun in the next:

## (277) 2016-4-Frog2

- a. *Puwede=ba akin=na=lang ito-ng isa-ng palaka?*  
 can=Q 1SG.DAT=now=only DEM.PROX.NOM-LK one-LK frog  
 Can just this one frog be mine?
- b. *I-u-uwi=ko=ito sa=bahay*  
 UV<sub>i</sub>-IPFV~take.home=1SG.GEN=DEM.PROX.NOM DAT=house  
 I will take it home
- c. *at a~alaga-an=ko* ∅  
 and IPFV~take.care-UV<sub>an</sub>=1SG.GEN  
 and take care of it.
- d. *Ma-gi~ging alaga=ko=siya.*  
 STAT-IPFV~become pet=1SG.GEN=1SG.NOM  
 He will be my pet.

Thus, this constraint should be weakened to only forbid co-reference of a personal pronoun and a demonstrative/zero *within the same clause*<sup>5</sup>:

**Resolution of Demonstrative Pronouns and Zero Anaphora II**

If a sentence *s* contains a demonstrative pronoun or a zero anaphor referring to a referent *r* as well as a personal pronoun referring to a referent *r'* (in other words  $\mathcal{T} \neq \emptyset \wedge \tilde{\mathcal{T}} \neq \emptyset$  at the sentence level), then the corresponding nodes cannot unify in the update process.

Equipped with the constraints formulated so far, we can begin to develop the frame-based representation of the following example:

- (278) **Context:** Frustrated by their unsuccessful attempts to catch the frog, the boy and the dog return home leaving the frog alone in the forest.
- a. *Na-lungkot ang=palaka<sub>i</sub>.*  
 RLS.STAT-sad NOM=frog  
 The frog was sad.
- b. *H(in)anap-∅=niya<sub>i</sub> ang=mga=yapak<sub>j</sub> at...*  
 ⟨RLS⟩find-UV<sub>in</sub>=3SG.GEN NOM=PL=footprints and  
 He found footprints and...
- c. *...s⟨in⟩und-an=niya<sub>i</sub>=ito<sub>j</sub>.*  
 follow.UV<sub>an</sub>=3SG.GEN=this.NOM  
 ...he followed this.

<sup>5</sup> Compare this constraint to the somewhat stronger Principle B of Binding Theory (Chomsky 1981:188), “[a] pronominal is free in its governing category”.



For simplicity, let us assume (as in the Hungarian example), that we are starting with the trivial context<sup>6</sup>  $c_0 = \langle \emptyset, \emptyset, \emptyset, f_\epsilon \rangle$ . The first sentence then introduces two new discourse referents: the frog  $f$  and a ‘being sad’-event  $e_1$ , giving us the following process for the first ICG update:

$$(279) \quad c_1 = c_0[s_1] = c_0 \left[ \left\langle \emptyset, \emptyset, \{f, e\}, \emptyset, \text{sad}(e_1) \xrightarrow{\text{EXP}} (f) \text{frog} \right\rangle \right] \\ = \left\langle \emptyset, \emptyset, \{f, e\}, \text{sad}(e_1) \xrightarrow{\text{EXP}} (f) \text{frog} \right\rangle$$

The second sentence of our example introduces two more new discourse referents: a finding event  $e_2$  and footprints  $p$  as the undergoer argument. The actor argument is filled by a personal pronoun  $x$ , thus an anaphoric referent. The update process, thus, looks as follows:

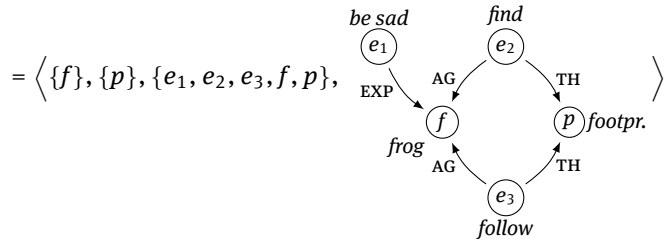
$$(280) \quad c_2 = c_1 \left[ \left\langle \{x\}, \emptyset, \{x\}, \{p, e_2\}, \right. \right. \\ \left. \left. \begin{array}{c} \text{find} \\ (e_2) \\ \swarrow \text{AG} \quad \searrow \text{TH} \\ (x) \quad (p) \\ \text{animate} \quad \text{footprints} \end{array} \right\rangle \right] \\ = \left\langle \{f\}, \emptyset, \{e_1, e_2, f, p\}, \right. \\ \left. \begin{array}{c} \text{be sad} \quad \text{find} \\ (e_1) \quad (e_2) \\ \text{EXP} \quad \swarrow \text{AG} \quad \searrow \text{TH} \\ (f) \quad (p) \\ \text{frog} \quad \text{footprints} \end{array} \right\rangle$$

The node in  $f_{s_2}$  corresponding to the personal pronoun, i. e. the actor node, must unify with another node in the ICG frame  $f_{c_1}$  and the discourse referent identified with an element of  $\mathcal{R} = \{f, e\}$  in  $c_1$ . Since the verb *find* requires an animate actor argument, unification with  $e$  is not possible, leaving us only with  $f$ . Thus, the node in  $f_{s_2}$  corresponding to the personal pronoun unifies with the *frog*-node in the update process. Following our first language specific rule for Tagalog, the referent  $f$  is copied to  $\mathcal{T}$  in  $c_2$  since it has been coded by a personal pronoun.

In addition to another pronoun, the final sentence of this example features the first demonstrative pronoun and it introduces a *following* event  $e_3$  as a new discourse referent. Thus, we have two anaphoric referents coded by a personal pronoun ( $y$ ) and a demonstrative ( $z$ ). The update process is then as follows:

$$(281) \quad c_3 = c_2 \left[ \left\langle \{y\}, \{z\}, \{e_3\}, \{y, z\}, \right. \right. \\ \left. \left. \begin{array}{c} \text{entity} \quad \text{follow} \quad \text{entity} \\ (y) \quad (e_3) \quad (z) \\ \swarrow \text{AG} \quad \searrow \text{TH} \end{array} \right\rangle \right]$$

<sup>6</sup> In reality, the frog has already been introduced and is present in the ICG representation. The speaker chose a V-initial sentence rather than a presentational construction, which suggests that the frog mentioned here is the one already present in the ICG. To avoid the complexity of explicitly modeling this, we will just pretend the frog is a new referent.



Due to the selectional restrictions of the verb *follow*, the node  $z$  in  $f_s$  cannot unify with  $e_1$  or  $e_2$  since they are not entities. This leaves only the nodes  $f$  and  $p$ . The previously formulated constraint rules out  $f$ , which leaves only  $p$  leading us to the correct interpretation.

To summarize, we have established the following language specific constraints accounting for correct anaphora resolution on Tagalog:

---

#### Language Specific Constraints on Anaphora Resolution

1. If a sentence  $s$  contains a third-person personal pronoun referring to a referent  $r$ , then  $\mathcal{T} = \{r\}$  in  $s$  and after the update in  $c[s]$ .
  2. If a sentence  $s$  contains a demonstrative or zero pronoun referring to a referent  $r$ , then  $\tilde{\mathcal{T}} = \{r\}$  in  $s$  and after the update in  $c[s]$ .
  3. If a sentence  $s$  contains a third-person personal pronoun and  $\mathcal{T} \neq \emptyset$  in the context  $c$ , then the node in  $f_s$  corresponding to this argument unifies with the node corresponding to the topic referent in the context frame  $f_c$ .
  4. If a sentence  $s$  contains a demonstrative or zero pronoun and  $\tilde{\mathcal{T}} \neq \emptyset$  in  $c$ , then the node corresponding to the referent of the demonstrative or zero in  $f_s$  must unify with the node corresponding to the secondary topic in  $f_c$ .
  5. If  $\emptyset \neq \mathcal{T} = \{r\}$  and  $\emptyset \neq \tilde{\mathcal{T}} = \{r'\}$ , then the nodes corresponding to  $r$  and  $r'$  cannot unify in the update process.
- 

Let us now move on to the question of how the topic and secondary topic are established at the beginning of a topic chain.

## 6.5 Case Study: Topic Shifts and *ay*-Inversion

While formulating the language-specific constraints for Tagalog, we already hinted that there is reason to believe that topic marking via *ay*-inversion or left-dislocation does not play the same role in Tagalog as topic marking does in Hungarian. In the second part of this chapter, we will attempt to quantify this in a case study based on the *Frog Story* and *Vater & Sohn* narratives we elicited in Manila.

A central point Nagaya (2006b) makes is that topic continuity is signaled in Tagalog by using personal pronouns, quite as zero marking is used for this purpose

in languages such as Hungarian or Japanese. We have already seen examples of such topic/pronoun chains and how they can be treated within the frame-based model developed by Balogh (2018). So far, however, we have not really discussed how speakers initiate such pronoun chains and establish which referent is the current pronoun topic. In Japanese (Shimojo 2016) and Hungarian (Balogh 2018), this is one function of their topic-marking constructions. We have discussed the Hungarian-specific constraints Balogh (2018) uses that reflect this, and seen an explicit example in (271): following a topic marked expression, subsequent zeros are preferably interpreted as referring to the same referent. If another RP appears in the topic position, this indicates a topic shift. Given that Tagalog *ay*-inversion (and left-dislocation) is often taken to be a topic-marking construction, one might speculate that it establishes pronoun topics in a similar way topic marking in Japanese or Hungarian does for their zero-coded topic chains. Thus, one would expect:

---

**Hypothesis**

- a.) Following an *ay*-inversion, the referent of third person personal pronouns will be coreferential with an *ay*-fronted argument.
  - b.) When a new topic chain begins, the new referent of third person personal pronouns will be indicated via *ay*-inversion.
- 

We will see, however, that our data supports neither of these hypotheses. Instead I will argue that *ay*-topics and pronoun topics do not coincide and we are, in fact, dealing with two distinct topic notions. In order to investigate these hypotheses, I conducted a case study using the narratives we elicited during our fieldwork in the Philippines using picture stories, specifically the *Frog Stories* (Mayer 1967; Mayer 1969; Mayer 1971) and the *Vater & Sohn* (Ohser 2016) stories. For this and for future investigations, the glossed data<sup>7</sup> were annotated using a combination of three annotation schemes:

1. RefInd (Schiborr, Schnell, and Thiele 2018),
2. GRAID (Haig and Schnell 2014), and
3. RefLex (Riester and Baumann 2017),

which I will explain in more detail below. These annotations made it possible to search the data for references to any of the referents that occurred in the stories as well as the anaphoric device that was used and several other properties. I will then go into some quantitative results of the case study and see how our hypotheses fared

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<sup>7</sup> Thanks to Corinna Langer for her tireless glossing of our data using the Linguist's Toolbox.

and look at some other strategies that speakers use to clarify the referents of third person anaphoric devices. Finally, we will formulate some tentative conclusions from this case study regarding the modelling of reference tracking in Tagalog, before we get into the nuts and bolts of this topic in the section 6.3.

### 6.5.1 Data Annotation

The goal of this section is to introduce the annotation scheme that was applied to the data for the sake of case study. The basic annotations were made on two tiers:

(282) *Nakita ng=palaka ang=bata-ng lalaki.*  
 003-np.d:a 001-np.h:u\*  
 r-given r-given

The frog saw the boy.

the first containing the RefInd (orange) and GRAID (red) annotation identifying the referent, as well as the properties and function of the referring expression within the sentence; the second tier was used for the RefLex (green) tag. More details on these three schemes as well as the minor modifications that were made follow below.

In addition, pronoun chains were identified and annotated according to how the referent of the personal pronoun was introduced. Finally, dislocated and *ay*-inverted topics were annotated to indicate whether the referent constitutes a shifted topic, a continuing topic or neither.

#### 6.5.1.1 Referent Indexing in Natural-Language Discourse

**Referent Indexing in Natural-Language Discourse**, or RefIND for short, forms the first component of our annotations. The basic idea is quite simple: Each referent that a speaker introduces receives a three-digit number, its *referent index*, which identifies it uniquely. Non-referential uses of nominal expressions such as ‘a doctor’ in the English sentence

(283) **Schiborr, Schnell, and Thiele (2018:6)**  
*He is a doctor.*

do not receive an index, since it neither takes up nor introduces a trackable entity to the discourse, but rather expresses a property of the referent of the pronoun *he*. Just as Schiborr, Schnell, and Thiele (2018) found for their corpus, most of the referents indexed in our data set were people or concrete entities although spatial and temporal entities, states-of-affairs, and mental states also occurred. In

practice, when determining whether an expression constituted a trackable referent or not, a very important (if not the most important) criterion mentioned in the annotation guidelines was the (possibility to) use of a pro-form to take up the same referent later in the discourse.

This does not mean that nominal predicates never receive a RefInd index. It was common in our data, for nouns coding central characters to be used in predicate position or even introduced this way. We already discussed the following example in the context of reversed *ang*-inversion:

## (284) 2016-6-Frog1

*Ang=na-huli-∅=niya*                      *ay* [*ang=alaga=niya-ng*  
 NOM=ABIL.RLS-catch-UV<sub>in</sub>=3SG.GEN INV NOM=pet=3SG.GEN-LK  
*aso=niya*]<sup>PREL</sup>.  
 dog

What he caught was his pet dog.

Here, the boy's dog appears as the predicate of the sentence and it would seem unintuitive not to label it with the corresponding index. In the following example, an *ang*-inversion is used to introduce a new referent, the owl:

## (285) 2016-4-Frog2

**Context:** The boy, Pedro, is looking for his frog in the forest. He sees a hole in the side of a tree and climbs up to look inside. As he calls for his frog, he is startled and falls back down.

*“Si Pedro, nakita na naman ng butas sa puno. Umakyat siya sa puno. [...] Pagsilip niya, tinatawag niya ‘Palakang Tetot! Palakang Tetot! Lumabas ka diyan! Nagulat na lang si Pedro at sa pagkagulat niya nahulog siya sa puno.’”*

[*Isa-ng malaki-ng kuwago*]<sup>PREL</sup> *ang=l(um)abas*                      *sa=puno*.  
 one-LK big-LK owl                      NOM=(AV.RLS)come.out DAT=tree

A big owl came out of the tree.

The unexpectedness of this event licenses the *ang*-inversion (Latrouite 2020), in which the owl is the predicate. Both the dog and the owl are trackable referents, which are taken up in the subsequent discourse. Rather than expressing class membership as in example (283), these nominal predicates are specificational (284) and identificational (285), which is reflected in different logical structures in RRG (Van Valin 2005:48).

When several referents previously introduced referents are referred to as a group, e. g. using a plural pronoun, this counts as a new referent and is assigned a new number. For example, in the *Frog Stories*, the boy, the dog and the frog are

assigned the numbers 001, 002, and 003, respectively. When speakers referred to the three of them as a group by using a third person plural pronoun, this group referent was assigned the referent index 006. This is referred to as *split antecedence*. Its counterpart, *partial co-reference*, occurred in our data as well. Many speakers interpreted the father and son in the *Vater & Sohn* stories as a grandfather with his grandson and introduced them collectively as *mag-lolo* (derived from *lolo* ‘grandfather’), a Tagalog term which refers to a grandfather with a grandchild, here indexed as 056. Later speakers singled out the individual referents, the boy, index 052, and his grandfather, index 051.

Furthermore, a *list of referents* is created which lists all RefIND-numbers that were assigned in the annotation process together with a label identifying the referent, a brief description if necessary, the referents semantic/ontological class, its relation to other discourse referents, as well as any comments. Tables 6.1 and 6.2 show lists of the recurring referents in our data set.

In this case study the number of stories told by consultants was limited and there were many recurring characters. To make it easier to study how each of the referents was coded by different speakers, I divided the numbers from 001–999 into several intervals to make it easier to distinguish different referents at a glance:

- 001 – 050** Recurring referents of the *Frog Stories*
- 051 – 100** Recurring referents of the *Vater & Sohn* stories
- 100 – 600** Other referents of the *Frog Stories*
- 601 – 999** Other referents of the *Vater & Sohn* stories

Furthermore, I consistently assigned recurring participants, i. e. the protagonists of the stories the same indices across all speakers. I did not do this for the ‘non-protagonist’ referents, for several reasons: First, the protagonists were mentioned by all speakers whereas some of the other elements of the story were ignored by some speakers and regarded as non-relevant. Second, some of the referents were simply different, e. g. when the speaker referred to themselves or to the other consultant they were telling the story to. To some extent this also applied to other referents directly related to the story, such as the place of the story, which some took to be in the Philippines, others in North America; similarly, the body of water where the boy is fishing was identified as a pond, a lake, a stream, or a river by different consultants. Thus, it seemed appropriate to assign different RefInd-numbers for these non-central referents. An overview of the recurring referents with constant referent indices across all our speakers can be found in Tables 6.1 and 6.2.

Similar lists were appended to each annotated story containing a complete list of RefInd indices that were assigned in that story, a label identifying each referent, a brief description if necessary, the referents semantic/ontological class, its relation to other discourse referents, as well as any comments. The RefInd

guidelines provide three relations to describe the relationships between referents: set member of, includes, and part-whole of. In terms of semantic/ontological categories, Schiborr, Schnell, and Thiele (2018:15) list the following:

**human** human beings and anthropomorphized non-human beings

**animate** not anthropomorphized animals

**inanimate** inanimate physical objects

**body part**

**mass** non-individuable masses like water

**location** description physical locations, places and areas

**time** points in time or periods of time

**abstract** emotions, thoughts, speech, states-of-affairs

Classifying referents according to these categories was generally straightforward. As shown in Table 6.1, the animal protagonists of the *Frog Stories* were all classified as *human*, i. e. as anthropomorphized non-human beings. This was done for several reasons. First, the animals are clearly depicted in an anthropomorphized way, showing human facial expressions to indicate emotions such as sadness and surprise and reacting to the unfolding events in ways more complex than one would expect from an animal (particularly the frog). Second, it is clear that our speakers reflected these anthropomorphized characteristics into their stories by describing the animals' emotional states, inner monologues and even ascribing the capability to deliberately deceive (e. g. the turtle playing dead to secretly steal the boy's fishing rod while his back is turned). Finally, there even appear to be some grammatical reflexes of the animals' anthropomorphized status: some speakers used the case markers *si/ni/kay* instead of *ang/ng/sa* in combination with the animals, saying e. g. *si=palaka* instead of *ang=palaka* for 'NOM=frog'. This set of case markers is normally reserved for proper names, kinship terms (e. g. *tatay* 'father') and certain occupations (e. g. *doktor* 'doctor') Schachter and Otnes (1972:94), thus in a sense putting the animals on par with humans on the morphological level.

Note that as explained above, the different subsets of the *Frog Stories*' protagonists each have their own RefInd-number. This was less relevant for the *Vater & Sohn* stories, since the only recurring plural referent was the boy and his father, sometimes taken to be a boy and his grandfather.

### 6.5.1.2 GRAID

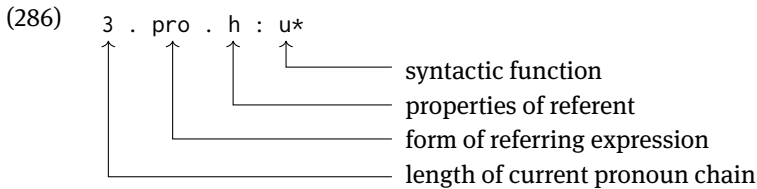
The next element of the first annotation tier captured **Grammatical Relations and Animacy in Discourse**, GRAID for short. These comprise a set of glosses that were developed "to facilitate cross-corpus research in language typology" (Haig and Schnell 2014:2). The main goal of Haig and Schnell (2014) was to investigate how





referring expressions are realized, which is why they receive the most detailed annotations, predicates and other categories are less elaborate. I restricted the use of GRAID-glosses mostly to referring expressions, predicates when relevant, and clause boundaries, since, in other cases, the regular morphological glosses are sufficient for our purposes. More detailed GRAID-annotations can always be added at a later time.

However, not all of the glosses described in the manual (Haig and Schnell 2014) are relevant for Tagalog and others were more useful after slight modifications, which I will discuss in this section. A typical GRAID gloss in our data looks as follows:



Although aligned with a single word, it targets an entire referring expression capturing the form of the referring expression, animacy properties of the referent and its syntactic function. Since we are interested in pronoun chains and their lengths, I added an additional component at the beginning of the gloss indicating the length of the current pronoun chain. Table 6.3 shows an overview of the GRAID-glosses used for referring expressions. Let us now have a closer look at the components of the glosses.

#### 6.5.1.2.1 Length of Current Pronoun Chain

As mentioned above, I added this annotation component to simplify the task of finding pronoun chains and determining their length. It is only present for personal pronouns, demonstratives, and zero anaphora. The number indicates how many consecutive times the current referent has been referred to by this anaphoric device. If the same referent was taken up using a different anaphoric device or the same anaphoric device was used for a different referent, the number is reset.

#### 6.5.1.2.2 Form of Referring Expression

The GRAID manual makes a quite fine grained distinction between different types of referring expressions, not all of which are present in Tagalog. For example, free pronouns (*pro*), ‘weak’ clitic pronouns (*=pro*) and pronominal affixes (*-pro*) are distinguished, a distinction that is not particularly useful in Tagalog where

clitic pronouns are the norm and ‘free’ pronouns only occur in special syntactic circumstances, e. g. *ay*-inversion. On the other hand, GRAID provides no separate gloss for demonstratives, which would be important for research on Tagalog. Thus, I used the following glosses:

**np** noun phrase, i. e. in RRG-terms an RP

**np\*** RP with clausal sub-constituent, i. e. voice marked verb (+ arguments)

**pro** personal pronoun (clitic or free)

**dem** demonstrative pronoun

**∅** zero anaphora

The gloss *pro* was simply used for all personal pronouns, regardless of whether they were free or clitics. Demonstratives would regularly be glossed as *other* in the GRAID system, so I introduced the gloss *dem*.

As we have seen, a verb with its arguments can be used as a referring expression in Tagalog by simply adding a case marker. This is commonly seen in *ang*-inversions, reversed or regular, such as (284), where the verb *na-huli-∅* ‘ABIL.RLS-catch-UV<sub>in</sub>’ together with its actor argument *niya* ‘3SG.GEN’ is turned into a referring expression using the case marker *ang*: *ang=na-huli=niya* ‘what he caught’. Latrouite and Van Valin (2020) argue that this type of RP contains an RP-internal CLAUSE-constituent, making it a bit more complex in structure than a ‘simple’ RP. For this reason, I introduced the gloss *np\** to use in place of *np*, which also makes it easier to retrieve *ang*-inversions from the data.

Since by their very nature, zero anaphora are not represented in the transcripts of the texts, consistent decisions need to be made regarding when to posit a zero and when not. Here, the GRAID manual provides three criteria:

1. The non-expressed argument must be licensed by the verb.
2. If a zero is posited, it must refer to a discourse-retrievable entity.
3. It should be possible to substitute an overt form for the zero.

To see the second criterion in action, consider the sentence:

(287) **Haig and Schnell (2014:10)**

*We’ll find a restaurant and eat there.*

Here, no zero is posited for the undergoer argument of *eat*, since it is used as an activity here and there is no discourse-retrievable entity that is meant to be the undergoer. The *upang/para*-clauses discussed on pages 201–202 are a nice example for the third criterion. Since the actor can be realized by an overt pronoun in Tagalog, one would posit a zero if it is absent. In such cases they are often translated using a purpose clause in English, in which the actor is *obligatorily*

deleted in co-reference with the matrix-clause actor. Thus, in English one would *not* posit a zero.

### 6.5.1.2.3 Properties of Referent

This group comprises four glosses specifying animacy properties of the referents, which has been argued to be a relevant category for Tagalog morphosyntax. An *h* is used for human referents and a *d* for anthropomorphized referents, or more specifically for non-human referents “capable of speech and self reference” (Haig and Schnell 2014:12). As mentioned above, the animal protagonists of the *Frog Stories* were depicted in an anthropomorphized way. Most speakers referenced the emotional state of one of the animals at some point; some even portrayed them as capable of speech, deliberate deception, or at least relayed their thought processes as in the following example:

(288) 2016-12-Frog1

*Siguro, 'to-ng palaka, nag-i-isip=din,*  
 maybe DEM.PROX.NOM-LK frog AV.RLS-IPFV~think=also  
 “*Bakit kaya hindi=na=ako h(in)uli-∅ ni=Patrick?*”  
 why so NEG=NOW=1SG.NOM (RLS)catch-UV<sub>in</sub> GEN=Patrick  
 Maybe, this frog is thinking, ‘So, why didn’t Patrick catch me?’

Here, the speaker is describing the frog’s thoughts after the boy, whom he named *Patrick*, has given up on catching him. Although the frog does not speak, the frog clearly refers to himself using the pronoun *ako* ‘1SG.NOM’ and thus fulfills the criterion for the gloss *d*.

First and second person referents were used mostly by the speakers to refer to themselves and the consultant they were telling the story to and in reported speech by the boy in the *Frog Stories* making it unnecessary to additionally gloss these referents as human. The only exception was when the boy was talking to one of his pets addressing them with a second person pronoun. Nevertheless, I omitted the gloss *d* here, which I used consistently for the animals in the *Frog Stories* otherwise.

### 6.5.1.2.4 Syntactic Function

The standard GRAID glosses for major syntactic functions include *s*, *a*, and *p* for intransitive subject, transitive subject, and transitive object respectively. Additionally with *ncs* GRAID provides a gloss for non-canonical subjects such as the dative subject in Icelandic. Despite *a* and *p* being reminiscent of the semantic roles AGENT and PATIENT, Haig and Schnell (2014:13) emphasize that they are interested in

marking the grammatical function and not so much semantic macroroles, thus ‘A and P are those arguments of a transitive verb that receive the same formal coding as the AGENT and PATIENT of a primary transitive verb denoting a prototypical transitive event (e. g. English *kill*, *smash*) in the language concerned.’ This is admittedly sufficient for most languages, but not well suited for the symmetrical voice system of Philippine languages: to identify which argument of a transitive verb receives the same formal coding as the AGENT and PATIENT of a verb such as *kill*, one would have to select either actor or undergoer voice as a basis for comparison, which would not do the voice system justice. Thus I opted to deviate from the GRAID-guidelines and annotate the macroroles ‘actor’ and ‘undergoer’ instead of grammatical functions and used an asterisk to indicate whether the argument was *ang*-marked. Beyond that, I held on to the other glosses included in GRAID resulting in the following annotations for arguments:

**s** intransitive subject

**a(\*)** transitive (*ang*-marked) actor

**u(\*)** transitive (*ang*-marked) undergoer

**g(\*)** (*ang*-marked) goal argument

**l(\*)** (*ang*-marked) locative argument of verbs of motion

The remaining function glosses are fairly straightforward: *voc* for vocatives, e. g. when the consultants (or story referents) addressed each other, *poss* for possessors, *appos* for appositional expressions and *dt* for dislocated topics to which I added *at* for *ay*-fronted topics (with overt inversion marker *ay*) and *pred* for nominals that were used as predicates since this does not involve an actual verbal element or copula in Tagalog.

#### 6.5.1.2.5 Clause Boundaries

Finally, GRAID offers a set of glosses to mark boundaries and properties of clauses. The beginning of a main clause is marked using *##*, the beginning of a dependent clause by *#*. If a main clause begins with a dependent clause, or a dependent clause is center-embedded in a main clause, then its right boundary is marked by *%*. Additional details of the clause can be added as well: *ds* for clauses rendering direct speech, *neg* for negative polarity, and *cc* (complement clause), *ac* (adverbial clause), and *rc* (relative clause) to specify the clause type. Table 6.4 provides an overview of the meaning and structure of these glosses.

#### 6.5.1.3 RefLex

The RefLex system provides a very fine-grained way of annotating various degrees of givenness on the referential and the lexical level. A detailed description can be

**Tab. 6.4:** Overview of the GRAID-glosses used to mark clause boundaries

clause level	direct speech	–	clause type	.	polarity
## main	∅		∅ unspecified	∅	affirmative
# dependent	ds direct speech		cc complement clause	neg	negative
			ac adverbial clause		
			rc relative clause		
%	end of dependent clause if it does not coincide with end of main clause				

found in the manual (Riester and Baumann 2017). Here, I will only mention the tags that were actually used in annotating the data since a detailed introduction to the entire system would be beyond the scope of this work.

For me, the relevant factor was whether or not the *referent* was given and not so much whether the *lexical* item used to refer to it was given or not. Thus, I only used the annotations for referential givenness, which all begin with the *r*-prefix. An overview of all *r*-tags in the RefLex system is shown in Figure 6.2 in the form of a decision tree, which nicely illustrates how the tags were assigned to each of the referents. I will only describe those tags in detail that actually occurred in the data.

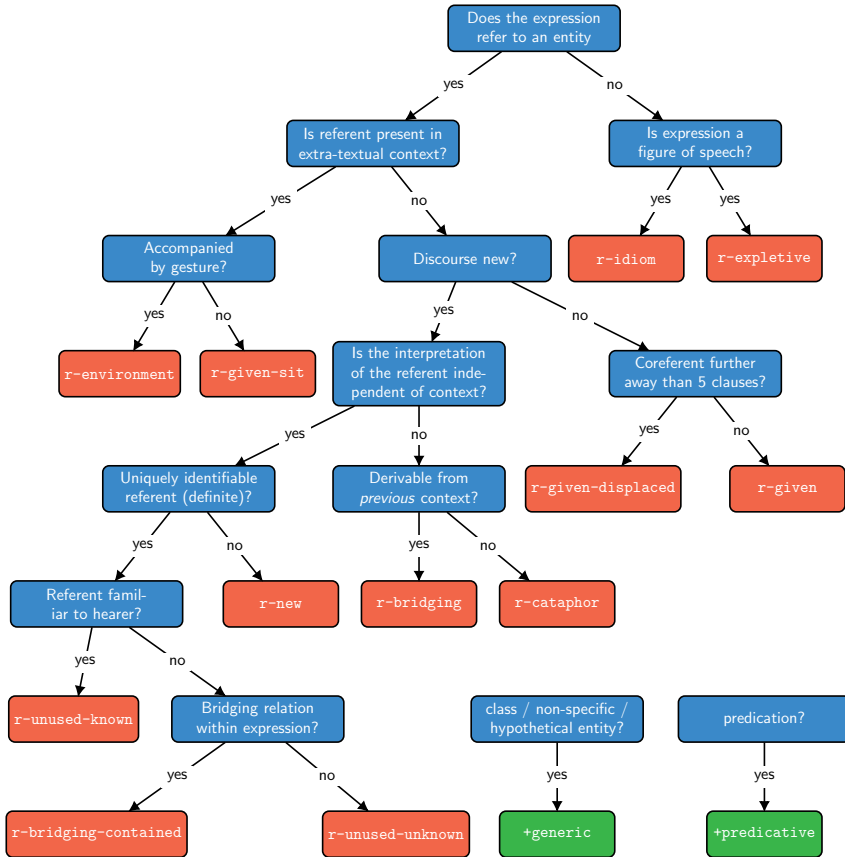
#### 6.5.1.3.1 *r*-new vs. *r*-given(-displaced)

The distinction between *given* and *new* seems to be very basic, but in this case it is not as trivial: Since the data were elicited using picture stories, the referents were depicted in the images and visible to both speaker and listener. Thus, one could argue that all referents in the narratives are either *r*-environment or *r*-given-sit, depending on whether the speaker pointed at the referent in question or not. Usually, however, the consultants quite clearly introduced the protagonists as *new*, e. g. using the presentational *may*-construction so that I found the tag *r*-new adequate for referents that are mentioned for the first time.

Once a referent has been mentioned, it subsequently gets the tag *r*-given or *r*-given-displaced if its last mention is more than five clauses away. Regarding the addition *displaced*, Riester and Baumann say:

We assume that a referent is valid during the whole discourse, i. e. a referent that has been introduced will not become fully new again, cf. Yule (1981). Nevertheless, the choice of a distance of five units is arbitrary to a certain degree. In annotation tools which allow for an automatic processing of the distance between anaphoric links, the sub-label *displaced* may be unnecessary.

(Riester and Baumann 2017:8)



**Fig. 6.2:** Decision Tree giving an overview of the RefLex tags for referential givenness. The ones used in the data are explained in some more detail below. (Image: reproduced from Riester and Baumann 2017:15, Fig. 2)

The arbitrary choice of five clauses seemed inappropriate to me, at least for the protagonists of the story. They are so central to the course of the narratives and additionally, they are shown and centrally feature on almost every page of the *Frog Stories* and every image of the *Vater & Sohn* stories that I would argue that they remain the focus of the interlocutors' attention even when they are not mentioned for more than five clauses. Thus, I always labeled them *r-given* after their first mention regardless of the distance to their last occurrence. For other referents I simply upheld the 5-clause-rule as given in the RefLex-guidelines.

**6.5.1.3.2 r-bridging(-contained)**

This tag was used for bridging anaphora with the additional sub-label contained when the bridging relation was explicitly given. For illustration consider the following two examples:

(289) **2016-9-Frog3**

*Siya=po ang=nag-punta doon sa=tubig.*  
 3SG.NOM=HON NOM=AV.RLS-go there DAT=water  
 r-given r-bridging  
 He was the one who went into the water.

(290) **2016-9-Frog3**

*May h(um)ila doon sa=buntot ng=aso*  
 EXIST (AV.RLS)pull DEM.DIST.DAT DAT=tail GEN=dog  
 r-new r-bridging-contained r-given  
*niya.*  
 3SG.GEN  
 r-given  
 There was something pulling at the dog's tail.

In the context of (289), taken from the *Frog Stories*, the main characters are in a boat on a pond or lake fishing. The water has not been mentioned previously but it is a part of the lake and thus accessible via bridging. A further explanation such as ‘the water of the lake’ is not necessary. The dog’s tail, in contrast, receives the sub-label contained because the relation to the dog is explicitly mentioned here.

Since there is no special tag for the locational nouns, which are used in Tagalog in place of spatial adpositions, the *r-bridging* was used for such cases as well, as in the following example:

(291) **2016-5-Frog1**

*sa=loob ng=bahay*  
 DAT=inside GEN=house  
 r-bridging-contained r-given  
 inside the house

In this case, the locational noun *sa=loob* ‘DAT=inside’ is used with an explicit argument. But this is not always the case. Then, the tag *r-bridging* would be used.

**6.5.1.3.3 r-environment vs. r-given-sit**

These tags were not used quite as often as the others. Mostly, they occurred, when speakers interrupted the narrative and addressed each other or used referents in

the room to illustrate the situation in the narrative. One speaker, however, began her narrative with the sentence:

(292) **2018-9-Balloon**

*Ang=lalaki-ng=ito ay isa-ng bully.*

NOM=man-LK=this INV one-LK bully

r-environment

This man is a bully.

The tag *r-new* somehow seems inappropriate here. Although this is the very beginning of the narrative, the speaker clearly is not introducing the characters. Since there are several male individuals shown on the first picture of the story, one can infer that she must have pointed at the one she was talking about. Thus, the tag *r-environment* seems more fitting here.

#### 6.5.1.3.4 *r-unused-known*

Finally, the tag *r-unused-known* was used for places in the real world that speakers used to give the stories some location, such as *the Philippines*, *the US*, or *Tondo*, a district of Manila known for crime and poverty. One speaker compared the turtle in the *Frog Stories* to the Teenage Mutant Ninja Turtles, which were also taken to be *r-unused-known*. Another speaker named the Frog *Pong Pagong* after a Filipino cartoon character. This was simply labeled *r-given* since the referent was the frog in the story, who was given in that context, and not the cartoon character.

## 6.5.2 Quantitative Results

Let us now turn to some quantitative results of this case study regarding the role of *ay*-inversion in pronoun chains.

### 6.5.2.1 Topic/Pronoun Chains and *ay*-Inversion

Our first hypothesis above concerned the question whether *ay*-inversions signal topic shifts in a similar way as topic marking does in Hungarian or Japanese. To this end, I searched for all *ay*-inverted or dislocated topics, annotated as *at* or *dt* respectively on the GRAID-tier. I then sorted each instance into one of the four categories: continuing topic, shifted topic, or neither.



### 6.5.2.1.1 Shifted Topic

‘Topic’ is meant in the sense of Nagaya (2006a) that the referent is coded using a personal pronoun. This category is basically the one that most of the examples should fall into, if Tagalog were to match our hypothesis. In the examples in this category, the referent of the left-dislocated expression was not coded by a personal pronoun prior to the target sentence but it was afterwards. It was not required that a pronoun chain ensue, one pronominalization was enough. In the context leading up to the target sentence, a different referent or no referent at all may have been coded by personal pronouns.

The following example was elicited using the second book of the *Frog Story* series.

(293) 2016-4-Frog2

- a. *Wala=na si=Palaka-ng Tetot.*  
 NEXIST=now NOM=frog-LK Tetot  
 Palakang Tetot (=the frog) was gone.
- b. *Lungkot na lungkot si=Pedro.*  
 sad LK sad NOM Pedro  
 Pedro (=the boy) was very sad.
- c. *Pero h(in)anap-∅=niya sa=kanya-ng bota – wala;*  
 But ⟨RLS⟩search-UV<sub>in</sub>=3SG.GEN DAT=3SG.DAT-LK boot N.EXIST  
 But he searched in his boot – nothing;
- d. *H(in)anap-∅=niya sa=ilalim ng=kanya-ng kama –*  
 ⟨RLS⟩search-UV<sub>in</sub>=3SG.GEN DAT=bottom GEN=3SG.DAT-LK bed  
*wala.*  
 N.EXIST  
 he searched below his bed – nothing.
- e. *Ito=naman-g usyusero-ng si=Bantay,*  
 DEM.PROX.NOM=PTCL-LK curious-LK NOM=Bantay  
 ⟨in⟩amoy-amoy-∅ ang=loob ng=pinakulugan ni=Palaka-ng  
 LKRLSSniff.around-UV<sub>in</sub> NOM=inside GEN=enclosure GEN=frog-LK  
*Tetot.*  
 Tetot  
 This curious Bantay (=the dog), [he] was sniffing around inside  
 Palakang Tetot’s jar.
- f. *Hindi=niya=na ma-alis-∅ ngayon ang=bote*  
 NEG=3SG.GEN=now ABIL-remove-UV<sub>in</sub> now NOM=jar

*sa=loob ng=kanya-ng ulo.*  
 DAT=inside GEN=3SG.DAT-LK head

*intended:* He couldn't get the jar off his head.<sup>8</sup>

In (293b), the boy, whom this speaker has named *Pedro*, is established as the aboutness topic for the following sentences. The speaker uses the name to refer to the boy in (293b) and after that in (293c) and (293d) personal pronouns are used. Then, in (293e), we find the expression *si=Bantay* 'NOM=Bantay', referring to the dog, fronted to the left-detached position. In the following sentence (293f), the speaker refers to the dog using personal pronouns, indicating that the dog has taken over as the new pronoun-topic. This is analogous to Hungarian or Japanese, where an overt topic-marked referring expression indicates a topic switch and the referent is subsequently zero-coded.

#### 6.5.2.1.2 Continuing Topic

Topic-marked referents were categorized as continuing topics, if they were pronominalized in the clauses leading up to the target sentence regardless of whether it was pronominalized in the clauses that followed. Consider for instance the following example:

(294) 2016-14-Frog3

- a. *Habang nami~mingwit ang=bata-ng lalaki,*  
 while AV.RLS.IPFV~go.fishing NOM=child-LK man  
 While the boy was fishing,
- b. *bigla=niya-ng na-kita*  
 suddenly=3SG.GEN UV.RLS-see  
 suddenly, he noticed
- c. *na parang b(um)i~bigat ang=kanya-ng*  
 COMP like (AV.RLS)IPFV~become.heavy NOM=3SG.DAT-LK  
*pamingwit.*  
 fishing.rod  
 that his fishing rod seemed to be getting heavier.
- d. *Sa=kabigatan=nito, siya ay na-hulog sa=ilog*  
 DAT=weight=DEM.PROX.GEN 3SG.NOM INV STAT.RLS-fall DAT=river  
 Due to its weight, he fell into the river

<sup>8</sup> *literally:* He couldn't remove the jar from inside his head.

- e. *at s(in)und-an=siya ng=kanya-ng alaga-ng aso.*  
 and <RLS>follow-UV<sub>an</sub>=3SG.NOM GEN=3SG.DAT-LK pet-LK dog  
 and he was followed by his pet dog.
- f. *Habang siya ay s(in)u~sund-an ng=kanya-ng aso,*  
 while 3SG.NOM INV <RLS>IPFV~follow-UV<sub>an</sub> GEN=3SG.DAT-LK dog  
 While he was followed by his dog,
- g. *pareho=sila-ng na-hulog.*  
 both=3PL.NOM-LK STAT.RLS-fall  
 they both fell.

This example is taken from the beginning of the third *Frog Story* book. The boy is out fishing with his dog and frog and a turtle takes his bait. The turtle, however, is so strong that the boy is unable to reel it in and ends up falling into the water. We follow the boy here as the pronoun-topic. He is referenced in the adverbial clause in (294a) using a lexical noun and then by a coreferential pronoun in the following main clause in (294b). He is then taken up using a personal pronoun in each of the clauses (294b) through (294f). Both in clause (294d) and (294f), the personal pronoun is *ay*-fronted. Nevertheless, the referent remains the same and the pronoun chain continues.

Notice that the *ay*-inverted or dislocated topic need not be a pronoun itself. Consultants happily used a lexical noun to refer to a referent that had previously been pronominalized, as in the following example:

(295) 2016-5-Frog1

- a. *Tign-an=mo, naka-bukas ang=pintuan.*  
 see-UV<sub>an</sub>=2SG.GEN STAT-open NOM=door  
 Look, the door is open.
- b. *Kaya na-iwan-∅=niya-ng naka-bukas,*  
 so ABIL.RLS-leave-UV<sub>in</sub>=3SG.GEN-LK STAT-open  
 So, he (=boy) left it open;
- c. *kaya naka-pasok si=palaka.*  
 so ABIL.AV.RLS-enter NOM=frog  
 so, the frog could come in.
- d. *Ayan, na-kita=siya ng=dalawa*  
 there, UV.RLS-see=3SG.NOM GEN=two  
 There, the two of them (=boy and dog) see him (=frog).
- e. *at si=palaka, nag-tanong*  
 and NOM=frog AV.RLS-ask  
 And the frog asked

- f. *kung puwede=siya-ng maki-sali sa=dalawa.*  
 COMP can=3SG.NOM-LK SOC-participate DAT=two  
 whether he could join the two of them.

In the second clause (295b), we see that until this point, the boy was the pronoun topic. Without any obvious syntactic cue, this shifts however, after (295c), which mentions the frog using a lexical noun who then becomes the new pronoun topic and is coded by the pronoun *siya* ‘3SG.NOM’ in (295d) and (295f). In (295e), however, the frog is coded once again by a full lexical noun that is topicalized by dislocation to the left-detached position. We have seen that the analogous case would be infelicitous in Hungarian (see 271) or suggest that we are now talking about a different frog. In our case, however, the referent remains the same and the pronoun chain is continued in the next clause.

### 6.5.2.1.3 Neither

The last two categories covered the case that the topic-marked referent was coded by personal pronouns in the sentence *preceding* the target sentence (and possibly afterwards as well), and the case that the topic-marked referent was coded by personal pronouns in at least one clause *following* the target sentence. The only remaining case would be that the topic-marked referent was neither coded by personal pronouns before nor after the target sentence. This is the case in the following example:

#### (296) 2016-14-Frog3

- a. *Habang t(in)i-tingn-an ng=lalaki,*  
 while <RLS>IPFV~look-UV<sub>an</sub> GEN=man  
 While the boy is looking,
- b. *na-kita=niya ang=pagong na l(um)u-lutang sa=ilog.*  
 UV.RLS=3SG.GEN NOM=turtle LK <AV.RLS>IPFV~float DAT=river  
 he sees the turtle floating in the river.
- c. *S(in)ubuk-an=niya-ng sundut-in ng=kanya-ng pamingwit*  
 <RLS>try-UV<sub>an</sub>=3SG.GEN-LK poke-UV<sub>in</sub> GEN=3SG.DAT-LK fishing.rod  
***ang=pagong,***  
 NOM=turtle,  
 He tried to poke the turtle with his fishing rod (to see)
- d. *kung ito ay buhay=pa.*  
 whether DEM.PROX.NOM INV alive=still  
 whether it is still alive.

- e. *At na-ga-galit=siya sa=aso=niya,*  
 and STAT.RLS-IPFV~angry=3SG.NOM DAT=dog=3SG.GEN  
 And he gets angry at his dog
- f. *dahil <in>i~isip-∅=niya na na-patay-∅*  
 because <RLS>IPFV~think-UV<sub>in</sub>=3SG.GEN COMP ABIL.RLS-kill-UV<sub>in</sub>  
***ang=pagong.***  
 NOM=turtle  
 because he thinks he (=the dog) (accidentally) killed the turtle.

In this part of the third *Frog Story* book, the boy just managed to pull his dog away from a fight with the turtle. The boy and the dog made their way out of the water and as the boy looks back, he sees the turtle floating on the water and assumes it to be dead. The boy is referred to as *ang=lalaki* ‘NOM=man’ or ‘NOM=male’ in the adverbial clause in (296a), and immediately taken up in the main clause in (296b) using a personal pronoun<sup>9</sup>. He remains the pronoun topic throughout the clauses (296b)–(296f) where he is the only referent to be coded by personal pronoun. The turtle on the other hand, is mentioned in (296b) and (296c); both times, the speaker uses a full lexical noun. In (296d), she uses the demonstrative *ito* ‘this’ to refer to the turtle and additionally uses an *ay*-inversion. Nevertheless, the turtle does not become the pronoun topic. Rather, it appears to be of very local relevance, more like a sentence topic. This type suggests that *ay*-marked or dislocated topics can have a different, more local status, than the topics that form pronoun chains – we appear to be dealing with two different topic notions.

Table 6.5, shows the counts for each of the three categories. The ratios of the categories are roughly the same in the *Frog Stories* and the *Vater & Sohn* stories, which allows them to be added together in the third column.

**Tab. 6.5:** Overview of the status *ay*-fronted and left-dislocated topics in the *Frog Stories* and the *Vater & Sohn* stories

	Frog		V&S		Σ	
	at	dt	at	dt		
<b>continuing</b>	6	1	3	0	10	(6.3 %)
<b>shifted</b>	7	19	7	2	35	(22.0 %)
<b>neither</b>	35	53	14	12	114	(71.7 %)

<sup>9</sup> Compare to (294a–294b).

At 7.7 %, continuing topics are the exception, although they do occur. Since 22.6 % of the dislocated topics are subsequently pronominalized (category *shifted*), one can assume that this is one function of *ay*-inversion and left-dislocation: making a referent salient that will now be pronominalized. However, in the majority of cases, this apparently isn't the function of *ay*-inversion and left-dislocation. 68.7 % of the fronted referents are neither continuing nor shifted topics suggesting that *ay*-inversion and left-dislocation mostly mark very local, possibly sentence-level aboutness topics. Such an example can be seen in (296d) above.

Similarly, speakers sometimes used *ay*-inversion or fronting to the LDP to briefly draw attention to an activity happening in the background, not directly relevant to the main chain of events, or to provide background information on someone or something they had mentioned, such as in the following example:

## (297) 2016-12-Frog1

- a. *Ngayon, g(in)awa-∅=nila, p(in)untah-an=nila si=palaka.*  
 now <RLS>do-UV<sub>in</sub>=3PL.GEN <RLS>go.to-UV<sub>an</sub>=3PL.GEN NOM=frog  
 No, what they do is, they approach the frog.
- b. *Gusto talaga nila ma-kuha-∅ si=palaka, eh.*  
 want really 3PL.GEN ABIL-get-UV<sub>in</sub> NOM=frog PTCL  
 They really want to catch the frog.
- c. *Tapos, na-kita=niya=rin ang=buslo=niya,*  
 then UV.RLS-see=3SG.GEN=too NOM=net=3SG.GEN  
 Then, he finds his net,
- d. *s(um)ampa=rin=siya sa=sanga.*  
 <AV.RLS>climb=too=3SG.NOM DAT=branch  
 (and) he climbs up onto the branch.
- e. *Iyon-g sanga, pataas na ganoon, gigitna, mataas,*  
 DEM.DIST.NOM-LK branch upwards LK like.that to.the.middle high  
*tapos, pababa-ng ganoon.*  
 then downwards-LK like.that  
 That branch, it goes up like this, high in the middle and then goes down,  
 like this.
- f. *Nag-umpisa si=Patrick tsaka ang=aso=niya sa=magkabila-ng*  
 AV.RLS-star NOM=Patrick and NOM=dog=3SG.GEN DAT=oppositeLK  
*dulo ng=sanga.*  
 side GEN=branch  
 Patrick and his dog head to opposite sides of the branch.

The speaker is describing one of the attempts of the boy and his dog to catch the frog by trapping it in the middle of a log lying across a pond. He chronologically describes the unfolding events: the boy and his dog approach the frog (297a), the boy grabs his net (297c), climbs onto the branch (297d), and he and his dog trap the frog in the middle by approaching from opposite sides (297f). In (297e), we find a brief side note, in which the speaker describes the log while tracing its shape into the space in front of him with his hand. The expression *iyong=sanga* ‘that=branch’ is fronted to the LDP and is again a very local topic, relevant only in this sentence, before turning back to the main story line.

To summarize, *ay*-inversion and left-dislocation can initiate a pronoun chain, but unlike in Hungarian or Japanese, they are not a reliable syntactic cue. Furthermore, continuing topics may be *ay*-fronted or fronted to the LDP; this is not infelicitous as it would be, e. g. in Hungarian. Finally, the examples from the ‘neither’ category suggest that we are in fact dealing with two different topic notions here: ‘pronoun topics’ and ‘*ay*-topics’.

### 6.5.2.2 Signaling the (Pronoun-)Topic has Shifted: Searching for Candidates

As we have seen in the previous section, there are 35 instances of *ay*-inversions or dislocated topics that are subsequently pronominalized at least once. There are, however, considerably more pronoun chains, which leaves the question what cues, morphosyntactic or otherwise, signal the referent of the personal pronoun at the beginning of such a chain. In other words, when a speaker first refers to a referent using a personal pronoun, how does the listener correctly identify the correct referent? Although I will not be able to provide a complete answer to this question, I will present some hypotheses based on observations I made while annotating the data. Testing their general validity, however, is a task for future research.

#### 6.5.2.2.1 Lexical Nouns to Avoid Ambiguity

The first noteworthy observation is that Tagalog speakers appear to use lexical noun phrases quite frequently. Table 6.6 shows how often different types of referring expressions are used to refer to the main characters of the *Frog Stories* in our data, Table 6.7 shows the counts for the *Vater & Sohn* stories. The counts for the anaphoric devices were made by searching for occurrences of  $n-?.pro$  in the RefInd and GRAID annotations, where  $n$  is the index of the corresponding referent and  $?$  was any number, ensuring that we are counting occurrences of pronouns used as arguments and not as possessors<sup>10</sup>. The ‘subset’ category counts references

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<sup>10</sup> Possessors seem to work in part independently from personal pronoun chains, as the boy could be referred to using a demonstrative but be referenced in the same sentence as a possessor using the *kanyang*.

to a subset of {boy, dog, frog, turtle} of cardinality  $\geq 2$ , i. e. referent indices 005–011. Note that these subsets, too, could be referred to using lexical nouns such as *mag-amo*, a term used to refer collectively to a pet and its owner, or *ang dalawa* ‘the two’. Coordinations such as *ang batang lalaki at ang kanyang alagang aso* ‘the boy and his pet dog’ were counted separately as one reference to the boy and one reference to the dog, which of course makes it difficult to compare the numbers in this column to those for the other referents.

**Tab. 6.6:** Use of lexical noun phrases and other anaphoric devices for the central characters of the *Frog Stories*

	boy	dog	frog	turtle	subset	$\Sigma$
<b>anaphoric devices</b>						
personal pronoun	205	25	85	14	200	530
demonstrative	5	5	14	13	2	39
zero anaphora	28	28	43	32	20	151
<b>total</b>	239	58	142	59	222	720
<b>lexical noun</b>	226	229	225	115	13	810

Even for the boy, who is mentioned most often, the most common way speakers refer to him is by lexical noun, which is done almost half of the time (48.6%). For the other characters the ratio is much higher: 79.8% for the dog, 61.3% for the frog, and 66.1% for the turtle<sup>11</sup>. As mentioned above, the subset case is a little more complex and cannot be directly compared to the numbers for the individual referents. The 14 counts listed under lexical noun only count nouns collectively referring to the entire group. The group, however, could also be referred to using coordinate lexical nouns each referring to one of the group members or coordination of a pronoun and a lexical noun or constructions such as the following:

(298) **2016-05-Frog1**

**Context:** The boy, Juan, and his dog, Pulgoso, were running through the forest. There was a log blocking the path and the boy, didn’t see it, and...  
 “*Ngayon, dali-dali silang tumakbo. Ngunit hindi nila nakita na may isang sanga ng puno na nakaharang at dahil hindi nakita ni Juan at...*”

*Dahil mabilis=sila-ng t(um)a~takbo ni=Pulgoso,*  
 because quickly=3PL.NOM-LK <AV.RLS>IPFV~run GEN=Pulgoso

<sup>11</sup> Unsurprisingly, it is even more extreme for other referents since they are often mentioned once and then never again. Here lexical nouns make up more than 90% of the references made.



*na-hulog=sila*                      *sa=sapa.*  
 STAT.RLS-fell=3SG.NOM DAT=stream

Because they, including Pulgoso, were running quickly, they fell into the stream.

**Continuation:** *At ang palaka ay nagulat.* (And the frog was startled.)

The speaker uses a construction, in which a genitive-marked RP, in this case *ni=Pulgoso* ‘GEN=Pulgoso’ is used to clarify the referent of a plural pronoun. The boy, *Juan*, just having been mentioned in the previous sentence, is not mentioned again explicitly, and is understood to be part of the group referred to by the pronoun *sila* ‘3PL.NOM’. Only the dog is referred to explicitly by his name *Pulgoso*, possibly to disambiguate that he belongs to the group referred to by the pronoun, in contrast with the other salient character, the frog, who is not.

**Tab. 6.7:** Use of lexical noun phrases and other anaphoric devices for the central characters of the *Vater & Sohn* stories

	father	son	father ⊕ son	Σ
<b>anaphoric devices</b>				
personal pronoun	40	23	5	116
demonstrative	1	1	0	8
zero anaphora	12	10	2	33
<b>total</b>	53	34	7	157
<b>lexical noun</b>	104	79	14	33

We find a similar picture for the main characters of the *Vater & Sohn* stories: 66.2% of references made to the father are made using a lexical noun, 69.9% for the son and 66.7% for the two of them as a group. Thus I propose the following hypothesis:

#### Hypothesis

Speakers use lexical nouns phrases to avoid ambiguity. As a result, the ratio of lexical noun phrases to other anphoric devices is higher in Tagalog than it is in other languages.

Of course, there may very well be other factors contributing to the frequency of lexical nouns in our data. It is conceivable that this is typical for spoken language and we would find different numbers in written texts, or that the nature of the picture stories we used to elicit the data caused the speech style of consultants to tend towards child-directed speech, where more lexical nouns may be expected.

Therefore, this hypothesis is in particular need of corroboration with much more data, preferably from a balanced corpus.

### 6.5.2.2 Pronoun Chains in the Data

Let us now move on to the pronoun chains in the data and search for recurring cues to identify the correct referent of the personal pronouns. The *Frog Story* data contains a total of 111 pronoun chains of length  $\geq 2$  – after all, one instance of a personal pronoun can hardly be called “a chain”. Of these, 63 involve 3SG-pronouns, the other 48 3PL-pronouns. While chains of length 10 or longer did occur, they were quite rare, 85.6 %, i. e. most of the chains being of length  $\leq 4$ . Given Nagaya’s interpretation of pronoun chains, this can be taken to mean that the speakers frequently shifted topics.

The picture is quite similar for the *Vater & Sohn* stories. Since, however, they are much shorter and the data set is smaller, we only have 23 chains of length  $\geq 2$ , 82.6 % of which are of length  $\leq 4$ . As was the intention of selecting stories with individually acting characters, we have no pronoun chains involving 3PL-pronouns.

**Tab. 6.8:** Possible cues for establishing a pronoun topic and their respective frequencies in the *Frog Stories* and the *Vater & Sohn* stories

Possible Cue	Frog Stories	Vater & Sohn	$\Sigma$
<i>ay</i> -inv. / left-dislocation	18 (16 %)	2 (9 %)	20 (15 %)
unique lexical NP / coord.	28 (25 %)	13 (56 %)	41 (31 %)
subordinate clause	2 (2 %)	2 (9 %)	4 (3 %)
apposition	4 (4 %)	0 (0 %)	4 (3 %)
other	59 (53 %)	6 (26 %)	65 (48 %)

Table 6.8 shows a tentative list of possible cues that may play a role in correct anaphora resolution at the beginning of a pronoun chain. We have already seen that *ay*-topics and left-dislocated topics mostly do not become pronoun topics. Here, we see the answer to the converse question: most pronoun topics don’t start out as *ay*-topics or left-dislocated topics. Only 15 % of the pronoun chains are preceded by a sentence in which a lexical noun referring to the topic is *ay*-fronted or dislocated to the LDP.

In 30 % of the pronoun chains, the last sentence (or at least the last clause of the last sentence) preceding the chain contained only one overt lexical noun (for plural pronouns: one list of coordinated lexical nouns), the referent of which

then became the pronoun topic. These are listed in Table 6.8 as *unique lexical NP / coord.* For example,

(299) **2018-3-Tree**

**Context:** The father just finished planting a tree in his garden, when his son arrives running from an angry looking man who is chasing him. The boy hides behind the father.

- a. *Sa=galit ng=ama ng=bata, b(in)uot-∅=niya ang=puno*  
 DAT=anger GEN=father GEN=child (RLS)pull-UV<sub>in</sub>=3SG.GEN NOM=tree  
*sa=lupa.*  
 DAT=earth

In the boy's father's anger, he pulled the tree out of the ground.

- b. *Laki-ng gulat ng=mama.*  
 big-LK surprise GEN=grown.man

The man was very surprised.

- c. *Na-kita=niya kung gaano kalakas ang=ama.*  
 UV.RLS-see=3SG.GEN COMP how strong NOM=father

He saw how strong the father was.

In (299c), we see the first element of a pronoun chain involving the pronoun *niya* '3SG.GEN', which refers to the man who is chasing the boy. The pronoun *niya* '3SG.GEN' in (299a) refers to the father. So, we indeed have a shift here and (299c) is the beginning of a new pronoun chain and the pronoun topic is the referent of the only lexical noun in the preceding sentence (299b), i. e. *ng=mama* 'GEN=grown.man'.

We have already seen a related case in example (296a-296b), the relevant portion of which is repeated here as (300):

(300) **2016-14-Frog3**

- Habang t(in)i-tingn-an ng=lalaki, na-kita=niya ang=pagong...*  
 while (RLS)IPFV~look-UV<sub>an</sub> GEN=man UV.RLS=3SG.GEN NOM=turtle  
 While the boy is looking, he sees the turtle...

In this case, however, the pronoun *niya* '3SG.GEN', which begins a pronoun chain, is coreferential with the unique lexical noun in the preposed subordinate clause, *ng=lalaki* 'GEN=man'. In Table 6.8, the category label *subordinate clause* refers to examples of this type.

In a way, the last two categories we discussed boil down to the pronoun being coreferential with the last mentioned (suitable) lexical noun. Cross-linguistically, there is a tendency to choose more explicit anaphoric devices the further away the

last mention of the referent is. As a result, in languages that use zero coding in topic chains, one would expect a very small referential distance between the first use of zero coding and the last explicit mention of the topic referent. Tagalog, as we have seen, despite allowing zero coding, tends to use personal pronouns for topic chains. Therefore this rule could translate to Tagalog as follows:

---

**Hypothesis**

If the clause preceding the beginning of a pronoun chain contains only one argument that is coded by an overt lexical noun, it is a likely candidate for the new pronoun topic.

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Despite the similarity of the last two categories, I have kept them distinct, since they may need to be modeled in different places: since the *subordinate clause* category involves coreference within a single sentence, there should only be a single node at the sentence level representation of (300) to represent both the referent of the pronoun *niya* ‘3SG.GEN’ and the lexical noun *lalaki* ‘man’. In (299b) and (299c), on the other hand, we are dealing with two separate sentences. As a consequence, the node corresponding to *ama* ‘grown.man’ in (299b) and the node corresponding to the pronoun *niya* ‘3SG.GEN’ in (299c) only unify in the update process. Thus, the former can be tackled at the syntax-semantics interface, while the latter is dealt with in the common-ground update.

Another strategy speakers used to remove ambiguity was to clarify the referent of a personal pronoun by explicitly naming the referent in an apposition after the first use of the pronoun:

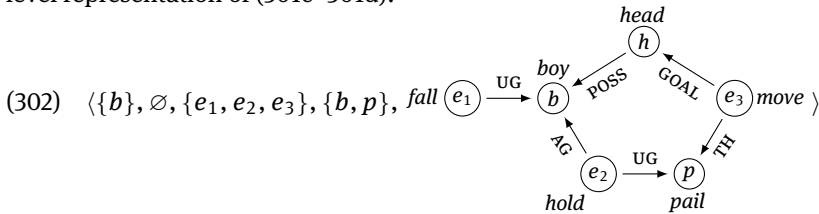
(301) 2016-6-Frog1

- a. *Kaya, sila, na-patid at b(um)agsak sa=ilog*  
 so 3PL.NOM STAT.RLS-trip and <AV.RLS>fall DAT=river  
 So, they (=boy and dog) tripped and fell into the river
- b. *kung saan nakapuwesto ang=palaka.*  
 COMP where seated NOM=frog  
 where the frog was sitting
- c. *Tapos, pagbagsak niya, ng bata-ng lalaki,*  
 then falling 3SG.GEN GEN child-LK man  
 Then, when he, the boy, fell down,
- d. *ang baldeng hawak niya, pumunta sa kanyang ulo.*  
 NOM pail hold 3SG.GEN went DAT his head  
 the pail he was holding went onto his head.

This passage from the first *Frog Story* book describes a failed attempt by the boy and the dog to catch the frog resulting in both of them falling into the pond (or river,

as the speaker says here). In (301a), we see the pronoun *silá* ‘3PL.NOM’ forming the end of the previous pronoun chain with the boy together with his dog as the pronoun topic. In (301c), then, a new pronoun chain begins featuring the singular pronoun *niya* ‘3SG.GEN’. Without any clarification, one might assume that the pronoun could refer to either the boy or his dog, or even the frog, since it is the only referent referred to by a lexical noun in the clause immediately preceding the first occurrence *niya*. However, the speaker follows the pronoun in (301c) with the apposition *ng=bata-ng lalaki* ‘the boy’, which removes any ambiguity.

Example (301c) is another case where the resolution of the personal pronoun does not occur during the update of the common ground but at the syntax semantics interface when the pronoun and the apposition are linked as a complex noun phrase (Van Valin 2005:223, 260–267). So, we should get the following sentence-level representation of (301c–301d):



Because it is referred to by a pronoun, referent *b*, the boy, is in the topic set. The corresponding node, however, is not underspecified as a node corresponding to a pronoun normally would be, since the referent is clarified by the appositional RP. This ensures that the node is correctly unified with the node corresponding to the boy in the ICG frame.

Finally, the category *other* includes a few examples that didn’t occur often enough to deserve their own category and several examples in which the correct resolution of the pronoun appears to depend on several cues, so that sorting it into a single category would seem inappropriate. Nevertheless, it is possible to identify a few factors that appear to be relevant. As mentioned before, of course, these are hypotheses deduced from a limited data set and require further testing in larger, balanced corpora.

The particle *naman* is one of those factors that appear to be relevant to anaphora resolution. It is a second position clitic that has several functions, one of which is expressing contrast (Schachter and Otnes 1972:425; Ramos and Cena 1990:115). The following hypothesis is thus not surprising:

---

#### Hypothesis

If a personal pronoun occurs in two consecutive clauses and the second occurrence is accompanied by the particle *naman*, they are preferably interpreted as non-coreferential.

---

The following passage exemplifies this nicely. It was elicited using the first book of the *Frog Story* books. The speaker is describing how the boy and his dog attempt to catch the frog by trapping him on a log lying across the pond.

## (303) 2016-5-Frog1

- a. *Sabi ni Juan<sub>i</sub> kay Pulgoso<sub>j</sub>*  
said GEN Juan DAT Pulgoso  
Juan (=boy) told Pulgoso (=dog)
- b. *na p(um)unta=siya<sub>j</sub> sa=kabila-ng sanga,*  
COMP (AV)go=3SG.NOM DAT=opposite-LK log  
that he (=dog) should go to the other [side of the] log,
- c. *at siya<sub>i</sub>=naman ay sa=kabila pu-punta...*  
and 3SG.NOM=PTCL INV DAT=other IPFV~go  
and he (=boy), on the other hand, would go to the other.

The first clause (303a) introduces the following two (303b–303c) as reported speech which the boy, *Juan*, directs towards his dog, *Pulgoso*. In (303b), the speaker uses the pronoun *siya* ‘3SG.NOM’ to refer to the dog, to whom the boy is issuing a command. This also lines up with our hypothesis from above, since the dog is also the last referent explicitly mentioned in (303a). In (303c), the pronoun *siya* occurs again, this time accompanied by the contrast particle *naman*, suggesting that the speaker now means a different referent: the second most accessible referent in the context, the boy.

The final factor that I would like to discuss is the importance of rhetorical relations. We have encountered rhetorical relations in Section briefly in sec. 6.1 and in sec. 6.3 in the context of Balogh’s (2018) frame-based model of discourse, which records sentence-level representations together with their rhetorical relations in addition to the constantly updated representation of the immediate common ground. One of the reasons for this is that they are important in a number of languages for correct anaphora resolution. In fact, they are even relevant in English:

## (304) Kehler (2002:257) citing Winograd (1972)

*The city council denied the demonstrators a permit because*

- a. *they* feared violence.
- b. *they* advocated violence.

Notice that the pronoun *they* interpreted differently in the two cases: coreferential with *the city council* in first, coreferential with *the demonstrators* in the second case. This can be explained using rhetorical relations. The conjunction *because* indicates that the relation between the two clauses is EXPLANATION. So, in each

case, the pronoun *they* is resolved in a way that the second clause provides a plausible explanation for the state of affairs described in the first. This appears to play a role in Tagalog as well.

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### Hypothesis

When there is an EXPLANATION relation between subsequent sentences, anaphoric devices “receive the assignment necessary to establish the Cause-Effect relation” (Kehler 2004:257).

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This can be seen in action in the following example, which was elicited using one of the *Vater & Sohn* stories.

(305) 2018-3-Tree

- a. *May isa-ng ama na nag-tanim ng=puno.*  
 EXISTone father LK AV.RLS-plant GEN=tree  
 There was a father planted a tree.
- b. *Noong na-tapos-∅=siya-ng mag-tanim,*  
 when ABIL.RLS-finish-UV<sub>in</sub>=3SG.NOM AV-planting  
 When he was done planting,
- c. *b⟨um⟩alik=siya sa=bahay=niya para i-suli*  
 ⟨AV.RLS⟩return=3SG.NOM DAT=house=3SG.GEN to UV<sub>i</sub>-put.away  
*ang=mga=gamit.*  
 NOM=PL=tools  
 he went back into his house to put away his tools.
- d. *Paglabas=niya ulit, na-kita=niya*  
 gone.outside=3SG.GEN again UV.RLS-see=3SG.GEN  
*ang=anak=niya, t⟨um⟩a-takbo.*  
 NOM=child=3SG.GEN ⟨AV.RLS⟩IPFV-run  
 Back outside again, he saw his son, running.
- e. *H⟨in⟩a-habol-∅=siya ng=isa-ng malaki-ng mama na*  
 ⟨RLS⟩IPFV~chase-UV<sub>in</sub>=3SG.NOM GEN=one-LK tall-LK man LK  
*mukhang galit na galit.*  
 looks angry LK angry  
 He is being chased by a man who looks very angry.

The speaker begins the story in (305a) by introducing the father, who then becomes the pronoun topic in from (305b) through (305d). In (305e) the pronoun *siya* ‘3SG.NOM’ occurs, but the context makes it very implausible for the father to be the intended referent. However, taking into account that the speaker is explaining why the boy is running, i. e. that we have an EXPLANATION relation between (305d) and

(305e), leads to the identification of the correct referent, the boy: his being chased by an angry man is a plausible reason for his running in the previous sentence.

Let us conclude this section with a second example involving a rhetorical relation, in this case the relation question-answer pair (QAP) (Asher and Lascarides 2003:463).

---

### Hypothesis

When repsonding to an explicit question, i. e. discourse relation QAP, a personal pronoun is preferably resolved as one of the referents mentioned in the question.

---

Since our data consists primarily of narratives, the number of such question answer pairs is quite limited. Thus, investigations involving more lively discourse among two or more interlocutors would be interesting for the future. An example for this rhetorical relation did, however, occur in our data:

(306) 2016-10-Frog1

**A:** *Habang nag-la~lakad, masama=pa=rin ang=loob*  
 while AV.RLS-IPFV~walk bad=still=too NOM=inside  
*ng=bata-ng lalaki.*  
 GEN=child-LK man

While he was walking, the boy felt bad.

**B:** *Bakit=ba na-lu~lungkot ang=palaka?*  
 why=Q STAT-IPFV~sad NOM=frog  
 Why is the frog sad?

**A:** *Dahil wala=siya-ng kasama sa=ilog.*  
 because NEXIST 3SG.NOM-LK companion DAT=river  
 Because he has no companion in the river.

In the story told by speaker A, the boy and the dog have given up on trying to catch the frog and decide to go home. She is then interrupted by speaker B who asks why the frog is sad, something speaker A had mentioned previously. In her response, speaker A uses the pronoun *siya* ‘3SG.NOM’, but uses it to refer to the frog, which speaker B mentioned in her question rather than the boy whom she was just talking about.

## 6.6 Summary and Outlook

We started out in section 6.1 with an overview of the tools natural languages use to keep track of referents in discourse (Foley and Van Valin 1984) as well as the





by Kallmeyer and Osswald (2017) or using the concept of cascades (Löbner 2019). Finally, moving away from the genre of narratives, a complete model of discourse will have to be able to capture discourse between multiple interlocutors with all the additional difficulties that entails.

In the second part of this chapter, we discussed a case study based on narratives elicited in the field using picture stories to investigate the relationship between *ay*-topics/left-dislocated topics on one hand and pronoun topics on the other. The first step was to annotate the data using the RefInd, GRAID and RefLex frameworks, which we introduced in section 6.5.1. Using the annotated data, we then found that it is possible for an *ay*-marked or left-dislocated topic to become the new pronoun topic, but it is also possible for a pronoun topic to be *ay*-marked or left-dislocated. The latter is somewhat surprising, since e. g. in Hungarian the analogous case, i. e. a topic marked overt noun phrase coding a referent that was previously zero-coded, would be infelicitous. However, most commonly, *ay*-topics and left-dislocated topics were independent from pronoun topics. In many cases, the former seemed to be topics of much more local relevance, often limited to a single clause, while the pronoun topics tended to form pronoun chains showing their relevance over a longer stretch of discourse. Having established that *ay*-topics and left-dislocated topics don't generally become pronoun topics, we found in section 6.5.2 that most pronoun topics don't start out as *ay*-topics or left-dislocated topics showing again that they represent two distinct types of topics. In this context, we had a closer look at how pronoun chains start and collected several cues that may contribute to identifying the correct referent of personal pronouns.

Of course these results must be interpreted very cautiously. This case study was conducted with a quite limited data set that reflects only a small number of speakers. Therefore, future work should include compiling a larger, balanced corpus and annotating to reproduce the results found here and see whether the cues for correct pronoun resolution formulated here as hypotheses actually hold up. Those that do then need to be integrated into our frame-based model. As we have seen different preferences may need to be modeled in different places of the model. Furthermore, the model must also reflect that certain cues and rules may outrank others. So, we first need to distinguish rules from preferences and then determine any interactions between them. This could be done by conducting comprehension experiments. A possible setup would be an online questionnaire in which a target sentence containing a pronoun is presented in different context and record how speakers interpret the pronoun in each case.

Finally, personal pronouns are only the first part of the story. We have seen that secondary topics are coded using demonstratives or zero anaphora. Their use and interaction with pronoun topics needs to be understood as well. Let us have a

look at a simple example to see what is involved in the interpretation of a sentence including all three anaphoric devices:

(308) 2016-8-Frog3

- a. *Na-laglag ang=bata sa=ilog and t(um)alon ang=aso at*  
 STAT.RLS-fall NOM=child DAT=river and <AV.RLS>jump NOM=dog and  
**palaka.**

frog

The boy fell into the river and the dog and the frog jumped (after him).

- b. *S(in)und-an=nila ang=bata upang sagip-in* ∅  
 <RLS>follow-UV<sub>an</sub>=3PL.GEN NOM=child to rescue-UV<sub>in</sub>  
**ito.**

DEM.PROX.NOM

They followed the boy to rescue him.

The first sentence (308a) contains four lexical nouns which makes their referents mentally accessible and thus prime candidates to be taken up by anaphoric devices in the second sentence of this example. The first anaphoric device in (308b), is the third person plural pronoun *nila*. Its referent is most probably a subset of {boy, dog, frog, river} including at least two referents. Since the undergoer of this clause, *ang=bata* ‘NOM=child’, takes up the boy again as a lexical noun, he is probably not included in the referent of the pronoun. The river is out as well since we expect an animate undergoer, which leaves us with the dog and the frog. This lines up with the observation that the two of them are the last two referents mentioned in (308a) and they are coordinated and share a case marker suggesting that the speaker perceived them as a group. Next, we have the *upang*-clause. Unlike the English *to*-clause in the translation, we have seen that there is no obligatory argument sharing in Tagalog. It is possible for the actor of an *upang*-clause to differ from the actor in the matrix clause. However, our data suggests that when the actor is zero-coded, it tends to be coreferential with the actor of the matrix clause, i. e. the dog and the frog. Finally, we have the demonstrative *ito* ‘this’, which is interpreted as the boy. This could be an inference from the situation currently being described: the boy fell into the river and is in need of being rescued. It could also just be that he is the last referent to be mentioned by a lexical noun. All of these details need to be understood and worked out to create a complete cognitively plausible model of discourse.

To make matters more complicated, several examples in the data suggest that pronouns used to code possession are to some degree independent of the pronouns used to code arguments.

## (309) 2018-10-Violin

- a. *Habang ang=tatay<sub>i</sub> ay t<in>u-tono-∅ ang=isa-ng violin,*  
 while NOM=father INV (RLS)IPFV~tune-UV<sub>in</sub> NOM=one-LK violine  
 While the father is tuning the violin,
- b. *ang=mahirap na musikero<sub>j</sub> ay na-tuwa at*  
 NOM=poor LK musician INV STAT.RLS-happy and  
*na-ging mag-pa-salamat sa=tatay,*  
 STAT.RLS-become AV-CAUS<sub>PA</sub>-thank DAT=father  
 the poor musician started thanking the father
- c. *dahil na-ayos-∅=niya<sub>i</sub> ang=kanya<sub>j</sub>-ng violin.*  
 because ABIL.RLS-fix-UV<sub>in</sub>=3SG.GEN NOM=3SG.DAT-LK violin  
 because he<sub>i</sub> had fixed his<sub>j</sub> violin.

In this speakers rendering of the *Vater & Sohn* violin-story, the father asked the musician to give him the violin because it was out of tune. He then tuned it for him and returned it. We see the father coded by a lexical noun in (309a) and the musician in (309b). In (309c) both are referred to by third person pronoun, the father as an argument, the musician as the possessor of the violin. This is not the only such example, although it is the most striking one. In the *Frog Stories*, speakers frequently used =*niya* ‘3SG.GEN’ to indicate possession by the boy even when the current pronoun topic was the boy and the dog coded by *sila/nila* or in one case the frog coded by *siya/niya*.

Even if these examples are cases where our consultants happen to have misspoken, the fact that they are perfectly understandable indicates that a good model of discourse should be equipped with strategies to correctly interpret such examples, as well.

## 7 Reversed *ang*-Inversion

In this chapter, we will examine the reversed *ang*-inversion construction in some more detail. We have already touched on it briefly in chapter 4; now however, we will investigate how the construction is used in our data – both fieldwork and *Hunger Games*.

We will begin in section 7.1, by discussing how reversed *ang*-inversion presented itself in our fieldwork data in question-answer pairs to code narrow information focus on an argument. Next, we will see that some contexts in the *Frog Stories* led speakers to use reversed *ang*-inversion as well, again to convey narrow argument focus. Thus, Tagalog speakers have two syntactic constructions at their disposal to convey narrow focus: reversed and regular *ang*-inversion. An important difference between the two is the placement of the focal constituent: while regular *ang*-inversions begin with the narrow focus, reversed *ang*-inversions begin with the background and end with the focal argument. I will argue that the *Information Flow Principle* (Ward and Birner 2011), the preference to place topical or given information at the beginning of a sentence, plays an important role in choosing between these two options.

According to Declerck (1984), similar considerations play a role in English when choosing between the different cleft constructions. In *it*-clefts and inverted *wh*-clefts the focal constituent is at the beginning of the sentence, while it occurs at the end of the sentence in *wh*-clefts and *all*-clefts. Thus, one would expect that in translations from English to Tagalog the order of focus and background is preserved if both observe the *Information Flow Principle* when selecting the appropriate narrow-focus construction. In section 7.2, we will see that this is indeed the case for our *Hunger Games* data: *it*-clefts and inverted *wh*-clefts are mostly translated using *ang*-inversions, keeping the focus at the beginning of the sentence, while regular *wh*-clefts and *all* clefts are mostly translated using reversed *ang*-inversion.

Then, we will investigate what other English constructions were translated using reversed *ang*-inversions. We will see that clefts in the English text account for more than half of the reversed *ang*-inversions found in the Tagalog version. Many more involve a focus sensitive particle associating with a focal argument in English, which explains the use of a narrow focus construction in Tagalog. Finally, we will turn to the question of voice distribution in the context of reversed *ang*-inversions. As we will see, the overwhelming majority of reversed *ang*-inversions feature a focal undergoer and thus undergoer voice.

Many of the findings presented here have been already published in my *Studies in Language* article “Reversed *Ang*-Inversion and Narrow Focus Marking in Tagalog” (Nuhn 2019), particularly the results discussed in section 7.1. In section

7.2, the discussion of the case study based on the *Hunger Games* data not only goes into considerably more detail than the results already presented by Nuhn (2019), but also includes aspects such as voice distribution, which were not discussed by Nuhn (2019).

## 7.1 Reversed *ang*-Inversion in Spoken Data

The relevant spoken data discussed in this section was elicited using the QUIS picture story *Tomato Story* and the *Frog Story* books. See sections 3.1.2.1 and 3.1.2.2 for details on the elicitation process.

I will begin by discussing how reversed *ang*-inversion turned up in the question-answer pairs elicited after the *Tomato Story* task and then move on to its use in the *Frog Stories*. Inter-speaker comparison was particularly interesting here, as there were situations in the book that were described using reversed *ang*-inversion by many or even all of the speakers we worked with.

### 7.1.1 QUIS Fairy Tale

As described in section 3.1.2.2, after the consultants had told the *Tomato Story*, they were asked a set of five questions (80–84). The ones relevant to this section are the constituent questions (80), (82), and (83), which require a response with narrow focus on one of the verb arguments. They are repeated here as (Q1–Q3):

- (Q1) *Sino ang=una-ng p<(in)>a-bili-∅ ng=nanay ng=mga=kamatis?*  
 who NOM=first-LK <RLS>CAUS<sub>PA</sub>-buy-UV<sub>in</sub> GEN=mother GEN=PL=tomato  
 Who was the first one the mother sent to buy tomatoes?
- (Q2) *Ano ang=<(in)>uwi ng=ikalawa-ng anak?*  
 what NOM=<RLS>bring.home GEN=second-LK child  
 What did the second child bring home?
- (Q3) *Sino-ng anak=niya ang=nag-dala ng=mga=kamatis?*  
 who-LK child=3SG.GEN NOM=AV.RLS-bring GEN=PL=tomato  
 Which of her children was it who brought tomatoes?

The consultants were asked to respond to each question in a full sentence. Three different syntactic structures were used to do so:

1. *ang*-inversion,
2. reversed *ang*-inversion, and
3. canonical word order, i. e. *in-situ* focus.

An overview of the frequencies with which each of the constructions occurred is shown in Table 7.1.

Two responses had to be excluded from the study as presented by Nuhn (2019): In one case, a consultant responded to (Q3) with *Ang=pangalawa=niya-ng anak* ‘Her second child’, i. e. only the focused constituent. Another consultant also responded with just the focused constituent and then, after a pause, completed her answer to a full sentence in form of an *ang*-inversion. Her response to question (Q3) was thus:

(310) **Question:** *Which child brought home tomatoes?*

2016-6-QUIS-Tomato-A

*Si=bunso...* [pause] *nah!*  
 NOM=youngest.child ah!

*Si=bunso ang=naka-bili ng=kamatis.*  
 NOM=youngest.child NOM=ABIL.RLS-buy GEN=tomato

The youngest child... ah! The youngest child was the one who was able to buy tomatoes.

Thus, it is unclear, whether she would have normally responded with an *ang*-inversion or just did so here because it was the only way to complete the answer she had already given to a full sentence that answered the question. At the very least her first attempt at an answer may have had an influence on her choice of construction<sup>1</sup>.

Regarding question (Q2), it is worth noting that the second child did not find the way to the market, and thus, came home empty-handed. Most consultants correctly responded *Wala*. ‘(There is) nothing.’, which is technically a complete sentence in Tagalog. It is, however, not very interesting for us in investigating narrow argument focus constructions. Thus, they are not included in the counts

**Tab. 7.1:** Frequency of constructions used to mark narrow focus in answers to *wh*-questions in the QUIS-task *Tomato Story*

Construction	Q1	Q2	Q3
<i>ang</i> -inversion	–	1	2
reversed <i>ang</i> -inversion	4	2	2
<i>in-situ</i> focus	2	–	–

<sup>1</sup> If, however, one were to include this response as an *ang*-inversion, this would not change anything for the following discussion.

in Table 7.1. One consultant, however, correctly responded that the second child brought home an empty basket and two more consultants claimed the second child had brought home tomatoes. Although the latter response is incorrect, we can assume that it is, nevertheless, a felicitous response to the question and thus these three responses were not excluded.

So, in sum, we had a total of 13 valid responses in full sentences to our 3 *wh*-questions. It is worth noting that the questions (Q1–Q3) very much resemble *ang*-inversions in their structure. The only difference is that in place of the sentence-initial focused constituent, they have a question word in that position. One might expect this structural similarity to prime consultants to respond with an *ang*-inversion and simply take up the syntactic structure given in the question. In fact, it is difficult to assess the priming effect here accurately since there is no other way to pose a *wh*-question in Tagalog. However, most of the consultants actually did *not* use an *ang*-inversion in their response: Only 3 of the valid responses were given in form of an *ang*-inversion! Reversed *ang*-inversions, on the other hand, made up 8 of the responses, while the remaining 2 were given in canonical word order.

Our consultants produced both reversed *ang*-inversions with and without *ay* as shown by the following responses given to question (Q3):

(311) **Question:** *Which child brought home tomatoes?*

a. 2016-1-QUIS-Tomato-A

[*Ang=nag-dala ng=kamatis sa=nanay=niya*]<sup>BG</sup> *ay*  
 NOM=AV.RLS-bring GEN=tomato DAT=mother=3SG.GEN INV  
 [*ang=bunso-ng kapatid*]<sup>FOC</sup>.  
 NOM=youngest-LK sibling

The one who brought his mother tomatoes was the youngest sibling.

b. 2016-7-QUIS-Tomato-A

[*Ang=nag-dala ng=mga=kamatis*]<sup>BG</sup>, [*ang=pangalawa-ng*  
 NOM=AV.RLS-bring GEN=PL=tomato NOM=second-LK  
 <*in*>*utus-an=niya-ng bata*]<sup>FOC</sup>.  
 <RLS>order-UV<sub>an</sub>=3SG.GEN-LK child.

The one who brought (home) tomatoes is the second of her children she sent.

A very convenient property of these question-answer pairs is that the focus structure of the response is clear from the question. Thus, the constituent following the *ay* in (311a) and the second *ang*-phrase in (311b) are clearly the narrow foci of the consultants' answers, as they are the portions that give information asked for by (Q3).



Thus, it is clear that construing (311b) as a regular *ang*-inversion would be completely nonsensical. This would mean interpreting the first *ang*-phrase as the narrow focus of the sentence:

(312) **Question:** *Which of her children was it who brought home tomatoes?*

# [Ang=*nag-dala ng=mga=kamatis*]<sup>FOC</sup> [ang=*pangalawa-ng*  
 NOM=AV.RLS-bring GEN=PL=tomato NOM=second-LK  
 <in>utus-an=*niya-ng bata*]<sup>BG</sup>.  
 <RLS>order-UV<sub>an</sub>=3SG.GEN-LK child.

It is the one who brought tomatoes to his mother who is her second child that she sent.

As the translation suggests, this does not answer the question and is completely infelicitous.

This strongly suggests that reversed *ang*-inversion is used in spontaneous speech to indicate narrow completive focus in response to a *wh*-question. As opposed to regular *ang*-inversion, the narrow focus is sentence final, immediately following the *ay*, or, when omitted, following the pause.

Finally, I would like to relate these findings to Dery's (2007) finding that both *ang*-inversion and canonical word order are not generally judged felicitous when answering a *wh*-question. Both constructions were rejected by more than 30 % of his sample population. Given how often reversed *ang*-inversion occurred in this task and the fact that it was not included in Dery's questionnaire, I would predict that further investigations will reveal that reversed *ang*-inversion is, in fact, the preferred complete-sentence response to constituent questions in Tagalog.

It is also worth noting that our consultants quite happily responded with both canonical word order (313) and regular *ang*-inversion (314).

(313) **Question:** *Who was asked by his mother to go and buy tomatoes first?*

2016-10-QUIS-Tomato-A

<In>utus-an=*niya* [ang=*panganay na anak*]<sup>FOC</sup> upang b<um>ili  
 <RLS>order-UV<sub>an</sub>=3SG.GEN NOM=eldest LK child to <AV>buy  
 ng=*kamatis*.  
 GEN=tomato

She sent her eldest child to buy tomatoes.

(314) **Question:** *Which child brought home tomatoes?*

2016-10-QUIS-Tomato-A

[Ang=*bunso=niya*]<sup>FOC</sup> [ang=*naka-pagdala ng=kamatis*]<sup>BG</sup>.  
 NOM=youngest.child=3SG.GEN NOM=RLS.ABIL.AV-bring GEN=tomato

Her youngest child was the one who brought (home) tomato(es).

Notice that *ang=panganay na anak* ‘the eldest child’ is focused *in situ* in (313) and does not appear in the sentence-final position, where it would receive prosodic prominence according to Kaufman (2005). Canonical word order or *in-situ* focus was, however, not used in response to (Q3). A possible explanation for this observation is that (Q3) is the only question that targets the actor argument and according to Nagaya and Hwang (2018), Tagalog allows *in-situ* focus only for non-actor arguments.

Comparing (314) and (311b), the main difference is, apart from choice of words, the order of the two *ang*-phrases, which is *reversed* in (311b). This was ultimately the motivation of the name ‘reversed *ang*-inversion’.

### 7.1.2 Frog Stories

Out of the 14 consultants that recorded *Frog Stories* with us in 2016, 7 worked with the first book of the series *A boy, a dog and a frog* (Mayer 1967). As I have already hinted above, there is one situation in this book that *all 7* speakers described using a reversed *ang*-inversion:

#### (315) 2016-6-Frog1

**Context:** After trying to catch a frog for a while, the boy and his dog position themselves on opposite sides of a large log lying across a pond with the frog in the middle. The dog pounces at the frog while the boy tries to catch it with his net. The frog jumps away at the last second.

“When they saw the frog that was in the middle, they approached it. When he was about to . . . you know . . . the frog with the net...”

“*Noong nakita nila ang palaka na nasa gitna, pinuntahan nila. Kaso nga lang, noong aanuhan niya ng panungkit ang palaka...*”

[*Ang=na-huli-∅=niya*]<sup>BG</sup>                      *ay* [*ang=alaga niya-ng=aso*]<sup>FOC</sup>.  
 NOM=ABIL.RLS-catch-UV<sub>in</sub>=3SG.GEN INV NOM=pet    3SG.GEN-LK=dog

What he caught was [his pet dog]<sup>FOC</sup>.

The other consultants produced several variations of this sentence differing only slightly in the choice of words or producing a pause in place of the inversion marker *ay*. This omission of the inversion marker is quite typical for informal Tagalog and is thus unsurprising in this setting.

When the *ay* is omitted, the construction, once again, closely resembles a regular *ang*-inversion. One of the younger speakers not only omitted the inversion marker *ay* but didn’t even produce a pause in its place. Thus, even in spoken Tagalog, the sentence viewed in isolation can be ambiguous with respect to its

focus structure: If it is construed as a reversed *ang*-inversion, the second *ang*-phrase is the focus, if it is construed as a regular *ang*-inversion, the first one is:

(316) 2016-12-Frog1

[*Ang=na-huli-∅=niya*]<sup>BG</sup>,                    [*ang=aso=niya*]<sup>FOC</sup>.  
 NOM=ABIL.RLS-catchUV<sub>in</sub>=3SG.GEN NOM=dog=3SG.GEN  
 What he caught is [his dog]<sup>FOC</sup>.

(317) # [*Ang=na-huli-∅=niya*]<sup>FOC</sup>                    [*ang=aso=niya*]<sup>BG</sup>.  
 NOM=ABIL.RLS-catch-UV<sub>in</sub>=3SG.GEN NOM=dog=3SG.GEN

It is [the one he caught]<sup>FOC</sup> that is his dog.

I will argue, however, that the interpretation shown in example (317) is infelicitous. This time, lacking an explicit question that is being answered, it is the context that helps disambiguate.

As a narrow-focus construction, the regular *ang*-inversion in (317) evokes the presupposition “*x is the boy’s dog*”, while providing the new information “*x = the one he caught*”. So, this utterance would make sense in a quite odd situation where the identity of the boy’s dog is unclear and the dog might be some other entity and the speaker wishes to clarify that the dog is actually the thing the boy has just caught. However, since the identity of the dog, as one of the main characters of the story, has been clear since the beginning and the context provides no indication of such a strange scenario, this interpretation is completely nonsensical, and thus, infelicitous.

Construing the sentences as having the focus structure shown in (316), that is, as a reversed *ang*-inversion would mean that it evokes the presupposition “*the boy caught x.*”, while providing the new information that “*x = his dog*”. Given the context that the boy is about to swing his net in an attempt to catch the frog, the presupposition is completely reasonable. The sentence thus conveys the information that the boy caught his dog rather than the frog, which is clearly what the speaker intended it to do.

Notice that the dog contrasts with the frog here – we have an explicit alternative. Thus, we have a clear case of contrastive focus. This establishes that reversed *ang*-inversion can be used for both completive and contrastive focus.

The unanimous consensus displayed by our consultants in terms of construction choice is quite remarkable and raises the question why they all chose reversed *ang*-inversion rather than a regular *ang*-inversion. I will argue that this is linked to the *Information-Flow Principle*: If there is a continuous aboutness topic, speakers prefer to realize it at the beginning of a sentence to create a link to the immediate common ground, i. e. the previous discourse. In the case of (315) and (316), the first *ang*-phrase *ang=nahuli=niya* ‘the thing he caught’ references the continuous

aboutness topic of the section: the boy, coded here by the personal pronoun *niya* ‘3SG.GEN’, and his endeavor to catch the frog. It is also this *ang*-phrase that evokes the presupposition that the boy has indeed caught something. This open proposition, again, creates a link between this sentence and the previous discourse before providing the new information by specifying what it was that he caught (compare this to Ward and Birner 2011:1949ff). In an *ang*-inversion, this information would be realized at the end of the sentence, while beginning with the new information resulting in a less coherent discourse.

The *Information-Flow Principle* is also a relevant factor in English when speakers opt for an information-structurally marked word order (Ward and Birner 2011) or when choosing between different cleft-structures (Declerck 1984). I will revisit this line of thought in section 7.2. In the remainder of this section, I would like to investigate which anaphoric devices the speakers used to refer to the different protagonists of the story to solidify my claim that the boy and his actions can indeed be seen as a continuous aboutness topic, which is a necessary prerequisite to arguing with the *Information-Flow Principle*.

As discussed in section 6.2, Nagaya (2006a) found that Tagalog speakers tend to code third person referents that are currently topics using the personal pronouns *siya/niya* ‘3SG.NOM/GEN’, thus realizing topic chains as “pronoun chains”. On the other hand, non-topics, i. e. presupposed referents that are not currently the topic, are taken up using demonstratives, such as *ito* ‘this’ or zero anaphora. From a cross-linguistic perspective, this is very unusual as zero coding would be expected for continuing topics, while more marked expressions such as demonstratives and personal pronouns are normally used to indicate a topic switch. (See section 6.1, specifically the markedness scale from Van Valin 2005 shown in Figure 6.1.)

Table 7.2 shows how often each of the three anaphoric devices was used to refer to the three main referents in the the first *Frog Story* book (*A boy, a dog and a frog*) up to the point when the boy catches the dog with his net, i. e. when the

**Tab. 7.2:** Use of anaphoric devices used for the three main third person referents in the consultants’ recounting of the first *Frog Story* (*A boy, a dog and a frog*) before the boy catches his dog with his net

anaphoric device	boy	dog	frog
lexical noun ( <i>bata / aso / palaka</i> )	40	47	84
personal pronouns ( <i>siya / niya</i> )	74	3	2
demonstratives ( <i>ito / nito</i> )	0	1	11
zero anaphora ( $\emptyset$ )	2	0	14
$\Sigma$	116	51	111

consultants uttered their respective version of (315). Clearly, the personal pronouns *siya* ‘3SG.NOM’ and *niya* ‘3SG.GEN’ are mostly reserved for the boy. More importantly, while they are used to code the other two referents as well, only the boy is the only referent occurring in longer pronoun chains extending across up to 9 clauses (Speaker 11).

The dog is usually referred to using the lexical noun *aso* ‘dog’, names some consultants had given him (such as *Milo* or *Pulgoso*), or he is referred to together with the boy using third person plural personal pronouns *sila/nila* ‘3PL.NOM/GEN’.

The entire story centers around the boy trying to catch the frog and this particular part of the narrative details his ultimately unsuccessful attempts to do so. The dog, on the other hand, is not understood as the aboutness topic as can be seen by the referring expressions used to refer to him – three references across seven speakers using personal pronouns don’t allow for pronoun/topic chains involving the dog. The fact that he ends up getting caught in the boy’s net is, unexpected and new information. Therefore, the reversed *ang*-inversion indeed realizes the topic at the beginning of the sentence and presents the new information at the end.

After bringing the dog to the listeners attention, one of the consultants repeated the same proposition in form of a regular *ang*-inversion, possibly to stress the unexpectedness of this event:

(318) 2016-12-Frog1

[*Ang=na-huli-∅=niya*]<sup>BG</sup>,                      [*ang=aso=niya*]<sup>FOC</sup>.  
 NOM=ABIL.RLS-catch-UV<sub>in</sub>=3SG.GEN    NOM=dog=3SG.GEN

[*Ang=aso*]<sup>FOC</sup> [*ang=na-huli-∅*]<sup>BG</sup>.  
 NOM=dog    NOM=ABIL.RLS-catch-UV<sub>in</sub>

What he caught was his dog. His dog is what was caught.

In the regular *ang*-inversion portion of (318), the boy is zero-coded, which according to Nagaya (2006a), indicates he has now been demoted to a non-topic. The speaker then continues talking about the frog, its natural adaptation to water and the advantages this brings with it in this setting. After keeping the frog as topic for a while, he switches back to the boy to move on with the story.

Notice that in examples (315), (316), and (318), the personal pronoun *niya* ‘3SG.GEN’ occurs both in the focus and the background portion. However, it is the first occurrence in the background portion that continues the topic/pronoun chain by identifying the boy as the actor of the catching event. This is what is relevant for our considerations here. In the focal portion of the sentence its used to indicate possession and is not really necessary:

## (319) 2016-11-Frog1

[*Ang=na-huli-∅=niya*]<sup>BG</sup>,                    [*si=Milo.*]<sup>FOC</sup>  
 NOM=ABIL.RLS-catch-UV<sub>in</sub>=3SG.GEN NOM=Milo

What he caught was Milo.

Speakers who had given the dog a name, just used that instead, thus, eliminating the need for the possessive pronoun. Additionally, we have already seen in chapter 6 possessive pronouns and argument pronouns are to some extent independent of each other (see ex. 309c).

Such an analysis in terms of the *Information-Flow Principle* would also nicely explain, why reversed *ang*-inversions are the preferred response to a *wh*-question: The first *ang*-phrase basically reiterates material from the question and thus provides a link to what the speaker's interlocutor said.

Another context in the third book of the series, *A boy, a dog, a frog and a friend* (Mayer 1971), led two more consultants to produce a reversed *ang*-inversion.

## (320) 2016-1-Frog3

**Context:** The boy, his dog and his frog are fishing in a pond, when the boy seems to have caught something. He is pulled into the water by what turns out to be a turtle that had taken his bait. After a short fight between the turtle and the dog, the turtle seems to be dead. While the boy is digging a grave for it, the turtle starts moving again and takes the boys fishing rod. "And the dog is surprised when he sees that the turtle is moving towards the fishing rod and it suddenly barks and the boy sees that the turtle is alive and..."

"*At nagulat ang aso, nang nakita niya ang pagong na gumagapang patungo doon sa pamingwit at agad itong tumahol at nakita ng bata na ang pagong ay buhay at...*"

[*Ang=gusto=lamang=nito*]<sup>BG</sup> ay [*ang=kanya-ng pamingwit*]<sup>FOC</sup>.  
 NOM=want=only=this.GEN INV NOM=3SG.DAT-LK fishing.rod

All it really wanted was his fishing rod.

In their interpretation, the turtle had pretended to be dead with the ultimate goal of stealing the boy's fishing rod. This portion of their narrative aims at clarifying this intention of the turtle. One of the consultants phrased this as follows:

## (321) 2016-3-Frog3

- a. *Tapos, iyon=pala, buhay ang=pagong.*  
 then there=PTCL alive NOM=turtle  
 Then, there! The turtle is alive.

- b. *Nag-pa-patay-patayan=lang=siya.*  
 AV.RLS-IPFV~play.dead=only=3SG.NOM  
 It was just pretending to be dead.
- c. *Tapos [ang=gusto=niya=lang=pala]<sup>BG</sup>, [ang=stick ng=bingwit]<sup>FOC</sup>.*  
 then NOM=want=3SG.GEN=only=PTCL NOM=stick GEN=fishing.rod  
 Then, all it wanted was the fishing rod.

After it is mentioned in (321a), the turtle is subsequently taken up by the personal pronouns *siya* ‘3SG.NOM’ in (321b) and *niya* ‘3SG.GEN’ in (321c), constituting the start of a pronoun chain. This shows that the speaker now considers the turtle to be the current aboutness topic. Then, in (321b), the speaker says that the frog had been pretending to be dead, which means that there is an ulterior motive to his actions, which she then supplies in (321c). The first *ang*-phrase of the reversed *ang*-inversion then evokes the presupposition “*The turtle only wanted x*”. This open proposition links back to the turtle, the current aboutness topic, as well as his secret intention that was only hinted at in the previous sentence. Only then does the speaker provide the turtle’s real goal, the value of the variable *x* in form of the second *ang*-phrase of the reversed *ang*-inversion. Thus, this example fits very well with the hypothesis that reversed *ang*-inversion is chosen by speakers to realize constant aboutness topics at the beginning of the sentence, thus providing a link to the immediate common ground.

## 7.2 Reversed *ang*-inversion in the *Hunger Games* Data

So far, we have linked the choice between regular and reversed *ang*-inversion to the *Information-Flow Principle*, that is, speakers prefer reversed *ang*-inversion over regular *ang*-inversion, when it allows them to realize a continuous topic at the beginning of the sentence. Declerck (1984) describes a similar preference in English when choosing between *it*-clefts and *wh*-clefts. In the following section 7.2.1, I will look into the effect this common preference has on the translation of cleft structures from English to Tagalog by conducting a case study using the *Hunger Games* novels and their translations. After that, in section 7.2.2, I will look into some other English non-cleft constructions that were translated using reversed *ang*-inversion.

### 7.2.1 Translations of cleft structures

In English, we are quite used to marking focus by prosody, by giving the focused element a pitch accent (see e. g. Lambrecht 1994:238–241). There are, however, also syntactic means that can be used to mark narrow focus, that are particularly useful

when prosody is not an option, e. g. in written texts. These are cleft constructions, such as the following (Collins 1991):

- (322) *It was [the fishing rod]<sup>FOC</sup> that he wanted.* (it-cleft)  
 (323) *[The fishing rod]<sup>FOC</sup> was what he wanted.* (inverted *wh*-cleft)  
 (324) *What he wanted was [the fishing rod]<sup>FOC</sup>.* (*wh*-cleft)  
 (325) *All he wanted was [the fishing rod]<sup>FOC</sup>.* (*all*-cleft)

One key difference among these four sentences concerns the ordering of focus and background: the constructions in (322) and (323) begin with the focus, which is followed by the background, while (324) and (325) are introduced by the background and present the focus sentence-finally. Discussing *it*-clefts and inverted and non-inverted *wh*-clefts, Declerck (1984:274ff) points out that discourse structure plays an important role in choosing *which* cleft is used in English, the preference being to realize a continuous topic earlier in the sentence. Thus, construction choice seems to be driven by the same criteria I have proposed for regular and reversed *ang*-inversion in Tagalog. Given the similarity of *wh*-clefts and *all*-clefts in structure and position of the focused constituent, including them in this case study as well seemed reasonable, especially since an *all*-cleft provided such a natural sounding translation of example (321c).

For the sake of this case study, we will have to assume that translators generally strive to create texts that sound natural to their readers and thus select constructions that are contextually appropriate, both from an information-structural and a discourse-structural point of view. This assumption is also necessary for other information-structural investigations that have been conducted using translations, such as those of Shimojo and Choi (2000) and Lee and Shimojo (2016), who compared Korean and Japanese topic markers in contemporary Bible translations, Balogh (2020) who investigated the different focus domains that can associate with the Hungarian additive particle *is* ‘also’, or Latrouite and Riester (2018), who used the *Unhappy Rats* and *Unhappy Dog* to elicit different focus structures in Tagalog. The importance of the *Information-Flow Principle* in both English and Tagalog then suggests the following hypothesis, which can be nicely tested using the *Hunger Games* corpus:

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#### Hypothesis

*It*-clefts and inverted *wh*-clefts are mostly translated by *ang*-inversions or adjunct inversions.  
 (Non-inverted) *wh*-clefts and *all*-clefts are mostly translated by reversed *ang*-inversions.

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To be clear, this is not meant to suggest a complete identical distribution of the two Tagalog constructions and the two respective English cleft-constructions they



correspond to within the hypothesis. It has already been pointed out by Latrouite (2020) that regular *ang*-inversion has a much wider distribution than *it*-clefts and we will see in section 7.2.2 that the same holds true for reversed *ang*-inversion and *wh/all*-clefts. Rather, the hypothesis means that in contexts that allow for syntactic focus marking by a cleft in English, we will probably find a syntactic narrow focus construction in Tagalog. Furthermore, if the focused constituent is at the beginning (end) of the English sentence, it will also be at the beginning (end) of the corresponding Tagalog sentence.

The necessity to include adjunct inversion in the hypothesis arises from the observation that clefting in English is not only possible for arguments but also for a wide variety of adjuncts. In many cases, such as the following temporal adjuncts, this is possible in an *it*-cleft or an inverted *wh*-cleft, but less acceptable in *wh*-clefts and downright ungrammatical in *all*-clefts:

- (326) *It was **yesterday / then** that I realized I had made a mistake.*  
 (327) ***Yesterday / Then** was when I realized I had made a mistake.*  
 (328) *When I realized I had made a mistake was <sup>?</sup>**yesterday** / <sup>\*</sup>**then** / <sup>\*</sup>**that**.*  
 (329) *<sup>\*</sup> All I realized I had made a mistake was **yesterday / then / that**.*

In a Tagalog translation, (326) and (327) could not be translated using *ang*-inversion, since the time of an action is not accessible via the voice system, i. e. the time cannot be made the *ang*-marked argument of the verb and thus it cannot be *ang*-fronted. Here we would expect adjunct inversion (see section 5.1.2) to be used instead. Since this construction also begins with the focal portion of the sentence, it doesn't change much in terms of the *Information-Flow Principle*. Given that we don't expect such cases as much for *wh*-clefts and *all*-clefts the hypothesis states that we expect them to be predominantly translated by reversed *ang*-inversion only.

The English cleft-constructions are easily searchable using regular expressions. This was done for all four cleft types. The search results then had to be sifted through manually to sort out any false positives. Then, the Tagalog translations of each cleft construction were looked up and sorted by construction. Table 7.3 shows an overview of the results<sup>2</sup>.

The table shows that our expectations are very well met, especially for the *all*-clefts, which are translated by reversed *ang*-inversions in 83% of the cases,

<sup>2</sup> Note that the numbers in the *wh*-cleft column differ from those in Table 2 of Nuhn (2019:489) because several more *wh*-clefts were found after the publication that were previously overlooked due to their more complex structure. They contained subordinate clauses or appositions set off by commas and thus did not fit the regular expression that was initially used.

**Tab. 7.3:** Overview – frequencies of constructions used to translated English cleft structures. For reversed *ang*-inversions, the two numbers reflect whether the *ay* was overt (before ‘+’ sign) or not (after ‘+’ sign).

construction in translation	<i>it</i> -cleft		inv. <i>wh</i> -cleft		<i>wh</i> -cleft		<i>all</i> -cleft	
<i>ang</i> -inversion	<b>33</b>	(69 %)	<b>18</b>	(55 %)	1	(3 %)	3	(4 %)
adjunct inversion	<b>7</b>	(15 %)	<b>12</b>	(36 %)	—	(0 %)	—	(0 %)
<i>ay</i> -inversion	1	(2 %)	—	(0 %)	—	(0 %)	—	(0 %)
reversed <i>ang</i> -inversion	—	(0 %)	—	(0 %)	<b>28+1</b>	(81 %)	<b>58+1</b>	(84 %)
unmarked	3	(6 %)	2	(6 %)	1	(3 %)	3	(4 %)
equative	—	(0 %)	—	(0 %)	2	(5 %)	4	(6 %)
other	4	(8 %)	1	(3 %)	3	(8 %)	1	(2 %)
∑	48		33		36		70	

and the inverted *wh*-clefts, which were translated by *ang* or adjunct inversion 91 % of the time.

*It*-clefts and *wh*-clefts also match our hypothesis 84 % and 81 % of the time, which is quite convincing, as well. In fact, as I will argue below, the *wh*-clefts translated using an equative structure are so similar to reversed *ang*-inversion that, for all intents and purposes, they can still be taken to support our hypothesis, bringing us up to 86 %.

Now, let us look at each of the English cleft constructions individually and have a more detailed look at how they are translated, paying particular attention to the sentences that were not translated according to our hypothesis as they can provide valuable insights into other structures that can be used to express narrow focus.

### 7.2.1.1 *it*-Clefts

Most of the 48 *it*-clefts that occurred in the novels were simply translated using *ang*-inversions, or when that was not possible, adjunct inversions. In most cases, this was simply done by *ang*-inversion of the argument itself:

(330) **The Hunger Games: *Mockingjay* (Collins 2010:168; Reyes 2013:169)**

[*Ang=mga=istorya*]<sup>FOC</sup> *ang=g(um)u~gugol ng=oras.*  
 NOM=PL=STORY      NOM=(AV.RLS)IPFV~COST GEN=time

**Original:** It's [stories]<sup>FOC</sup> that take time.

In other cases, the constituent was fronted to the left-detached position (shown below in boldface) and then, clause-internally, a resumptive pronoun was fronted in its place, as in the following example:

(331) **The Hunger Games: *Mockingjay* (Collins 2010:90, Reyes 2013:92)**

**Context:** Katniss visits a hospital and realizes how her presence gives the wounded hope and inspiration. The mere sight of her lights up their faces, while her words have little additional effect.

“The sounds of pain and grief begin to recede, to be replaced by words of anticipation. From all sides, voices beckon me. I begin to move, clasping the hands extended to me, touching the sound parts of those unable to move their limbs, saying hello, how are you, good to meet you. Nothing of importance, no amazing words of inspiration. But it doesn’t matter. Boggs is right.” (Collins 2010:90)

“*Ang mga tunog ng sakit at pighati ay nabawasan at napalitan ng mga salita ng pag-asam. Tinatawag ako ng mga boses sa lahat ng panig. Nagsimula akong kumilos. Hinawakan ko ang mga kamay na iniaabot sa akin, hinhawakan ang maaayos na parte ng katawan ng mga taong hindi maigalaw ang kanilang biyas, nagsasabi ng “hello,” “kumusta ka na,” at “mabuti at nakilala kita.” Walang gaanong importansiya, walang magagandang salitang magbibigay-inspirasyon sa kanila. Ngunit hindi na iyon mahalaga. Tama si Boggs.*” (Reyes 2013:92)

**Ang=ma-kita=ako-ng buhay, [iyon]<sup>FOC</sup> ang=mag-si~silbi-ng**  
 NOM=UV-see=1SG.NOM-LK alive DEM.DIST.NOM NOM=AV-IPFV~serve-LK  
*inspirasyon.*  
 inspiration

Seeing me alive, that is what serves as inspiration.

**Original:** It’s [the sight of me, alive]<sup>FOC</sup>, that is the inspiration.

This translation seems to be preferred when the focused constituent was longer or had a more complex internal structure, as in the example above.

Since the left-detached position is well-known to typically house presupposed information, this fits quite well with our hypothesis and the *Information-Flow Principle*: Both author and translator are comfortable mentioning these referents sentence-initially since the reader is already familiar with these concepts. In (331), the sentence sums up Katniss’s observation that seeing her is a more powerful source of inspiration than hearing her speak. However, both sources have been introduced in the context already, so although *ang makita akong buhay* ‘the sight of me, alive’ is the narrow focus of this sentence, the event of seeing Katniss alive is a given referent, and one that is under discussion in this section of the novel. Similarly, because Haymitch has been in on the conspiracies to overthrow the *Capitol* from the beginning, just as he has been Katniss’s coach, i. e. one of her

principal sources of information, since book one, her eventually turning to him for answers can be taken as given as well.

#### 7.2.1.1.1 Discontinuous Clefts

Table 7.3 lists one *ay*-inversion and three sentences that were translated with canonical word order in Tagalog. Looking at one of the examples from this category, it is easily understood why the translator did not choose *ang*-inversion or adjunct inversion in these cases:

##### (332) **The Hunger Games: *Catching Fire* (Collins 2009:368)**

**Context:** After winning the *Hunger Games*, Katniss and Peeta, the two tributes from District Twelve, are being interviewed. Discussing their relationship makes Katniss particularly uncomfortable. Finally, the moderator moves on to discussing the various dangers that they faced and survived in the arena.

*“But it’s not until we get around to the mutts that I forget I’m on camera.”*

This construction is what Declerck (1984:266) refers to as a *discontinuous cleft*. Although it is syntactically an *it*-cleft, when read in context, the clefted constituent does not receive the characteristic contrastive prosody, nor is it construed as the narrow focus of the sentence. Rather, both parts of the sentence provide new information and, in fact, it is the *that*-clause that actually brings the narrative forward. Given that Katniss is generally uncomfortable being in the limelight, her forgetting that she is on camera is in no way to be expected, much less presupposed as it would be in a regular *it*-cleft. Thus, this part of the sentence is not defocalized as it typically would be. Both parts of the sentence carry normal stress. The function of such discontinuous *it*-clefts is, thus, not to mark narrow focus. Rather, they are used as a stylistic device, e. g. to create suspense.

Consequently, it seems fitting to find the following translation in the Tagalog version:

##### (333) **The Hunger Games: *Catching Fire* (Reyes 2012a:394)**

*Pero na-kalimut-an=ko=lang na nakatutok sa=akin*  
 but ABIL.RLS-forget-UV<sub>an</sub>=1SG.GEN=only LK pointed DAT=1SG.DAT  
*ang=camera nang ma-punta=kami sa=paksa tungkol*  
 NOM=camera when ABIL-reach=1PL.EXCL.NOM DAT=subject about  
*sa=pagsalakay ng=mga=mutt.*  
 DAT=attack GEN=PL=mutt

But I just forget that a camera is pointed at me when we reach the subject of the attack of the mutts.

The translator begins with the information in the English *that*-clause, stating that Katniss forgets that she is on camera. Only then does she specify when this happens using a subordinate clause that is simply added to the end of the sentence and not adjunct fronted, which would have been possible, as well.

#### 7.2.1.1.2 The ‘other’ Category

Now, I would like to move on to the four *it*-clefts whose translations ended up in the *other* category. This category is basically a collection of all constructions that didn’t fit into any of the other categories but didn’t occur often enough to justify introducing an additional category. Nevertheless, there were some very interesting constructions that deserve some attention.

The first of these is the following example:

#### (334) **The Hunger Games (Collins 2008:176; Reyes 2012a:184)**

**Context:** During the *Hunger Games*, Katniss flees from a “wall of fire” engineered by the Gamemakers. Inhaling so much smoke causes her to vomit violently, thus losing water, which is hard to come by in the arena. She is then targeted by fireballs and forced to flee even further until she believes herself temporarily in safety. She begins vomiting again.

“How long I scramble along dodging the fireballs I can’t say, but the attacks finally begin to abate. Which is good, because I’m retching again.” (Collins 2008:176)

“*Hindi ko alam kung gaano katagal akong tumakbo habang umiiwas sa mga bolang apoy pero sa wakas, nagsimula nang matapos ang mga pag-atake. Mabuti iyon dahil nasusuka na naman ako.*” (Reyes 2012a:184)

*Sa=pagkakataon-g ito, maasim=iyon na p(um)a~paso*  
 DAT=time this.NOM acidic=that.NOM LK (AV.RLS)IPFV~scald  
*sa=lalamunan=ko hanggang sa=ilong=ko.*  
 DAT=throat=1.SG.GEN up.to DAT=nose=1.SG.GEN

**Original:** This time it’s an acidic substance that scalds my throat and makes its way into my nose as well.

Structurally, this is actually very close to the *ang*-inversion we would have expected to find. Since the clefted constituent is indefinite in English, we wouldn’t get an *ang*-marked noun phrase in this position and the translator decided to go with the adjective *maasim* ‘acidic’ instead. This predicate takes the demonstrative *iyon* ‘that.NOM’ as its argument, which is modified by the following relative clause to ‘that, which scalds my throat up to my nose’.

Reformulating this sentence as an *ang*-inversion could look like this:

- (335) ...(*isa-ng*) *maasim* (*na sustansiya*) *ang=p(um)a-paso*  
 one-LK acid LK substance NOM=(AV.RLS)IPFV~scald  
*sa=lalamunan=ko...*  
 DAT=throat=1.SG.GEN

Here, the argument is the characteristic headless relative clause that is turned into a referring expression by adding the case marker *ang*. This is, in fact the main difference between the actual translation and an *ang*-inversion: In the translation, the relative clause is not headless, but is a regular relative clause modifying the demonstrative *iyon*. This difference appears even more minor given that there is evidence suggesting that the case marker *ang* actually developed as a contraction of a demonstrative with a linker (Reid 1979, Foley 1976:25–26), in other words precisely the type of construction we find here.

The second translation in the *other* category is quite similar in that its relative clause, too, has an overt head. We have already seen this sentence as example (159) in section 4.1.5.3. It is repeated here as (336):

(336) **The Hunger Games (Collins 2008:329; Reyes 2012b:351)**

**Context:** Close to a lake, Katniss sings a four-tone melody another tribute, Rue, had taught her. Birds called *Mockingjays* pick up the tune and repeat it. As more and more of them begin repeating the short tone sequence, it creates an unearthly harmony. Rue had told her that she uses this mechanism to signal the end of the work day in her home District.

“The music swells and I recognize the brilliance of it. As the notes overlap, they compliment one another, forming a lovely, unearthly harmony.” (Collins 2008:329)

“*Lumakas ang musika at kinilala ko ang kagalingan niyon. Habang nagkakasabay-sabay ang mga nota, pinapaganda niyon ang bawat nota, bumubuo ng isang maganda at hindi makalupang harmony.*” (Reyes 2012b:351)

*Ito ang=tunog na, salamat kay=Rue, ay*  
 this.NOM NOM=sound LK thanks DAT=Rue INV  
*nag-pa~pa-uwi gabi-gabi sa=mga=trabahante*  
 AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home every-evening DAT=PL=workers  
*ng=taniman sa=District Eleven.*  
 GEN=orchard DAT=District Eleven

**Original:** It was this sound then, thanks to Rue, that sent the orchard workers of District 11 home each night.

At first glance, this looks somewhat more complex than the previous example, but is easily broken down. The main clause is *Ito ang=tunog* ‘This is the sound’. The

linker *na* then introduces a relative clause modifying *tunog* ‘sound’. The *ay*-inverted phrase *salamat kay=Rue* ‘thanks to Rue’ belongs to the relative clause and is what makes this clause look so much more complicated than the previous one. So, let us consider the sentence without this parenthetical portion (337a) and compare it to a possible translation using *ang*-inversion (337b):

- (337) a. [Ito]<sup>FOC</sup> [ang=tunog na nag-pa~pa-uwi gabi-gabi  
 this.NOM NOM=sound LK AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home every-evening  
 sa=mga=trabahante ng=taniman sa=District Eleven]<sup>BG</sup>.  
 DAT=PL=workers GEN=orchard DAT=District Eleven  
 This is the sound that sent the orchard workers of District 11 home each night.
- b. [Ito-ng tunog]<sup>FOC</sup> [ang=nag-pa~pa-uwi gabi-gabi  
 this-LK sound NOM=AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home every-evening  
 sa=mga=trabahante ng=taniman sa=District Eleven]<sup>BG</sup>.  
 DAT=PL=workers GEN=orchard DAT=District Eleven  
 This sound is what sent home the orchard workers of District 11 home each night.

Now, the difference between the two versions is much easier to pinpoint: In the *ang*-inversion translation, the focused constituent is *itong tunog* ‘this sound’, just as in the English version. In the version found in the actual translation, the focus is just the demonstrative pronoun *ito* ‘this’, while *tunog* ‘sound’ appears in the background portion of the sentence where it serves as the head of the following relative clause. The translations given above for examples (337a) and (337b) attempt to reflect this difference<sup>3</sup>.

One could then speculate that the reason the translator opted for the translation in (336) rather than the simple *ang*-inversion was the ‘thanks to Rue’ part of the sentence. In an *ang*-inversion, this would have led to the very awkward *ang*-phrase:

- (338) ang=[salamat kay=Rue ay nag-pa~pa-uwi gabi-gabi  
 NOM=thanks DAT=Rue INV AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home every-evening

<sup>3</sup> The *ay* we saw in (336), is missing from (337a) since there is no more *ay*-inversion in the relative clause when we omit the parenthetical *salamat kay=Rue* ‘thanks to Rue’. Leaving the *ay* in or deleting the linker *na* instead both result in ungrammatical constructions:

\* *Ito ang tunog na ay nagpapauwi gabi-gabi...*

\* *Ito ang tunog ay nagpapauwi gabi-gabi...*

The only grammatical option is to delete the *ay*-fronted phrase together with the inversion marker.

*sa=mga=trabahante ng=taniman sa=District Eleven*  
 DAT=PL=workers GEN=orchard DAT=District Eleven

what, thanks to Rue, sent home the orchard workers of District 11 home  
 each night

While we have seen in section 4.1.5.3 that *ay*-inversions within RPs are not unheard of, this particular example seems very difficult to parse since the RP-NUCLEUS *nag-pa~pa~uwi* ‘AV.RLS-IPFV~CAUS<sub>PA</sub>-go.home’ is not only preceded by an *ay*-fronted phrase but also followed by the adverbial modifier *gabi-gabi* ‘every evening’ and a lengthy argument with its own modifiers. Thus, the translator may have chosen (336) simply because it is simpler and easier to parse.

Finally, let us turn to the last two translations of this category. In both cases, there is a cause-effect relationship between the clefted constituent and the *that*-clause in both cases. This is reflected in the translations using the particle *kaya* ‘therefore, so’, which indicates that what follows is an effect or a consequence.

Consider first the following *it*-cleft translation:

(339) **The Hunger Games: *Catching Fire* (Collins 2009:338; Reyes 2012a:352)**

**Context:** Katniss is speculating why the other tributes are protecting Peeta, the other tribute from her District. She remembers how well he did at the interview preceding the *Games*. She concludes that his inherent goodness is not enough. But then she remembers how well he did in the interviews before the *Games* and due to his superior eloquence. She realizes that this combination is what is so powerful.

“Certainly he is brave, but we have all been brave enough to survive a Games. There is that quality of goodness that’s hard to overlook, but still...and then I think of it, what Peeta can do so much better than the rest of us. He can use words. He obliterated the rest of the field at both interviews.” (Collins 2009:338)

“*Walang dudang matapang siya, pero lahat kami ay sapat ang naging tapang para mapagtagumpayan ang isang Laro. Mayroon siyang taglay na kabutihan na mahirap bale-walain, pero gayunman...kapagkuwan ay naisip ko, kung ano ang kayang gawin ni Peeta nang higit pa sa kayang gawin ng alinman sa amin. Kaya niyang gumamit ng mga salita. Tinalo niya ang lahat ng mga kalaban sa parehong interview.*” (Reyes 2012a:352)

*At marahil iyon ay dahil sa=pinagbabataya-ng kabutihan kaya*  
 and maybe that.NOM INV because DAT=underlying-LK goodness so  
*na-ga~gawa-∅=niya-ng ma-antig-∅ ang=madla – hindi,*  
 ABIL.RLS-IPFV~do-UV<sub>in</sub>=3.SG.GEN-LK ABIL.move-UV<sub>in</sub> NOM=crowd no



*isa-ng bansa – sa=panig=niya sa=isa-ng pagbabago lang*  
 one-LK country DAT=side=3.SG.GEN DAT=one-LK turn only  
*ng=isa-ng simple-ng pangungusap.*  
 GEN=one-LK simple-LK sentence

**Original:** And maybe it's because of that underlying goodness that he can move a crowd – no, a country – to his side with the turn of a simple sentence.

Since we are dealing with a clefted causal subordinate clause here, *ang*-inversion is not an option anyway. If anything the translator may have used adjunct inversion, which would have looked something like this:

(340) ... *dahil sa=pinagbabataya-ng kabutihan=niya*  
 because DAT=underlying-LK goodness=3.SG.GEN  
*na-ga-gawa-∅=niya-ng ma-antig-∅ ang=madla...*  
 ABIL.RLS-do-UV<sub>in</sub>-LK ABIL-move-UV<sub>in</sub> NOM=crowd

Instead, the translator appears to imitate the structure of the English sentence. First, she quite literally translates the focus portion of the *it*-cleft: *At marahil iyon ay dahil sa pinagbabatayang kabutihan* 'And maybe that is because of the underlying goodness'. Then, what follows is a literal translation of the English *that*-clause introduced by the particle *kaya* 'therefore, so' giving additional emphasis to the causal relationship between the two sentence fragments. So, although we don't get an *ang*-inversion, the translation hardly deviates from the original.

Let us now turn to the final item of this category:

(341) **The Hunger Games: *Catching Fire* (Collins 2009:19; Reyes 2012a:18)**

**Context:** Katniss returns to her new house in *Victor's Village* from hunting in the forest. To her surprise, President Snow is already there waiting for her.

*Marahil ang=pagiging bago ng=bahay, o ang=pagkabigla=ko na*  
 maybe NOM=being new GEN=house or NOM=shock=1.SG.GEN LK  
*ma-kita=siya, o dahil pareho=namin-g alam na*  
 UV-see=3.SG.NOM or because both=1PL.INCL.GEN-LK know LK  
*kaya=niya=ako-ng i-pa-patay sa=loob ng=isa-ng*  
 capable=3.SG.GEN=1.SG.NOM-LK UV<sub>i</sub>-CAUS<sub>PA</sub>-kill DAT=inside GEN=one-LK  
*segundo, kaya pakiramdam=ko ay isa=ako-ng intruder.*  
 second so feeling=1.SG.GEN INV one=1SG.GEN-LK intruder

**Original:** "Perhaps it is the newness of the house or the shock of seeing him or the mutual understanding that he could have me killed in a second that makes me feel like the intruder."

Of the three possible causes for her feeling like an intruder, the first two are simply listed as NPs in Tagalog connected by *o* ‘or’. Only the third is realized as a full subordinate clause introduced by *dahil* ‘because’. This leads up to the translation of the English *that*-clause, which is introduced again by the particle *kaya*. Comparing this to the previous example, they are actually quite similar. The main difference being that the focal portion of the *it*-cleft is not really mirrored in Tagalog this time.

It is, however, noteworthy, that both examples – in fact all four examples of the category *other* – honor the *Information-Flow Principle* even though they don’t involve *ang*-inversion or adjunct inversion, suggesting that it is not just relevant in Tagalog for choosing between reversed and regular *ang*-inversion, but that it is a more generally valid principle in Tagalog.

### 7.2.1.2 Inverted *wh*-Clefts

The inverted *wh*-clefts show less diversity in their translations than the *it*-clefts. Here, we only have three translations that deviate from our hypothesis. The two sentences in the *unmarked* category are both *discontinuous clefts* (see above) and, thus, can be explained just as for the *it*-clefts. Since both portions of the cleft contain new information, we are not dealing with a narrow-focus construction. Thus, it is not surprising that we simply get canonical word order in Tagalog.

There is, however, one sentence that I have classified as *other*. That is because the translator deviated quite strongly from the English original:

#### (342) **The Hunger Games (Collins 2008:149; Reyes 2012b)**

**Context:** The *Hunger Games* begin with all of the tributes standing on metal plates at some distance around a huge heap of supplies, including food, tools, and weapons. Katniss wonders whether she should immediately run to safety as her mentor, Haymitch, advised her to, or risk grabbing a bow and a sheath of arrows before taking off. Being an exceptional archer, this would give her a decisive advantage.

“There, resting on a mound of blanket rolls, is a silver sheath of arrows and a bow, already strung, just waiting to be engaged. That’s mine, I think. It’s meant for me. I’m fast. I can sprint faster than any of the girls in our school although a couple can beat me in distance races.” (Collins 2008:149)

“*Nasa ibabaw ng mga nakarolyong kumot ang isang pilak na lalagyan ng mga palaso at pana na may tali na at naghihintay na lang na gamitin. Akin ‘yon! naisip ko. Para sa akin iyon. Alam kong mabilis ako. Mas mabilis akong tumakbo kaysa sa lahat ng mga babae sa paaralan bagaman natalo ako ng ilan sa malayuang karera.*” (Reyes 2012b)

*Pero kayang-kaya=ko-ng takbuh-in ang=apatnapu-ng yarda-ng*  
but very.capable=1SG.GEN-LK run-UV<sub>in</sub> NOM=forty-LK yard-LK

*layo ng=mga=gamit na iyon.*  
 yard-LK distance GEN=PL=things LK that.NOM

But I am very capable of running the forty-yard distance to these things.

**Original:** “But this forty-yard length, this is what I am built for.”

This is a clear example of a case where the English cleft is not used to mark narrow focus: the context does not warrant the QUD “What is Katniss built for?” and the prosody of the sentence differs from that of a true cleft – the word *this* receives less stress than one would expect in a cleft and the *wh*-clause is not de-stressed.

According to Declerck (1984:271–273) various factors can contribute to the use of such an unstressed anaphoric focus cleft, such as implying contrast or exhaustiveness, emphasis, and building suspense. We can see all of these at play here to some extent. The *wh*-clause evokes the presupposition that there is something Katniss is particularly good at, even *built for*. The way Declerck (1984:271) puts it, this creates a variable that is assigned a value. In this case, the value is *running the forty-yard distance*. This has several effects: first, it automatically creates contrast to the alternative values, the previously mentioned longer distances where Katniss can be beaten, which in this situation would mean almost certain death. Then, the exhaustiveness implication suggests that this may very well be the single advantage she will be able to exploit, thus putting emphasis on the gravity of this decision. This is reinforced by the choice of words, *am built for* rather than *am good at*, which not only suggests more confidence on her part in her ability to succeed, but the way it is presented in the *wh*-clause as though it were a given, presupposed fact, gives the reader the impression that it is *obvious* that there is just this one particular thing, at which Katniss has a decisive advantage over the other tributes. This makes running for the bow and arrow the obvious decision; it practically begs the question ‘How can I *not* run for the bow and arrow?’. This additionally contributes to building suspense since this conclusion contrasts with the assessment of her mentor, according to whom, running for the bow and arrow means certain death.

### 7.2.1.3 *wh*-Clefts

The *wh*-clefts, although mostly translated as expected, proved quite interesting, as they provided the only example found in this study that was completely contrary to our expectation, i. e. an *ang*-inversion. The majority of *wh*-clefts, however, were simply translated using reversed *ang*-inversion in accordance with our hypothesis:

(343) **The Hunger Games: *Catching Fire* (Collins 2009:150; Reyes 2012a:155)**

*Pero [ang=nag-pa-atras]<sup>BG</sup> sa=kamay=ko*  
 but NOM=AV.RLS-CAUS<sub>PA</sub>-retreat DAT=hand=1SG.GEN

*ay* [*ang=tunog*]<sup>FOC</sup>,...  
 INV NOM=sound

**Original:** “But what makes me jerk back my hand is [the sound]<sup>FOC</sup>,...”

The *ay* is preceded by a verb (or adjective), possibly with arguments or even adjuncts, which is turned into a referring expression by the case-marker *ang*. This part constitutes the background portion of the sentence. Following the *ay*, we find the narrow focus of the sentence. In most cases it was simply a noun, but verbs or even an entire complement clause is possible.

Before turning to the surprising *ang*-inversion example, I would like to discuss the ‘equative’ category. Finally, at the end of this section, we will have a look, once again, at the ‘other’ category.

#### 7.2.1.3.1 The ‘equative’ Category

The two sentences in this category could easily be counted as reversed *ang*-inversions. Consider, for example, one of them:

(344) **The Hunger Games: *Mockingjay* (Collins 2010:257; Reyes 2013:261)**

*Ang=ibig=mo-ng          sabih-in, hindi=kami          ma-pu-punta*  
 NOM=want=2SG.GEN-LK say-UV<sub>in</sub>    NEG=1PL.INCL.NOM ABIL-IPFV-go  
*sa=totoo-ng labanan.*  
 DAT=real-LK combat

What you’re saying is, we won’t be in actual combat.

In both sentences of this category, the fronted background-portion is *ang ibig mong sabihin* ‘what you want to say’. The pattern matches that of a reversed *ang*-inversion. We have a complex predicate formed by the pseudo-verb *ibig* ‘want’ and the speech-act verb *sabihin* together with the actor argument in the form of a 2SG.GEN-pronoun. This entire phrase is preceded by the case marker *ang*. However, as described in section 4.1.1, speech-act verbs are often *ay*-fronted, which quite often looks like a reversed *ang*-inversion but doesn’t necessarily behave like one in terms of information structure. For that reason, I have assigned them their own category, which I continue to do in this chapter for the sake of consistency. Clearly, however, these two cases not only look like reversed *ang*-inversions but also behave like reversed *ang*-inversions in terms of information structure.

#### 7.2.1.3.2 The *ang*-Inversion

One of the *wh*-clefts was translated as an *ang*-inversion, which is completely in violation of our hypothesis. This means that the order of focus and background is

reversed in Tagalog compared to the English original. Let us consider the example in its context:

(345) **The Hunger Games: *Mockingjay* (Collins 2010:161; Reyes 2013:161)**

**Context:** Katniss is having an anxiety attack and regrets having drunk coffee earlier.

*“Alam eksakto ni Snow kung ano ang ginagawa niya sa akin. Katulad ito ng pambubugbog kay Cinna habang pinanonood ko siya mula sa tribute tube ko. Nakadisenyo para guluhin ako. Tulad noon, sinubukan kong makabawi at lumaban. Ngunit habang ipinupuwesto na ni Cressida sina Castor at Pollux, naramdaman kong nagsisimula akong mabalisa. Masyado na akong pagod, tensiyonado, at hindi ko maialis ang isip ko kay Peeta mula nang makita ko ang mga rosas. Isang malaking pagkakamali ang pag-inom ko ng kape.”*

*Hindi isa-ng stimulant ang=kailangan=ko.*

NEG one-LK stimulant NOM=need=1.SG.GEN

**Original:** “What I didn’t need was a stimulant.”

Interestingly enough, this example actually checks out in terms of the *Information-Flow Principle*: ‘Coffee’ just having been mentioned in the previous sentence, is taken up again by the hyperonym *stimulant*, which is identified as being what she did not need. Implicitly it is contrasted with a ‘sedative’, which would have been much more helpful given her current emotional state. In fact, even in the English context, an inverted *wh*-cleft would fit as well:

(346) **The Hunger Games: *Mockingjay* (Collins 2010:161)**

*Snow knows exactly what he’s doing to me. It’s like having Cinna beaten to a pulp while I watch from my tribute tube. Designed to unhinge me.*

*Like then, I try to rally and fight back. But as Cressida gets Castor and Pollux in place, I feel my anxiety building. I’m so tired, so wired, and so unable to keep my mind on anything but Peeta since I’ve seen the roses. The coffee was a huge mistake.*

***A stimulant is not what I needed.***

Actually, the *wh*-cleft used here by the author is slightly strange. It requires the reader to accommodate the presupposition that there is something Katniss did or took but didn’t need, which is not something the context in any way suggests. So, one might argue that it is actually the English original that doesn’t adhere to the *Information-Flow Principle* in this case, while the Tagalog translator did.

### 7.2.1.3.3 The ‘other’ Category

Two of the three sentences that were sorted into the ‘other’-category, are in a way the reversed *ang*-inversion equivalents of examples (334) and (336), the cases discussed in the ‘other’ category for *it*-clefts. What they have in common is that in place of the headless relative clause, they have an actual noun phrase. Consider the first one:

(347) **The Hunger Games: *Mockingjay* (Collins 2010:282; Reyes 2013:284)**

**Context:** Katniss is pondering over a conversation she had with her squad leader, Boggs. Among other things he said “Do what you came to do!”, which makes her wonder:

*Na-hula-an=ba ni=Boggs na [ang=talaga-ng dahilan*  
 ABIL.RLS-guess-UV<sub>an</sub>=Q GEN=Boggs LK NOM=true-LK reason  
*ng=pagpunta=ko]*<sup>BG</sup>  
 GEN=going=1SG.GEN

*ay [(um)alis at patay-in si=Snow nang mag-isa]*<sup>Foc?</sup>  
 INV (AV)leave and kill-UV<sub>in</sub> NOM=SNOW LK alone

**Original:** “Did Boggs guess that what I really came to do is desert and kill Snow on my own?”

The portion of the English sentence that corresponds to the *ang*-phrase in the background portion of the sentence is “what I really came to do” or in other words ‘the reason I came’. If we were to reformulate this as a true reversed *ang*-inversion, we would need to use an appropriate voice form of *punta* ‘go’, such that the referent of the *ang*-phrase is the reason for Katniss’ coming along. However, the reason for an action is a semantic role that is not easily accessible by means of the Tagalog voice system. The closest would be *causative voice*, i. e. *ang=i-k(in)a-punta=ko* “NOM=UV<sub>i</sub>-⟨RLS⟩CAUS<sub>KA</sub>-go=1SG.GEN”. According to Schachter and Otanes (1972), this form can often be paraphrased using *dahil sa* ‘because of’, which comes close to what we would need here. However, the voice form has been found to be used mostly for a quite direct type of causation, typically of emotional states in an experiencer and motion verbs are generally dispreferred (though not ruled out) by many speakers (Nuhn 2017). It may very well be for this reason that the translator chose to simply use an actual noun giving us *ang=talaga-ng dahilan ng=pagpunta=ko* ‘the true reason of my coming’. Thus, instead of the typical headless relative clause, we have here a simple noun phrase.

The second sentence in this category features a demonstrative pronoun *iyon* ‘that’ as the fronted background portion of the sentence. What it refers to is explained in a subordinate clause occupying the left-detached position:

(348) **The Hunger Games: *Catching Fire* (Collins 2009:209; Reyes 2012a:216)**

**Context:** Before the *Quarter Quell*, Katniss encounters tribute notoriously handsome and flirtatious Finnick Odair for the first time. Coming from District 4, he was what is referred to as a *Career*, meaning he had been trained specifically for participation in the *Hunger Games*, which has equipped him with superior athletic and fighting skills.

“Finnick Odair is something of a living legend in Panem. Since he won the Sixty-fifth Hunger Games when he was only fourteen, he’s still one of the youngest victors. Being from District 4, he was a Career, so the odds were already in his favor,…”

(Collins 2009:209)

“*Tila isang buhay na alamat sa Panem si Finnick Odair. At dahil napanalunan niya ang Sixty-fifth Hunger Games noong katorse pa lang siya, isa pa rin siya sa mga pinakabatang kampeon. Dahil nagmula siya sa District Four, isa siyang Career, kaya nasa kanya na ang kalamangan.*” (Reyes 2012a:216)

*Pero kung may isa-ng bagay=man na hindi puwede-ng angkin-in*  
 but if EXIST one-LK thing=PTCL LK NEG can-LK claim-UV<sub>in</sub>  
*ng=isa-ng trainer na i-b(in)igay sa=kanya, [iyon]<sup>BG</sup> ay*  
 GEN=one-LK trainer LK UV<sub>i</sub>-<RLS>give DAT=3SG.DAT that.NOM INV  
 [*ang=pambihira=niya-ng kagandahan*]<sup>FOC</sup>.  
 NOM=extraordinary=3SG.GEN-LK beauty

*literally:* But if there is one thing that no trainer can claim to have given him, that is extraordinary beauty.

**Original:** [B]ut what no trainer could claim to have given him was his extraordinary beauty.

A more direct translation in form of a reversed *ang*-inversion would be possible, for instance in the following way:

- (349) *Pero ang=hindi puwede-ng angkin-in ng=isa-ng trainer na*  
 but NOM=NEG can-LK claim-UV<sub>in</sub> GEN=one-LK trainer LK  
*i-b(in)igay sa=kanya ay ang=pambihira=niya-ng*  
 UV<sub>i</sub>-<RLS>give DAT=3SG.DAT INV NOM=extraordinary=3SG.GEN-LK  
*kagandahan.*  
 beauty

However, given the length of the fronted constituent, it is not surprising that the translator decided to make use of the left-detached position and refer to it clause-internally with a demonstrative pronoun. We saw her use the same strategy with longer referring expressions in *ang*-inversions when translating *it*-clefts (see

above). Additionally, she slightly modified the content of the question by turning the background portion into a conditional clause ‘*if there is one thing that no trainer could claim to have given him*’. This required the existential expression *may*, which makes turning it into referring expression by simply adding a case marker much more clumsy, thus the noun *bagay* ‘thing’ was added as head of a relative clause to resolve this problem.

The third sentence in this category is the following:

(350) **The Hunger Games: *Catching Fire* (Collins 2009:202; Reyes 2012a:209)**

**Context:** Katniss is watching video footage of earlier *Hunger Games*, specifically the final scene of the Games that her coach and advisor Haymitch won. His opponent throws an ax at him, misses and it flies into an abyss. “Haymitch makes a beeline for his cliff and has just reached the edge when she throws the ax. He collapses on the ground and it flies into the abyss. Now weaponless as well, the girl just stands there, trying to staunch the flow of blood pouring from her empty eye socket. She’s thinking perhaps that she can outlast Haymitch, who’s starting to convulse on the ground.” (Collins 2009:202)

“*Dumeretso si Haymitch sa talampas niya at kararating lang niya sa dulo niyon nang ihagis ng dalagita ang palakol. Bumagsak si Haymitch sa lupa at bumulusok naman ang palakol sa kailaliman. Ngayong wala na ring sandata ang dalagita, tumayo lang siya roon, sinusubukang pigilan ang pag-agos ng dugo mula sa eye socket niya na wala nang lamang mga mata. Malamang na iniisip niya na mas tatagal siya kaysa kay Haymitch, na nag-uumpisa nang mangisay sa sahig.*” (Reyes 2012a:209)

*Pero ang=hindi=niya alam, pero alam ni=Haymitch, na ba-balik*  
but NOM=NEG=3SG.GEN know but know GEN=Haymitch LK IPFV~return  
*ang=palakol.*

NOM=ax

**Original:** But what she doesn’t know, and what he does, is that the ax will return.

The English original features two coordinated referents in the background portion: ‘what she doesn’t know’ and ‘what he does (know)’. These are then identified as the fact that “the ax will return”. The striking thing in Tagalog is that they are not translated on equal footing. The first element of the coordination is translated as one would expect, *ang hindi niya alam* ‘what he doesn’t know’. If this were simply followed by an *ay* and the focal portion, we would have a reversed *ang*-inversion<sup>4</sup>.

<sup>4</sup> If one sets aside that *alam* ‘know’ is one of the speech-act verbs we have categorized separately.



The second element, on the other hand, lacks the *ang* and is linked to the focal portion by the linker *na*, as one would in an unmarked situation. Thus, the literal translation of the Tagalog construction would be something like ‘But what she doesn’t know, but Haymitch knows that the ax will return’.

A possible explanation for this translation could be that reversed *ang*-inversion, like regular *ang*-inversion comes with a stronger exhaustivity implication than the English cleft construction. Thus it is fine for the first element of the coordination, as there is indeed one and only one contextually salient thing that she doesn’t know. For the second element, on the other hand, it is weird to suddenly get the implicature that the only contextually salient thing Haymitch knows is that the ax will return.

#### 7.2.1.4 *all*-Clefts

For the most part, nothing surprising is to be found in the translations of *all*-clefts. Most of them were simply translated as reversed *ang*-inversion, four of them here categorized as ‘equative’ for consistency. The latter group involved the verb roots *alam* ‘know’ (3 times) and *kahulugan* ‘mean’<sup>5</sup> (1).

The exhaustivity, which is much more explicit in an *all*-cleft, is reflected in Tagalog using either the particle *lang* ‘only’ or the more or less synonymous *tangi(-ng)* ‘only(-LK)’, in some cases, such as the following, both are used, presumably for extra emphasis:

#### (351) **The Hunger Games (Collins 2008:326; Reyes 2012b:347)**

**Context:** In anticipation of the final battle of the *Hunger Games* Peeta and Katniss use up most of the food they have been able to procure during their time in the arena.

“Peeta packs up our gear while I lay out a big meal. The rest of the rabbits, roots, greens, the rolls spread with the last bit of cheese. The only thing I leave in reserve is the squirrel and the apple. By the time we’re done,…”  
(Collins 2008:326)

“*Inempake ni Peeta ang mga gamit namin habang naghahain ako ng maraming pagkain. Ang mga natirang kuneho, bungang-ugat, gulay, at mga tinapay na pinahiran ng natirang keso. Ang tanging itinabi ko bilang reserba ay ang ardilya at mansanas. Nang matapos kami,...*” (Reyes 2012b:347)

...*ang=tangi-ng na-iwan=na=lang ay*  
NOM=only-LK STAT.RLS-remain=now=only INV

<sup>5</sup> The verb ‘to mean’ is derived with the actor-voice prefix *mang-* which fuses with the initial consonant to *mangahulugan*.

*ang=mga=buto ng=kuneho.*

NOM=PL=bone GEN=rabbit

**Original:** ... all that's left is a pile of rabbit bones.

As in the previous cleft types, we find some that are translated using canonical word order. In the three cases relevant here, the author appears to have chosen an *all*-cleft more for stylistic reasons than to get a narrow-focus reading and the exclusivity that goes with an *all*-cleft. Consider, for instance the following example:

(352) **The Hunger Games (Collins 2008:27)**

**Context:** After Katniss's father dies in an accident in the mines of District Twelve, her mother falls into a deep depression. Neither Katniss nor her sister can get through to her.

*I suppose now that my mother was locked in some dark world of sadness, but at the time, all I knew was that I had lost not only a father, but a mother as well.*

Of course, this is not to say that Katniss had no knowledge of *anything* else. Rather it means that she realized that she had lost her mother as well in a certain sense without being aware of the depression her mother was suffering from and how it was linked to the behavioral symptoms she observed in her. There is no real need for a narrow-focus construction here. Thus, in Tagalog, we find a simple more literal description of the state of affairs:

(353) **The Hunger Games (Reyes 2012b:27)**

*Nang=mga=sandali-ng=iyon, na-pagtanto-∅=ko na*

at=PL=moment-LK=that.NOM ABIL.RLS-realize-UV<sub>in</sub>=1SG.GEN LK

*hindi=lang ang=akin-g=ama ang=na-wala*

NEG=only NOM=1PL.EXCL.DAT-LK=father NOM=STAT.RLS-lose

*sa=amin kundi maging ang=aming=ina.*

DAT=1PL.EXCL.DAT but even NOM=1PL.EXCL.DAT-LK=mother

At the time, I realized that our father wasn't the only one we had lost, but our mother, too.

Only a single sentence was categorized as 'other' and that was simply because the translator chose a different syntactic structure but without significantly changing the order of the constituents compared to the English original. Thus the *Information-Flow Principle* is still upheld:

(354) **The Hunger Games: *Catching Fire* (Collins 2009:53; Reyes 2012a:56)**

**Context:** After the *Hunger Games* Peeta has painted several scenes from the arena. Katniss sees them for the first time.

“What do you think?” he asks. ‘I hate them,’ I say. I can almost smell the blood, the dirt, the unnatural breath of the mutt.” (Collins 2009:53)

“*Ano sa tingin mo?*” *tanong niya. ‘Hindi ko sila gusto,’ sabi ko. Parang naaamoy ko ang dugo, ang dumi, ang hindi pangkaraniwang hininga ng mutt.*”

(Reyes 2012a:56)

*Lahat ay g(in)a~gawa-∅=ko para subuk-an-g kalimut-an*  
all INV (RLS)IPFV~do-UV<sub>in</sub>=1SG.GEN to try-UV<sub>an</sub>-LK forget-UV<sub>an</sub>  
*ang=arena...*

NOM=arena

*literal:* Everything I do (is) to try to forget the arena...

**Original:** All I do is go around trying to forget the arena...(and you’ve brought it back to life.)

The beginning of the sentence seems to imitate the English *all*-cleft in an almost word-for-word translation. Omitting the verb ‘go around’ entirely, the rest of the sentence is adjusted to fit the beginning.

More interesting are the three sentences that were translated using *ang*-inversion, to which I would like to turn next.

### The *ang*-Inversions

Three *all*-clefts were quite surprisingly translated using *ang*-inversions, which, of course, appears to go completely against our hypothesis since it reversed the order of focus and background. Upon closer examination, however, these three examples seem to be less about being explicit about narrow focus itself and more about emphasis of the restrictive character of the *all*-cleft.

Consider the first example from this category:

#### (355) The *Hunger Games: Catching Fire* (Collins 2009:390; Reyes 2012a:408)

**Context:** After the *Quarter Quell*, Katniss is wounded and psychologically incapable of coping with the situation: She is part of a secret rebellion and Peeta has been captured by the Capitol. She spends most of the time delirious, passive, and drugged with painkillers. Suddenly her childhood friend, Gale, shows up and thoughts of her mother and sister flood her mind. She is no longer able to block out reality.

“One side of his face has been burned fairly recently. His arm is in a sling, and I can see bandages under his miner’s shirt. What has happened to him? How is he even here? Something very bad has happened back home. It is not so much a question of forgetting Peeta as remembering the others.” (Collins 2009:390)

“*Ang isang panig ng mukha niya ay kamakailan lang nagkapaso. May sling ang braso niya at nakikita ko ang mga benda sa ilalim ng kanyang kamisetang pangminero. Ano ang nangyari sa kanya? Paano siya nakarating dito? May napakasamang nangyari doon sa amin. Hindi na dapat kuwestiyunin pa ang makalimutan ko si Peeta nang maalala ko ang iba.*” (Reyes 2012a:408)

*Isa-ng sulyap=lang kay=Gale ang=kailangan para b(um)ugso*  
 one-LK glance=only DAT=Gale NOM=need to become.abundant  
*ang=mga=iyon sa=kasalukuyan, nag-u~utos na*  
 NOM=PL=that.NOM DAT=present AV.RLS-IPFV~demand LK  
*kilalan-in iyon.*  
 acknowledge-UV<sub>in</sub> that.NOM

**Original:** All it takes is one look at Gale and they come surging into the present, demanding to be acknowledged.

The main point of this sentence is to sum up the situation described in more detail in the preceding sentences, namely that seeing her childhood friend suddenly jolts Katniss out of her delirious state and fills her mind with thoughts and worries about her family members. Thus, the entire propositional content of the sentence is given already, so this cannot really be taken to violate the *Information-Flow Principle*. The function of this sentence in its context is more about stressing the causal relationship between seeing Gale and worrying about her family and the fact that nothing more than one look at Gale is needed to trigger this reaction in her.

Had the translator opted for a reversed *ang*-inversion here, the result would have been as follows:

(356) *Ang=kailangan=lang para b(um)ugso ang=mga=iyon*  
 NOM=need=only to become.abundant NOM=PL=that.NOM  
*sa=kasalukuyan ay isa-ng sulyap kay=Gale.*  
 DAT=present INV one-LK glance=only DAT=Gale

The only thing that is needed for them to come surging into the present is one look from Gale.

As we have seen in some of the previous examples, when *lang* ‘only’ is used in a reversed *ang*-inversion, it appears within the fronted background. Thus, the reversed *ang*-inversion comes with the presupposition that there is only one thing needed to trigger this response in Katniss, while the regular *ang*-inversion only presupposes that *something* is needed. This makes regular *ang*-inversion a much more sensible construction choice since one wouldn’t want the part that is supposed to be stressed to be part of the presupposition.

The second use of *ang*-inversion can be explained in a fairly similar way:

(357) **The Hunger Games: *Catching Fire* (Collins 2009:132; Reyes 2012a:139)**

**Context:** In the aftermath of the *Hunger Games* security measures in District Twelve are increased. Eventually the mines, where most of the population works, are closed down, food shortages begin. Katniss's mother treats ill and injured people for free in their home. However, her medical supplies are running low as well.

"Everyone avoids me in public now. But there's no shortage of company at home. A steady supply of ill and injured is deposited in our kitchen before my mother, who has long since stopped charging for her services." (Collins 2009:132)

"*Iniiwasan na ako ng lahat ngayon. Pero walang kakulangan ng makakasama sa bahay. Regular ang dagsa ng mga may-karamdaman at sugatan na inilalagak sa kusina namin sa harap ng aking ina, na matagal nang huminto sa paniningil para sa kanyang serbisyo.*" (Reyes 2012a:139)

...*tangi-ng niyebe=na=lang ang=ma-ga~gamit=niya*

only-LK snow=now=only NOM=ABIL-IPFV~use=3SG.GEN

*sa=panggagamot.*

DAT=treatment

**Original:** ... all she'll have to treat the patients with is snow.

This *ang*-inversion presupposes that she can in fact treat people with snow, which is indeed given in this context, as it is explained at length several pages before. This sentence then identifies snow as *the only thing* she will be able to treat her patients with, stressing the restriction by using both *tangi* and *lang*, which both mean 'only'.

If, on the other hand, one were to formulate this as a reversed *ang*-inversion, the result could be:

- (358) *Ang=tangi-ng ma-ga~gamit-∅=lang=niya sa=panggagamot ay*  
 NOM=only-LK ABIL-IPFV~use-UV<sub>in</sub>=only=3SG.GEN DAT=treatment INV  
*niyebe.*  
 snow

In this case, the presupposition would be that when her supplies run out, there will be only one thing left that she can use to treat people. This could be accommodated easily enough, although one would naively expect nothing at all to be left. Therefore, this still leaves *ang*-inversion as the more natural choice.

The final example of this category is somewhat strange in that the narrow focus, which is on two sentence final coordinated noun phrases in English, is split up in Tagalog, such that one of the noun phrases appears sentence-initially in an *ang*-inversion while the other is added sentence-finally as sort of an after-thought:

(359) **The Hunger Games: *Catching Fire* (Collins 2009:383; Reyes 2012a:400)**

**Context:** After being suddenly transported out of the *Quarter Quell* with some of the other tributes, Katniss believes they have been taken prisoner by the Capitol for not playing by their rules. She believes she has failed in her attempt to keep Peeta alive and wants at least to save him from a more agonizing death at the hands of the Capitol. Looking for a weapon, she finds a sterile syringe and looks for Peeta.

“I so wanted to protect him. Am still resolved to. Since I have failed to keep him safe in life, I must find him, kill him now before the Capitol gets to choose the agonizing means of his death. I slide my legs off the table and look around for a weapon. There are a few syringes sealed in sterile plastic on a table near Beetee’s bed. Perfect.” (Collins 2009:383)

“*Gustong-gusto ko siyang protektahan. Desidido pa rin akong gawin iyon. Dahil nabigo akong panatilihin siyang ligtas na nabubuhay, kailangan ko siyang hanapin, patayin na bago pa makapili ang Kapitolyo ng napakahirap na paraan para mamatay siya. Ibinaba ko ang mga binti ko sa ibaba ng mesa at nagpalinga-linga para maghanap ng sandata. May ilang mga heringgilya na nakaselyo sa sterile plastic sa mesa malapit sa kama ni Beetee. Perpekto.*” (Reyes 2012a:400)

[*Hangin*]<sup>FOC</sup>=*lang ang=kailangan=ko at [isa-ng malinaw na turok*  
 air=only                    NOM=need=1SG.GEN and one-LK clear    LK shot  
*sa=isa sa=mga=ugat=niya]FOC.  
 DAT=one DAT=PL=vein=3SG.GEN*

**Original:** All I’ll need is air and a clear shot at one of his veins.

The sentence begins with an *ang*-inversion conveying all Katniss needs is air. The exclusivity here comes both from the particle *lang* ‘only’ and the exhaustivity implicature of the *ang*-inversion. The following afterthought ‘and a clear shot at one of his veins’ clearly shows that the exhaustivity implicature of *ang*-inversion can indeed be canceled.

Since the context describes Katniss looking for anything that would help her kill Peeta. Both her need (*kailangan* ‘need’) to kill Peeta and thus her need for appropriate “tools”, as well as the first “tool” she finds (the syringe) are explicitly mentioned in the previous three sentences. Thus, neither the English nor the Tagalog version can be accused of violating the *Information-Flow Principle*. What makes the Tagalog version interesting though is the discontinuous focus, which slightly changes the character of this utterance.

### 7.2.1.5 Interim Summary

All in all, the data presented here match the hypothesis nicely. Summing up, 158 out of 187 clefts were translated according to our expectation – that is *ang*-inversion or adjunct inversion for *it*-clefts and inverted *wh*-clefts and reversed *ang*-inversion or equative for *wh*-clefts and *all*-clefts. This corresponds to a very convincing 84 %. This can be taken as first evidence that the *Information-Flow Principle* is relevant in Tagalog when speakers choose between regular and reversed *ang*-inversion. One must, of course, bear in mind that, so far, this study relies solely upon the work of only one translator<sup>6</sup> and more data is needed for robust results.

We also saw that the *Information-Flow Principle* was often upheld even when the translator deviated from our hypothesis in her translation. This suggests that it is of importance in Tagalog on a more general level than just selection between the two constructions we investigated here.

### 7.2.2 More Reversed *ang*-Inversions in Translated Data

The previous sections have quite nicely established that reversed *ang*-inversions are used for both contrastive and completive narrow focus and we have seen that they are frequently used to translate English cleft constructions in which the focused constituent appears at the end. This leaves us with the question, whether there are any other contexts that reversed *ang*-inversion is frequently used in (see also Nuhn 2019).

#### 7.2.2.1 Other Constructions Translated Using Reversed *ang*-Inversion

Since we have already explored all of the reversed *ang*-inversions in the fieldwork data, with the data at hand, all we can do is turn to the *Hunger Games* corpus. As a first step toward understanding what other contexts we can find reversed *ang*-inversion in, I have collected all reversed *ang*-inversions that occur in the three novels and compared them to the corresponding sentences in the English original. This pilot study is, in a sense, a by-product of the survey conducted in chapter 4. Thus, the data was found by searching for occurrences of the inversion marker *ay* or *'y* in the texts and then filtering out the reversed *ang*-inversions. Thus the cases in which the *ay* was omitted are missing from this statistic. Since we are dealing with written Tagalog, however, we can assume that such cases are few in number (Schachter and Otones 1972).

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<sup>6</sup> Although studies conducted on the basis of Bible translations have the same problem.

**Tab. 7.4:** Overview – English constructions that were translated using reversed *ang*-inversion

original construction (English)	translated as reversed <i>ang</i> -inversion	
<i>all</i> -cleft	58	(27 %)
equative	45	(21 %)
focus sensitive particle	39	(18 %)
unmarked	29	(13 %)
<i>wh</i> -cleft	28	(13 %)
other	18	(8 %)
$\Sigma$	217	

The reversed *ang*-inversions were sorted by the construction of the corresponding English sentence. The results are shown in Table 7.4.

### 7.2.2.1.1 Clefts and Focus Sensitive Particles

Given what we have seen so far, it comes as no surprise that many of the reversed *ang*-inversions we find come from *wh*-clefts and *all*-clefts. Together, they make up 40 % of the occurrences. Together with the category ‘focus sensitive particle’, in which narrow focus also plays an important role, they even account for 58 %, i. e. more than half of the occurrences.

According to Nagaya (2007), the focus sensitive particle *lang* ‘only’ is obligatorily used with *ang*-inversion. We have already found this to be only part of the story, as it is also used with reversed *ang*-inversion, albeit not as a second position clitic, but within the *ang*-phrase preceding the inversion marker *ay*, as in the following example:

(360) **The Hunger Games: *Mockingjay* (Collins 2010:384; Reyes 2013:390)**

*Ang=na-tagpu-an=ko=lang ay kaginhawahan.*  
 NOM=RLS-find-UV<sub>an</sub>=1SG.GEN=only INV relief

**Original:** I find only relief.

The category ‘focus sensitive particle’ is made of sentences involving one of the focus-sensitive particles *only* and *just* associating with a narrow focus. This is rendered in Tagalog with either the particle *lang*, as above, or *tangi(-ng)* ‘only(-LK)’. Thus, we find nothing fundamentally new in these three categories, as we are already familiar with this use of reversed *ang*-inversion.



### 7.2.2.1.2 Equative

Another large group, with 21%, are what I have simply called ‘equative’ sentences. In the English original, two noun phrases are equated using the copula *is* or *are*, but in Tagalog the first noun phrase is translated using a verb by adding the case marker *ang* to get a referring expression, which results in the structure of a reversed *ang*-inversion. Consider, for example the following item from his category:

(361) **The Hunger Games: *Catching Fire* (Collins 2009:9; Reyes 2012a:8)**

**Context:** On the day the *Victory Tour* is to begin, Katniss goes hunting in the forest one last time. On the way back to her house in *Victor’s Village*, where she has to be at noon, she stops at her family’s old house in the *Seam* to change out of her hunting clothes, then goes to her friend Gale’s family to share some of her hunting spoils. After a cup of tea, she tells Gale’s mother, she has to leave.

*Ang=kasunod=ko-ng p(in)untah-an ay ang=Hob.*  
 NOM=next=1SG.GEN-LK ⟨RLS⟩GO-UV<sub>an</sub> INV NOM=Hob

*literally:* The next [place] I go to is the Hob.

**Original:** My next stop is the Hob.

Here, the voice morphology of verb form *p(in)untah-an* ‘⟨RLS⟩GO-UV<sub>an</sub>’ identifies the location as the referent of the resulting referring expression. The actor argument *ko* ‘1SG.GEN’ cliticizes to the modifier *kasunod* ‘next’. No “real” noun is needed in Tagalog. In fact, even in English, one could reformulate this sentence as a *wh*-cleft to get around using the noun *stop* as well:

(362) ***Where I go to next is the Hob.***

In that sense, the examples from this category quite closely resemble the *wh*-clefts we have already seen previously. The main difference is that in place of the *wh*-phrase of the cleft, we simply find a noun phrase. In many cases, a *wh*-cleft or an *all*-cleft would be equally felicitous in the given context. Others, such as the example above, sound less natural than the original construction. Nevertheless, it is quite clear from the context that current QUD is ‘Where does Katniss go next?’. At the beginning of this section, the author mentions Katniss’s final destination (her house in *Victor’s Village*), then lists the different places she goes before that and elaborates on the protagonist’s encounters at each place. Her stop at Gale’s house has clearly come to an end when she bids his mother goodbye. The expectation is thus, that we will now move on to the next destination, raising the question what that destination is. Thus, we are dealing with narrow focus here again. In terms of focus structure, therefore, we find nothing fundamentally new here either.

### 7.2.2.1.3 Unmarked

Finally, in 13% of the cases the English original sentence displayed a simple unmarked structure. Of these, several expressed a violation of some sort of expectation. As noted by Latrouite (2020), *ang*-inversions are also found in such contexts. The contrast between the expectation and reality is what licenses the choice of a marked construction. Apparently, reversed *ang*-inversion can be used in this way as well, although it doesn't seem to be quite as common as *ang*-inversion. Here, one of the examples from the novels:

(363) **The Hunger Games: *Catching Fire* (Collins 2009:111; Reyes 2012a:115)**

**Context:** Two of Gale's friends are trying to piece together the events that led to his public whipping.

"Gale must've gone to Cray's house, as he's done a hundred times, knowing Cray always pays well for a wild turkey." (Collins 2009:111)

"*Marahil ay nagpunta si Gale sa bahay ni Cray, na maraming beses na niyang ginawa, dahil alam niyang palaging nagbabayad nang malaki si Cray para sa isang ligaw na pabo.*" (Reyes 2012a:115)

*Sa=halip, ang=na-tagpu-an=niya ay ang=bago-ng Head*

instead NOM=RLS-meet-UV<sub>an</sub>=3SG.GEN INV INV=new-LK Head

*Peacekeeper.*

Peacekeeper

**Original:** Instead he found the new Head Peacekeeper.

This is very similar to an example discussed by Latrouite (2020), in which Katniss calls on the Mayor to sell strawberries since he is known to like them and pay a good price. Surprisingly, his daughter answers the doorbell instead of the mayor himself. There, we also find a narrow focus construction, but rather than a reversed *ang*-inversion, we find a regular *ang*-inversion:

(364) **The Hunger Games (Collins 2008:11–12; Reyes 2012b:11)**

**Context:** "When we finish our business at the market, we go to the back door of the mayor's house to sell half the strawberries, knowing he has a particular fondness for them and can afford our price." (Collins 2008:11–12)

"*Pagkagaling namin doon ay nagpunta kami sa likurang pintuan ng bahay ng alkalde para ibenta ang kalahati ng mga strawberry. Mahilig doon ang alkalde at kaya niyang bayaran ang presyong ibinibigay namin.*" (Reyes 2012b:11)

*Ang=anak ng=alkalde na si=Madge ang=nag-bukas ng=pinto.*

NOM=child GEN=mayor LK NOM=Madge NOM=AV.RLS-open GEN=door

It is the mayor's daughter Madge who opens the door.

**Original:** "The mayor's daughter, Madge, opens the door."

We can thus follow an analogous line of reasoning to explain, why reversed *ang*-inversion is chosen in (363). It is known that to sell the turkey Gale must meet the potential buyer. Thus, the event of meeting someone is presupposed. The information is that he, in fact, met someone else. So, again, we have a narrow focus situation.

However in several cases, the reversed *ang*-inversion appears to be used in a complementary function to this, namely to state what the initial expectation was, that was violated:

(365) **The Hunger Games: *Catching Fire* (Collins 2009:19; Reyes 2012a:19)**

**Context:** President Snow surprises Katniss in her mansion in *Victor’s Village*.

“President Snow smiles and I notice his lips for the first time.” (Collins 2009:19)

“*Ngumiti si Presidente Snow at sa unang pagkakataon ay napansin ko ang kanyang mga labi.*” (Reyes 2012a:19)

*Ang*=⟨*in*⟩*a-asah-an=ko-ng ma-kita ay mga=labi*

NOM=⟨RLS⟩IPFV~expect-UV<sub>an</sub>=1SG.GEN-LK ABIL.UV-see INV PL=lips

*ng=ahas...*

GEN=snake

I’m expecting snake lips,...

**Continuation:** “...*na walang sasabihing anuman. Pero ang sa kanya ay masyadong mapipintog, at banat na banat ang balat.*” (Reyes 2012a:19)

“... which is to say none. But his are overly full, the skin stretched too tight.” (Collins 2009:19)

In these cases, it is even clearer that we are dealing with a narrow focus situation, since the context already hints at or explicitly states that something surprising has occurred. Thus, it is already presupposed that some other expectation was previously in place, leading to the QUD ‘What did you/(s)he expect?’.

### 7.2.2.2 Voice and Reversed *ang*-Inversion

Let us now turn to the issue of voice in connection with reversed *ang*-inversions. In section 4.2, we already mentioned the finding by Latrouite (2020) that (regular) *ang*-inversions are more frequent with actor voice, i. e. narrow actor focus, than they are with undergoer voice, i. e. narrow undergoer focus. Then, in section 4.4, we saw that in our *Hunger Games* data set, *ay*-fronted actors are more common than *ay*-fronted undergoers, but undergoer voice is more common in *ay*-inversions than actor voice. This ‘split situation’ is made possible by the fact that both arguments

of a transitive undergoer-voice verb can be *ay*-fronted, while in an *ang*-inversion, the fronted argument *must* be the one cross-referenced by the voice marker on the verb.

**Tab. 7.5:** Role of focused constituent in reversed *ang*-inversions from the *Hunger Games* data

Role	Frequency	
<b>S</b> (intransitive)	35	(16 %)
<b>A</b> (transitive)	8	(4 %)
<b>U</b> (transitive)	173	(80 %)
<b>OTHER</b>	1	( $\ll$ 1 %)
$\Sigma$	217	(100 %)

Since we have described reversed *ang*-inversion as the *ay*-inversion of a regular *ang*-inversion, we do not have to look at the macrorole of the focal element and the voice form of the verb independently, as they must coincide, just as they do for regular *ang*-inversion. Table 7.5 shows how often different roles appeared as the narrow focus of a reversed *ang*-inversion in the *Hunger Games* data. Figure 7.1 visualizes the data in the form of a pie chart.

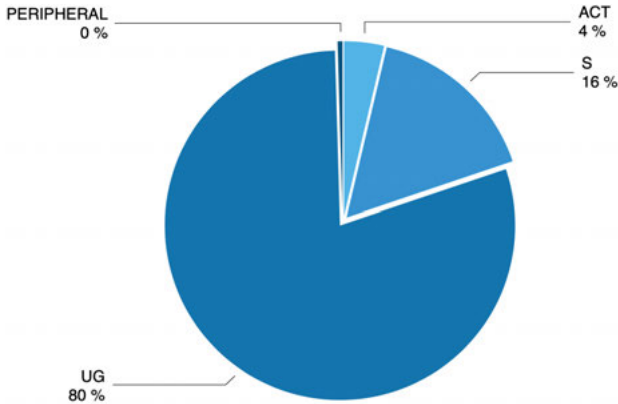
To be consistent with section 4.4, the intransitive cases are listed separately under ‘S’ and not sorted under ‘A’ and ‘U’ depending on the semantics of the verb in question. One reversed *ang*-inversion, listed as *other* in Table 7.5, involved a peripheral voice form:

(366) **The Hunger Games**

*Ang=talaga-ng i-k<in>a-ka-takot=ko* *ay kung ano*  
 NOM=really-LK UV<sub>i-</sub><RLS>IPFV~CAUS<sub>KA</sub>scare=1SG.GEN INV COMP what  
*ang=maaari-ng gaw-in=nila sa=akin-g ina at kay=Prim.*  
 NOM=can-LK do-UV<sub>in</sub>=3PL.GEN DAT=1SG.DAT-LK mother and DAT=Prim  
 What really scares me is what they might do to my mother and Prim.

The clause introduced by the complementizer *kung* following the inversion marker *ay* functions as the cause of the speakers fear. This is cross-referenced on the verb by the combination of the affixes *i-* and *ka-* forming a voice form referred to as causative voice<sup>7</sup>(Schachter and Otnes 1972:313).

<sup>7</sup> To be precise, Schachter and Otnes (1972:313) refer to this form as “causative focus”. But to remain consistent with the terminology in this work and avoid confusion with the information-structural term *focus*, we will use causative *voice* instead.



**Fig. 7.1:** Pie chart showing the function of the focal constituents in the reversed *ang*-inversions in the *Hunger Games* data

As with *ang*-inversion we see a skewed distribution, this time favoring undergoer voice and narrow-focus on the undergoer argument. Thus, reversed *ang*-inversion is not only ‘reversed’ in terms of the order of the constituents, but also in terms of voice selection. A possible explanation for this result could be given based on the default information states as discussed by Latrouite and Riester (2018). They propose that the default case is for actors to be *given/topical* and undergoers to be *new/focal*. Since we are comparing two narrow focus constructions here, let us focus on the *given-new* distinction<sup>8</sup>. If we assume that even when focal, actors tend to be given and undergoers tend to be new, the information-flow principle would explain the observed distributions: focal actors tend to be given and are realized sentence initially using regular *ang*-inversion, while focal undergoers tend to be new and are thus the background it is preferred to front the background portion of the sentence.

### 7.3 Summary and Outlook

We began our investigation of reversed *ang*-inversion in section 7.1 with our QUIS (Skopeteas et al. 2006) data where speakers used this construction to convey completive narrow argument focus in response to a question. The numbers even indicated a slight preference for reversed *ang*-inversion over regular *ang*-inversion

<sup>8</sup> Note that although the pragmatic states *given* and *new* and the information-structural categories *topic* and *focus* often correlate to a certain extent, the two are in principle independent, i. e. a given referent can be focal and under certain circumstances, a new referent can be topical (Van Valin and LaPolla 1997:204).

in this context. Then, turning to the *Frog Story* data, we found that the construction can be used for contrastive narrow focus, as well.

Since it is unlikely that a language has two syntactic constructions, in this case regular and reversed *ang*-inversion, that serve the exact same purpose, this raised the question, what the difference is between the two? I argued that just as for English clefts (Declerck 1984), speakers follow the *Information Flow Principle* (Ward and Birner 2011) when choosing between regular and reversed *ang*-inversion. When *ay*-fronting the background allows the speaker to place topical information sentence initially and thus provide a link to the previous discourse, then reversed *ang*-inversion is preferred.

This led us to the hypothesis that there should be a tendency for English *it*-clefts and inverted *wh*-clefts to be translated using *ang*-inversion, while regular *wh*-clefts and *all*-clefts should be mostly translated using reversed *ang*-inversions. We investigated this hypothesis in section 7.2 using the Tagalog translations of the *Hunger Games* novels and categorizing the translation of all cleft constructions found in the English original. The findings nicely matched our expectation: the order of background and focus in Tagalog is mostly kept the same as in the English original by choosing the appropriate construction.

We then turned to the converse question, which English constructions ended up being translated using reversed *ang*-inversions and found that cleft constructions and sentences involving focus-sensitive particles associating with one of the arguments accounted for more than half (58 %) of the reversed *ang*-inversions in the data.

Finally, regarding voice in reversed *ang*-inversions, we found that the overwhelming majority of reversed *ang*-inversions mark a focal undergoer. This is particularly noteworthy in light of the observation that regular *ang*-inversion is used more frequently for focal actors (Latrouite 2020).

Since this construction has not been discussed much in the literature so far, it is unsurprising that there are still many open questions. First, Latrouite (2020) observes that violation of expectations and unexpectedness can license *ang*-inversion. Thus, we can find *ang*-inversions in all-new contexts such as the following, which we have already seen in example (285):

(367) 2016-4-Frog2

**Context:** The boy, Pedro, is looking for his frog in the forest. He sees a hole in the side of a tree and climbs up to look inside. As he calls for his frog, he is startled and falls back down.

“*Si Pedro, nakita na naman ng butas sa puno. Umakyat siya sa puno. [...]*  
*Pagsilip niya, tinatawag niya ‘Palakang Tetot! Palakang Tetot! Lumabas*

*ka diyan! Nagulat na lang si Pedro at sa pagkagulat niya nahulog siya sa puno.”*

*Isa-ng malaki-ng kuwago ang=l⟨um⟩abas sa=puno.*  
 one-LK big-LK owl NOM=(AV.RLS)come.out DAT=tree

It was a big owl that came out of the tree.

In this context there is no presupposition in place that anything would come out of the hole in the tree and the owl has not been mentioned until this point. So, this is indeed an all-new sentence. While we have already seen reversed *ang*-inversions in cases where expectations were violated (see 363, 365), it is not clear whether they can occur in such all-new contexts as well. If so, the question would be what the difference is between regular and reversed *ang*-inversion since the *Information Flow Principle* cannot be applied to an all-new context.

Another difference between regular and reversed *ang*-inversion is that the former appears to allow for a wider range of narrow-focus constituents (Nuhn 2019). While we find narrow focus on verbs or complement clauses (see ex. 366) with reversed *ang*-inversion, this appears to be ungrammatical or at least very awkward when rephrased as an *ang*-inversion:

(368) **The Hunger Games: *Mockingjay* (Reyes 2013:382)**

*Ang=maaari=ko=lang ma-gawa-∅ ay s⟨um⟩uko.*  
 NOM=possible=1SG.GEN=only ABIL-do-UV<sub>in</sub> INV ⟨AV⟩give.up  
 The only thing I can do is give up.

(369) **rephrased as *ang*-inversion**

*??S⟨um⟩uko/??Pag-suko ang=maaari=ko=lang ma-gawa-∅.*  
 ⟨AV⟩give.up/GER-give.up NOM=possible=1SG.GEN=only ABIL-do-UV<sub>in</sub>

According to one of our consultants, the *ang*-inversion is slightly less awkward when the infinitive *s⟨um⟩uko* is replaced by the gerundive *pag-suko* ‘giving up’, although neither sounds particularly good. A more idiomatic work-around is possible when the action expressed by the verb is accessible from the context and can be taken up using a demonstrative pronoun:

(370) **The Hunger Games: *Mockingjay* (Collins 2010:387; Reyes 2013:405)**

*...iyon=lang ang=ma-ga-gawa ni=Haymitch...*  
 DEM.DIST.NOM=only NOM=ABIL-IPFV~do GEN=Haymitch  
 ...it is only that which Haymitch will be able to do...

**Original:** ...it’s all Haymitch can do...

Here we have an *ang*-inversion with focus on the demonstrative *iyon* ‘that’, which refers to an action given in the preceding discourse. It is currently unclear why this

work-around is necessary for regular *ang*-inversion, while reversed *ang*-inversion would simply allow narrow focus on the verb itself or which other types of focal constituents are subject to similar restrictions.

Finally, as mentioned in previous chapters, these case studies were conducted with a limited data set. For future research it would be desirable to extend these investigations to larger, well balanced corpora to corroborate the findings.



## 8 Conclusion

### 8.1 Overview of Findings

Our investigation of the interface between morphosyntax and information structure in Tagalog began with a survey of the uses of *ay*-inversion, which revealed that fronted arguments and adverbials (clauses and otherwise) account for the vast majority of *ay*-inversions in our data. Although often mentioned in the literature, *ay*-inversion of both an adverbial and an argument appears to be so rare that not a single example occurred, neither in our elicited data nor in the *Hunger Games* translations. Rather, when two *ay*-inversions occur within a single sentence, they are either nested (e. g. *ay*-inversion in an *ay*-fronted subordinate clause) or they occur in separate coordinated sentences. A surprising finding was that *ay*-inversion occurs in subordinate clauses, which suggest that they are in fact subordinate *sentences* rather than clauses (see also Matić, Putten, and Hammon 2016).

It is well established that transitive verbs allow three combinations of voice form and fronted macrorole argument:

1. ACT *ay* AV,
2. UG *ay* UV, and
3. ACT *ay* UV.

Our counts support the previously proposed hypothesis that ACT *ay* UV occurs less frequently due to the higher processing effort. In our data, it occurs about half as often as the other two options. We also found that an *ay*-fronted undergoer followed by an actor-voice construction is possible, however only in combination with an *ang*-inversion that puts contrastive focus on the actor.

Regarding the information-structural function of *ay*-inversion, we saw that reducing it to marking one of the primitives *topic* and *focus* depending on voice form and fronted argument, as often proposed, is too simplistic. Rather, it appears that focal readings appear mostly in combination with the additive particle *din* ‘also’, the scalar additive particles *maging* and *kahit* ‘even’ and the negative polarity item *ni*. This additive sense sets it apart from the exhaustive reading found in *ang*-inversions. We saw that the scope of these additive particles never extends beyond the inversion marker *ay*, which motivated our approach to the account of *ay*-inversion on RRG’s information-structure projection.

Noteworthy as well is that the UG *ay* UV construction is mostly used without an overtly coded actor in our *Hunger Games* data, often to translate an English passive construction. This suggests that this type of *ay*-inversion may also have

an actor-backgrounding function, which would explain it being referred to as a passive, both in the literature and by consultants.

Then, we turned to the subject of reference tracking in Tagalog, which we attempted to model by applying Nagaya's (2006a) analysis to the frame-based discourse model proposed by Balogh (2018). Nagaya (2006a) noted that when coding third person referents, Tagalog uses personal pronouns to code topics in a similar way zero marking is used for topics in Hungarian or Japanese. Unlike topic marking in these languages, it appears that *ay*-inversion does not generally establish the continuing topic that is subsequently coded using personal pronouns, which suggests that there are two different topic notions at play here. The quantitative data presented on this subject matter in chapter 6, was based on our elicited spoken data which was annotated using RefInd, GRAID (with slight modifications), and RefLex.

Finally, we discussed reversed *ang*-inversion, an inversion construction that combines *ay*-inversion and *ang*-inversion. Like *ang*-inversion, the construction codes narrow focus on an argument, but realizes the focal argument clause-finally rather than clause-initially. We began by reviewing the pilot study discussed by Nuhn (2019), which we extended by including inverted *wh*-clefts and *all*-clefts in the translation study. The results supported the hypotheses argued by Nuhn (2019) that the *Information Flow Principle* (Ward and Birner 2011) plays a decisive role in construction choice between regular and reversed *ang*-inversion.

The findings presented in this thesis nicely show that *ay*-inversion, though clearly linked to information structure, does not allow the marker *ay* to be reduced to a particle marking an information-structural primitive such as topic or focus. We saw examples for fronted topics, foci, and – in the form of reversed *ang*-inversion – narrow focus marked by *maximal backgrounding* (Güldemann 2016). In this regard it resembles the Barayin marker *ná* (Lovestrand 2018) and other languages discussed by Güldemann (2016), which show that there is not always a clear 1:1 correspondence between morphosyntax and information structure. The analyses presented in chapter 5 show a great strength of RRG, which reflects the morphosyntactic differences between different *ay*-inversion constructions – Latrouite and Van Valin (2020) posit at least two syntactic structures associated with *ay*-inversion – but at the same time allows to capture aspects of *ay*-inversion in the information-structure projection that tie the various uses together.

## 8.2 Open Questions and Outlook

Nevertheless, many open questions remain. First, it remains unclear how many distinct syntactic structures are required to adequately model *ay*-inversion. La-

trouite and Van Valin (2020) argue that at least two are required. However, many of the uses discussed in chapter 4 have so far received very little attention in the literature and some of them are apparently so infrequent that we have only very few examples of them (in some cases none at all) even in our fairly large data sample. This makes them of course quite challenging to investigate. *Ay*-inversion raises questions at the operator projection, as well. We have seen that *ay*-fronted constituents can be accompanied by the question marker *ba*, an instance of the illocutionary force operator, and the hearsay marker *daw*, an evidential operator. Although sentential in nature, they are considered clause-level operators in RRG. Their occurrence in a clause-external position, however, raises the question, whether they weren't better analyzed as sentential operators, at least in some languages. Furthermore, we saw that reversed *ang*-inversion allows coding of narrow focus in case not covered by regular *ang*-inversion, such as narrow verb focus. Why this is the case, is still unclear as well as what this means for its description in the syntactic and operator projection. Finally, reference tracking leaves much room for future research. Although it seems clear that *ay*-inversion is not a reliable indicator, the exact mechanisms by which a pronoun topic is established remains unclear. For a formal account of anaphora resolution it would also be of interest to assess to what extent the constraints we formulated are actual rules or merely preferences and how these apply when nfirst- and second-person referents co-occur with third-person referents coded by pronouns, demonstratives and zeros. Additionally, the discourse model still leaves several aspects for further development, such as the modeling of the temporal structure of the events in the ICG-frame and how to code plural referents.



# A Translation Tasks used for Elicitation

## A.1 Unhappy Rats

This translation task was developed by Dr. Anja Latrouite to study the effects of information structure and givenness on voice selection and the selection of syntactic constructions in Tagalog (Latrouite and Riester 2018).

### Story 1

$A_{NEW} U_{GIVEN} V_{NEW}$

Rats live stressful and dangerous lives. The noise of the traffic makes them nervous and sick. Dogs chase them. And also our domestic cats catch and kill rats, when they get the chance.

### Story 2

$A_{NEW} U_{GIVEN} V_{GIVEN}$

It is not only wolves and foxes that threaten rats and catch them. Cats also catch rats and eat them afterwards.

### Story 3

$A_{OLD} U_{NEW} V_{NEW}$

Cats are silly creatures with nothing but nonsense on their minds. They climb up on curtains, bring home mice. Cats also chase and catch big rats, when they are in the mood. Who wants to have a big rat in their house?

### Story 4

$A_{NEW} U_{OLD} V_{NEW}$

Life in the wilderness is pretty cruel. Lions catch antelopes, sharks catch tuna fish and happen to get caught and killed by humans themselves. Even here in the city these cruel laws of nature can be observed. Our domestic cats also chase and catch rats, and some also bring them home to continue playing with the bleeding creature.

### Story 5

$A_{NEW} U_{NEW} V_{NEW}$

When I look out of the window, I see only unhappiness and violence. Dogs chase

hens and make them lose their feathers. Old bitter women scream at children and make them cry. And also (our domestic cats) catch and kill innocent rats, when no one is looking.

## A.2 Unhappy Dog

### Story 1

$A_{NEW} U_{GIVEN} V_{GIVEN}$

My dog has a hard life. On the fourth of the July, the fireworks terrify him and he hides under the bed. Since he is so small, even the cat chases him around the house all the time. And my little sister hits the dog whenever she has the chance.

### Story 2

$A_{NEW} U_{GIVEN} V_{NEW}$

Not only the cat and the birds in the garden chase my pet dog. My little sister hits the dog whenever she has the chance.

### Story 3

$A_{OLD} U_{NEW} V_{NEW}$

My little sister can be really mean sometimes. She always drives our mother crazy with her constant complaining. She never stops talking and always leaves her toys all over the house. On top of that, my sister hits the dog whenever she chance.

### Story 4

$A_{NEW} U_{NEW} V_{NEW}$

Our household is always full of conflict. My parents are always yelling at my brother for not doing his chores. My grandparents always sitting at the table on the porch quarreling about something. And my little sister hits the dog whenever she has the chance.

### Story 5

$A_{NEW} U_{NEW} V_{OLD}$

When we were younger, there was a clear pecking order among us siblings. My brother used to hit me, I hit my little brother. My little sister hit the dog whenever she had the chance.

## A.3 Unhappy Dog (updated version, 2018)

### Story 1a

$A_{NEW} U_{GIVEN} V_{NEW/SIMILAR}$

**broad A+V**

My dog had a tough day yesterday. All kinds of unpleasant things happened to him. The postman scared him, our neighbor locked him up in the basement, my friend accidentally kicked him down the stairs, and my sister hit him.

### Story 1b

$A_{NEW} U_{GIVEN} V_{NEW/DIFFERENT}$

**broad A+V**

My dog had an interesting day yesterday. Many different things happened to him. Our neighbor surprised him with a new chew toy, the cat bit his tail, my father took him to the park and my sister hit him.

### Story 2

$A_{GIVEN} U_{NEW} V_{NEW}$

**broad V+U (predicate)**

My sister did all kinds of mean things yesterday. She scared the postman, she locked up a cat in the basement, she hid our father's glasses and she hit our dog.

### Story 3

$A_{NEW} U_{NEW} V_{NEW}$

**broad A+V+U (sentence)**

Many funny things happened in our village yesterday. So, I had a lot to laugh at looking out the window. I saw the post man fall off his bicycle and an angry dog terrorizing the neighbors. A naughty boy hid the shopkeeper's glasses my sister hit our dog.

### Story 4

$A_{NEW} U_{NEW} V_{GIVEN}$

**double A-U**

Yesterday, our village was full of violence. The shopkeeper hit a customer, the neighbor hit my mother, my father hit the postman, and my sister hit the dog.

### Story 5a

$A_{NEW} U_{GIVEN} V_{GIVEN,||}$

**narrow A**

Yesterday, I had to rescue the family dog and bring him to my place. Everyone treats him terribly there: My mother hits him, the post man hits him, my brother hits him, and my sister hits him, too.

**Story 5b**A<sub>NEW</sub> U<sub>GIVEN</sub> V<sub>GIVEN,||</sub>**narrow A**

Yesterday, our dog was behaving very strangely and limping. We knew that someone had hit him but couldn't figure out who would do such a cruel thing. In the end, the culprit could not bear the bad conscience any longer and confessed: my sister (had) hit the dog.

**Story 5c**A<sub>NEW</sub> U<sub>GIVEN</sub> V<sub>GIVEN</sub>**narrow A + CT<sub>adjunct</sub>**

Yesterday was stressful and tiring for our poor dog. He got chased around all day. In the morning, a rooster chased him down the street. Later, our cat chased him through the house. In the afternoon, our neighbor chased him out of her garden and after school, my sister chased him around in the garden.

**Story 6**A<sub>GIVEN</sub> U<sub>NEW</sub> V<sub>GIVEN</sub>**narrow U**

Yesterday, my sister was very naughty. One of her classmates had to go the school nurse because my sister hit him. She hit the postman, she hit one of the farmer's sheep and she hit our dog, too.

**Story 7**A<sub>GIVEN</sub> U<sub>GIVEN</sub> V<sub>GIVEN</sub>**verum focus**

My mother thinks my sister such an angel who would never harm any living being. So, when our dog started limping everyone immediately suspected me because they thought my sister would never hit the dog. But I saw it happen and so I know the truth. My sister did hit the dog.

**Story 8**A<sub>GIVEN</sub> U<sub>GIVEN</sub> V<sub>NEW</sub>**narrow V**

Our dog is entirely my sister's responsibility. When he is sick, she takes him to the vet and gives him his medicine. She walks him, she pets him, she feeds him and when he misbehaves she hits him.



## A.4 Further Translation Tasks

– *Ang*-inversion with pseudo verbs

- (371) It was Juan who had to cook dinner.  
 (372) Only Superman can save us now!  
 (373) PEDRO should be the one paying for the repairs.

– *Ang*-inversion with narrow focus on a subconstituent:

- (374) (Is the tall man sleeping? – No,) It's the FAT man who is sleeping (, and not the tall one).  
 (375) (Mary expected her younger daughter to be very popular in school, but in fact,) it is her OLDER daughter who is always invited to all the parties (, and not the younger one).

– Role reversals / violation of expectation

- (376) role reversal, ICG prepares for role reversal

For so many years, my mother had cooked for our whole family every day. Now it was time to repay her, and so from that day on, things changed: (now,) **we cooked for her**.

- (377) role reversal ICG prepares for role reversal (Bonus)

Everyone likes chicken: chicken adobo, chicken nuggets, KFC. Now imagine you woke up one morning in a very different world: (Suddenly,) chicken eat people!

- (378) role reversal, unprepared violation of GCG expectation

The other day, a friend and I were going to take the Russian exchange student, Ivan, sightseeing. While Ivan and I were waiting for our friend to get ready to leave, we turned on the radio to pass the time. After a couple of songs, Ivan said, “Interesting... in Russia, **the radio listens to you**”.

- (379) no role reversal, ICG prepares violation of expectation

The last time I visited my parents, it was such a hassle. There were long lines, so many people at the airport and when I got out of, I was looking for my mother who was supposed to pick me up. But instead, **my father picked me up** because my mother wasn't feeling well and nobody had thought to tell me about the change of plans.

- (380) no role reversal, ICG prepares violation of expectation (Bonus)

My neighbor always likes to try out the newest technological inventions. He recently had a computer chip put in his ear. Now, he doesn't have to hold his phone to his ear anymore. **His ear is his phone.**

(381) no role reversal, unprepared violation of GCG expectation

“Boy, do I have something for you, today”, said our teacher as he unlocked the classroom and let us in. He opened his bag, pulled out a stack of papers and slammed them on the table with a malicious looking smile. I buried my face in my hands. . . he was well known at our school for his impossible surprise quizzes. When I looked up again after a few moments, I realized: **He was handing out cake!** “I couldn't find any paper plate. So, each of you take a sheet of paper from my desk and fold it twice so you don't get your desks dirty.”

## B Story Prompts Used for Elicitation

1. How is life today different from life in your childhood?
2. Who was your favorite teacher?
  - What made him/her your favorite teacher?
  - What impact did this have on your life and how you see and perceive the world?
  - How would your life have been different without his/her influence?
3. Do you or have you ever had a pet? Tell me about him/her.
  - What kind of animal was it? What was its name?
  - What was it like? What did it enjoy doing?
  - How did you get it?
  - What influence did it have on your life?
4. What was the greatest/happiest moment in your life so far?
  - Why? What happened?
  - How would life have been different if this hadn't happened?
5. Tell me about your best friend.
  - Why are you best friends?
  - How did you meet?
  - Describe the impact of your relationship on your life.
  - Does anything about him/her bother you? What? Why?
6. How do you cook/build/do X?
7. What are your plans for the coming week?
8. If you could change something about today's society, what would that be?
9. If you could go on a free vacation anywhere in the world:
  - Where would you go?
  - What would you do there?
  - What gave you the idea to do that?
10. Imagine you wake up one morning under a tree in Luneta park and can't remember who you are or how you got there. How do you figure out who you are and get back home?
11. If you were king of the world...
  - ...how would you solve global warming?
  - ...how would you make the world a better place?
  - ...which steps would you take to ensure better education for everyone on the planet?
12. If you were a super hero, which super power would you have? [after consultant's response]

- How would you use that superpower to save the earth from the sun going supernova?
  - What would a typical day look like? Describe from breakfast to bed time!
  - Who would be your archenemy and how would you battle each other? Who would win?
13. If you could change anything about your parents, what would it be? How would your life have been different?
  14. What would you like to change about yourself and how would your life be different as a result?
  15. What do you think is your greatest strength/weakness? How has it shaped your life and how will it shape your future?
  16. If you could live your life as any animal, which would you want to be and why? What would you do all day?
  17. Imagine you could invent any realistic or fictional gadget. What would you want to invent? What could it do and how would that change the world?
  18. If you could meet any real or fictional person and give them a tour of Manila, who would it be?
    - What would you show them?
    - What would you talk about? What would you ask them?
  19. Is there anything in your life you wish had gone differently? What would you do differently, if you could? What impact would that have on your life today?

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