A Grammar of Arta:

A Philippine Negrito Language

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List of abbreviations

1	first person	MED	medial (demonstrative)
1+2	first–second person	MIR	(ad)mirative
2	second person	NEG	negation
3	third person	O	transitive object
A	transitive subject	OBL	oblique case
ABS	absolutive	PL	plural
ADJ	adjective	POST	posterior phase 'already'
ANT	anterior phase 'still'	POT	potentive verb
CAUS	causative	PRG	progressive aspect
COND	conditional	PROX	proximal (demonstrative)
CONTR	contrastive	PST	past tense
DEF	definite	RDP	reduplication
DEM	demonstrative	RECP	reciprocal
DIGR	digressive phase 'for a while'	NMZ	nominalizer
DIST	distal (demonstrative)	SPC	nominal specificity
GEN	genitive case	S	intransitive subject
HYP	hypothetical	SG	singular
INDEF	indefinite	STV	stative verb
INTR	intransitive verb	GAP	topic
LIG	ligature (linker)	TR	transitive verb

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Introduction

1.1   Aims of this study

Arta is an Austronesian language spoken by 10 native speakers and 35–45 second-language speakers primarily in Quirino province, northern Luzon, in the Philippines. Arta is an isolate language within the northern Luzon subgroup of Malayo-Polynesian languages in Austronesian. In spite of the relative uniqueness of the language, the only available source was limited to a single article, Reid (1989). This study attempts to provide a more comprehensive description of the language. I have been working with the Arta people for five years, and collected lexical and discourse data. I analyzed the phonological and grammatical structures of the language based on these data. In the following nine chapters, I provide the results of the analysis I conducted on the language, from phonology, morphology, via noun phrases and adjectival constructions, to higher order phenomena relevant to clause and sentence. In this chapter, as a prelude to the grammatical description, I will discuss sociolinguistic, ethnographic, and methodological issues.

1.2   Location and physical and social environment

The speakers of Arta live in the northern part of the island of Luzon, the largest island among the 7,107 islands comprising the Philippine archipelago. The longest river in the Philippines, the Cagayan river, runs from south to north, forming Cagayan Valley. The valley is

sandwiched between the Sierra Madre mountains in the east, and mountainous district, or Cordillera in the west. The western mountainous region Cordillera is home to various ethnolinguistic groups which may be called "Cordillerans", including Bontok, Kankanaey, and Kalinga, Isneg, Ibaloi, Ifugao, among others. The east side of Sierra Madre, that is, the eastern coast of northern part of Luzon, is home to various Negrito groups, who are phenotypically distinct groups from other Filipinos in that they have shorter stature, darker skin, and frizzy hair. The east coast area is inhabited by Dupaningan Agta, Pahanan Agta, Casiguran Agta, and Dinapigue Agta (see Robinson and Lobel 2013).

Figure 1. *Northern part of Luzon*   **Figure 2** *Quirino province*
Figure 1.1: Left: Northern part of Luzon. Right: Quirino province seen from south
(*seen from south*)

The Arta people have lived in the province of Quirino for at least three or four generations. The province is located 198 km distant from Manila, and 34km west of the nearest coastline. It is bounded by Isabela on the North, Aurora on the East and Southeast, the Sierra Madre mountains Range on the Eastern and Southern border, and the Mamparang mountains on the Western part of the province. The Cagayan river crosses the province from the south to north.

Quirino province is constituted by six municipalities: Cabarroguis, Diffun, Saguday, Aglipay, Maddela, and Nagtipunan (the last three represented in the right map of Figure 1.1), and the communities of Arta are located in Nagtipunan. The area was formerly covered with a

thick rainforest, traditionally occupied by Nagtipunan Agta and a non-Negrito group Ilongot (or Bugkalot) as well as Arta, but the area is currently inhabited by a large number of immigrants from outside of the province to reclaim the forested area. Now the province has become an "ethnic salad bowl."

The speakers of Arta live in Pulang Lupa, Kalbo, in Disimungal, Nagtipunan. There is currently no community exclusively composed of the Arta people. The majority of the populations in Pulang Lupa, Kalbo is Nagtiupuan Agta and Casiguran Agta (i.e. other Negrito groups), where the Arta people are sporadically distributed. The communities are located in the remote area surrounded by the mountains, as shown in the map. But there is a freshly-paved road coming from Cordon (Isabela province), through Cabarroguis (the capital of the province), their communities, getting to the east coast (the Aurora province). The Negrito people frequently interact with Negrito population living in Aurora. Some of the community members in Pulang Lupa and Kalbo originally came from Casiguran and other Negrito communities in Aurora. The bus service connecting Aurora and Quirino facilitate such social interactions. Some speakers of Arta settled down in Aurora, specifically living in Dinalungan and Casiguran.

1.3 Sociolinguistic situation of the Arta language

1.3.1 Mutual Intelligibility with neighboring languages

As will be shown below, Arta is genetically classified in the first-order subgroup within the Northern Luzon languages. The language is different from other neighboring languages to the extent that they are not mutually intelligible. Take an example from the lexicons among Tagalog, Ilokano, a lingua franca in Northern Luzon area, Casiguran Agta, and Arta, the latter two being Negrito languages spoken in the same communities.

Some lexical items are shared with the other languages (see 'eye' and 'head' in the top group separated by broken lines), but as seen in the two groups at the bottom (in boldface), Arta and Casiguran Agta have distinct vocabulary from Tagalog and/or Ilokano, or Arta has a unique set of lexical items compared with the other three languages. Reid (1989) calculates the retention of reconstructed Proto-Malayo-Polynesian vocabulary of Arta, and reports that Arta

Table 1.1: Lexical difference between Tagalog, Ilokano, Casiguran Agta, and Arta

	Tagalog	Ilokano	Casiguran Agta	Arta
'eye'	*mata*	*mata*	*mata*	*mata*
'head'	*ulo*	*ulo*	*ulo*	*ulu*
'breast'	*suso*	*suso*	**gisat**	*susu*
'nose'	*ilong*	*agong*	**dungos**	*adung*
'excrement'	*ta'i*	*takki*	**attay**	**sirit**
'laugh'	*tawa*	*katawa*	**ngihit**	**èla**
'banana'	*saging*	*saba*	**biget**	**bagat**
'back' (body)	*likod*	*likod*	*adèg, sèpang*	**sapang**
'hair'	*buhok*	*buok*	*buk*	**pulug**
'body'	*katawan*	*bagi*	*bègi*	**abi:**
'water'	*tubig*	*danum*	*dinom*	**wagèt**
'house'	*bahay*	*balay*	*bilɛ*	**bunbun**
'male'	*lalaki*	*lalaki*	*lèlake*	**gilèngan**
'female'	*babae*	*babae*	*bèbe*	**bukagan**

Note: "*ng*" = /ŋ/; "*è* " = /ə/, " ' " = /ʔ/.

shows 27 percent retention rate, which is among the two lowest of the Philippine languages (the other language of the lowest percentage is Manide).

Note however that these four languages share some important grammatical characteristics. All of the languages show the same word order in some respects: a predicate is followed by nominals, the head noun of nominals are preceded by an NP marker (determiner), pronominal forms are encliticized to the predicate, and so forth. Other characteristics are the apparent indeterminacy of major word classes, the complexity of verbal morphology, and shared cognates of some transitive affixes (PMP *-ən, *-an, and *hi-), and the alternate argument structures they involve.

Consider the following sentences in Ilokano, Casiguran Agta, and Arta, meaning 'I am going to flood the earth so that the mankind will be destroyed.', cited from the Bible (Genesis, the Old Testament):

A.   Ilokano

Pa-dakkèl-èk   [*ti*   *danum*]   [*idiay*   *daga*]   *tapno*   *mapu:kaw*   [*a:min*

CAUS-big-TR.1SG   ART   water   ART   soil   so.that   destroyed   all

a   *tao*].

LIG   human

B. Casiguran Agta

Pa-dikkèl-èn=ku	*[i*	*dinum]*	*[ta*	*luta=a].*	*munda*	*ma'ibut*
CAUS-big-TR=1SG	ART	water	ART	soil=SPC	so.that	destroyed

[attanan	*a*	*agta*	*ata*	*puti].*
all	LIG	Negrito	and	non-Negrito

C. Arta

Pa-ka:man-èng=u	*[i*	*wagèt]*	*[ti*	*tapa]*	*take:ta*	*mapili*	*[attanan*
CAUS-big-TR=1SG	ART	water	ART	soil	so.that	destroyed	all

a	*arta*	*aydi:*	*agani:].*
LIG	Negrito	and	non-Negrito

'I am going to make the water bigger so that the mankind will be destroyed.' (God to Noah)

In all the languages, the predicates are followed by the noun phrases (noun phrases are shown in square brackets), and the noun phrases are introduced by the article-like function words (glossed as ART). The causative prefix is *pa-* in the three languages (in fact that holds in Ilokano, which used different lexical choices in the above translation[1]). Furthermore, first singular person form is realized as a fused *k* in Ilokano, *=ku* in Casiguran Agta, and *=u*, which are the cognates reconstructable as *=ku in Proto-Northern Luzon (see Figure 1.7 for the diagram of some subgroups in Philippine languages). However, many function words differ among the languages. The meaning 'so that' is differently encoded in these languages: *tapno* in Ilokano, *munda* in Casiguran Agta, and *take:ta* in Arta. The coordination of nouns is signaled by *ata* in Casiguran Agta, and *aydi:* in Arta (*ken* in Ilokano although it is not used in this context).

In sum, there is a large number of constructional features shared between Arta and the neighboring languages, but lexical items including both content words and grammatical/functional words differ significantly between these languages. It is the latter property that is responsible for the hindrance of the mutual intelligibility.

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[1]The causative *pa-* is used in all known Philippine languages (Zorc p.c.).
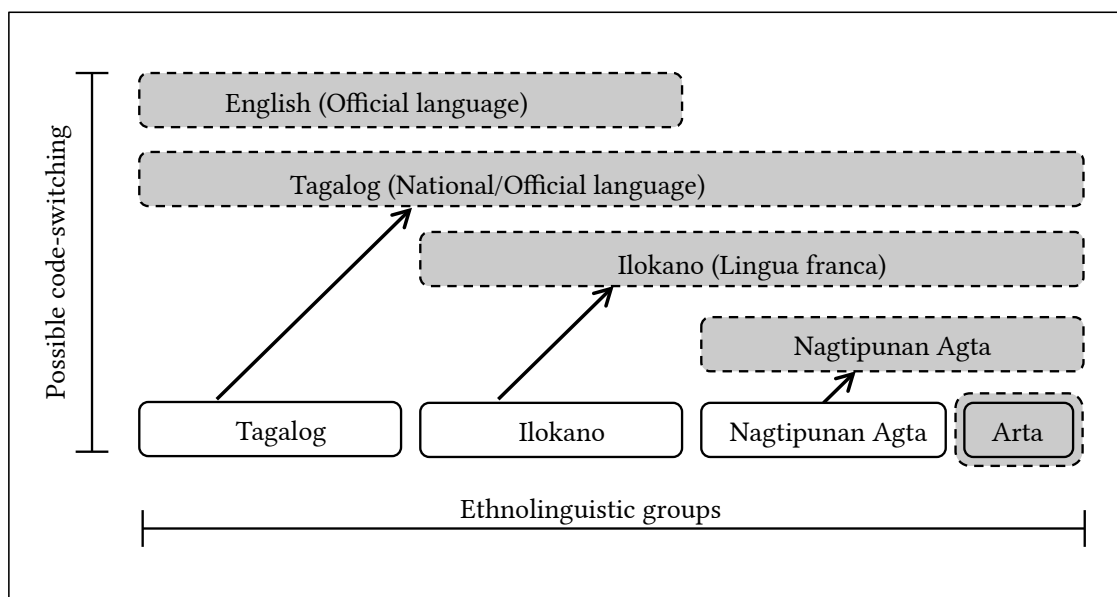
Figure 1.2: Multilingualism in Arta and neighboring ethnolinguistic groups

1.3.2   Multilingualism and the language vitality of Arta

Multilingualism in the Philippines is so pervasive. The sociolinguistic environment sur-rounding the Arta people would be illustrated as Figure 1.2. This diagram consists of two axes.[2] The horizontal axis represents some of the ethnolinguistic groups which the Arta people may interact with: Tagalog, Ilokano, Nagtipunan Agta, and Arta themselves, each of them shown by a rounded square. The vertical axis represents possible code-switching that may occur for each group. Each language is shown by a rounded dark square with the broken line. The arrows pointing to the languages show that the languages are the native tongues of particular ethnic groups.

The Arta language is, as shown in the figure, spoken primarily by Arta native speakers, with second-language speakers limited to the families or close relatives of the Arta native speakers. The Nagtipunan Agta language, or Casiguran Agta (or Casiguran Dumagat, a sim-ilar dialect), is spoken by the Arta native speaker, as well as Nagtipunan Agta people. The language functions as a common language at the community level. Ilokano is spoken by the Nagtipunan Agta, Arta, as well as the original Ilokano people, who migrated from the Ilocos region. In fact, the language currently serves as the lingua franca in the northern part of Lu-

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[2]This visualization is inspired by the illustration of African multilingualism by Shigeki Kaji (see Kaji 2013: 176).

zon. Tagalog, the national language, is also used by Arta, but their proficiency in Tagalog is much lower than that of Ilokano; it is only used when they have to communicate with those who cannot speak Ilokano. However, one Arta speaker living in Aurora province shows high proficiency in Tagalog because Tagalog functions as a lingua franca there. No Arta people can speak English, which exists merely as an official language.

Now let me report the number of the Arta speakers. However, The "speaker" should be used with caution, because the concept of "speaker" is actually a quite vague notion. In the following discussion, I will decompose the "speaker" into "potential" and "active" speakers. Potential speakers are those who *can* speak the language regardless of whether or not they are using the language. Active speakers are those who do speak the language. This distinction is quite significant because it is only the latter type of speaker who plays a role in the intergenerational language transmission.

(1) Potential speakers of Arta

    a. Those who can use Arta almost exclusively (monolingual speaker) . . . 0

    b. Those who can use Arta more fluently than, or as fluently as, Agta/Ilokano . . . 10

    c. Those who can use Arta less fluently than Agta/Ilokano . . . 35–45 (varying fluency)

(2) Active speakers of Arta

    a. Those who are using Arta almost exclusively . . . 0

    b. Those who are using Arta more frequently than Agta/Ilokano . . . 0

    c. Those who are using Arta much less frequently than Agta/Ilokano . . . 10

Ten potential speakers grouped as (1b) learned Arta as the first language in their childhood. They seem to be referred to as "native speakers". With regard to the second classification, however, they are classified into 2c; no Arta people are using the language as a primary tool for communication any longer. This is the case in the community level, and the family level. A typical pattern of the Arta families is that either the father or mother is Arta, and his/her spouse is Agta, and their children grow up as "Agta", rather than Arta. They thus speak Agta for communications within the family and community, and for inter-ethnic

communications, they use Ilokano. The Arta language is used when the "native" speakers (i.e. fathers and mothers of different families, at the age of over forty) come together to chat with each other. An increasing number of teenagers have come to command Tagalog (Filipino) because the Arta/Agta children currently go to school established within the Kalbo community (Dioryong Integrated School).

Nine out of the ten native speakers are probably over forty[3]; one native speaker is exceptionally thirty years old. They can command the language very fluently. Although code-switching is quite frequent between Arta and Agta/Ilokano, little vocabulary is borrowed from these languages when they are speaking Arta. This does not hold in the case of speakers (1c). Since these speakers probably learned the language as a second language, their language use is qualitatively different from the (1b) speakers. They speak Arta, but with the frequent lexical borrowing from Agta/Ilokano. Their manner of speech is labeled as *marakèt* "bad (speech)" by old native speakers.

1.4   The culture and lifestyle of Arta

The Arta people traditionally wore clothes called *agi* 'cloth' for females and *pulot* 'g-string' for males. The cloth is made of the fiber of barks, with no dyeing. They remove the bark of a kind of tree, putting it under mud until it becomes rotted. Having removed or washed the mud away off the bark, they pound it until it becomes softened. They also bought or exchanged cloth from neighboring people to wear. They traditionally did not use needle and thread, so if they get cloth from neighbors, they just cut it and tie it with string. Besides *agi* or *pulot*, they may decorate their own body with beads and strips of cloths. They wear *bi:sal* 'bangle' on the upper arms and *bakèd* on the head (*è* = /ə/), *pina:nès/tinakèd* 'bracelet' on the wrist, *bi:lèg* 'necklace' on the neck, *subèng* 'earring' through the hole of the earlobe. *Bi:lèg* 'necklace' and *pina:nès/tinakèd* 'bracelet' are made of beads (traditionally seeds), and the others, of cloth.

They often use *aba* 'mat' for sitting or sleeping. Weaving mats is important work for women. The mats are made of the leaves of what they call *bidi:yu* 'screw palm, pandan',

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[3]Because they do not record birthdates, one cannot determine any precise age for the speakers.

Figure 1.3: Left: *pina:nès* 'bracelets' (made of strings) and *tinakèd* 'beeds'). Right: *subèng* 'earring'

which is pliable enough to weave the mat. First they remove the spines running along the long leaves, and make long strips from the leaves. It is dried under the sun, and is woven. Until recently they made it for exchanging it with rice. *Bidi:yu* is a quite useful plant, the leaf being used for various kinds of basket.

Arta people have lived in inland areas in Luzon, distant from the ocean. Their subsistence diet primarily comprises of (i) wild pigs, deer, monkeys and other animals obtained by hunting, (ii) freshwater fishes, (iii) vegetables and rice planted in the field, (iv) yam and taro that are either planted in the field or grow wild in the mountain, and (v) rice, or other food obtained by interactions with neighboring societies.

Wild pig, deer and monkey were the primary source of protein for them, and hunting activity also constitutes the most enjoyable activity for Arta men in their daily routine. The Arta language does not have a generic term denoting 'hunt, hunting', but a more specific term for hunting *murab* is used, probably because the particular manner of hunting is prototypical. There are actually three different conceptual categories of hunting according to their manners. *Murab* (n.) or *mam-murab* (v.) denotes the hunting conducted by a single man without accompanying a hound (*lappul* 'dog'). *Bugay* (n.) or *mam-bugay* (v.) refers to the hunting conducted by a single man but with a hound accompanying him. *Tabug* (n.) or *man-tabug* (v.) is another hunting characteristically conducted by more than one hunter, regardless of whether a hound is accompanied or not. In *bugay*-hunting, hounds are used to bite the target before the Arta approaches it. They let a hound loose when the hunter found a target. The hound runs to bite the target, and keeps fighting with it until the target becomes weakened. For *murab*-hunting, they used to use bow and arrow, but more recently hunting

Figure 1.4: Left: *ilus* 'purple yam'. Right: *galiyang* 'kind of taro'

with guns.

If they get some game, they share the meat with all of the neighbors, and stay for three or four days. If they lack subsistence diet again, they go hunting again, sometimes changing their living locations to the place where they might find wild pigs or other game. Currently, however, hunting has lost its importance for the Arta. They cut thick trees to sell, and they also cut thin trees to make charcoal. As a result, the Arta people thus come to deplete all the trees on the mountains around their communities to earn money. The forest necessary for wild pigs to thrive are being lost in many areas around their communities.

When men are hunting, women go to the field or into the mountains to dig root crops such as yam and taro. Root crops include several kinds of yam (planted yam: *giwat*, *ippèt*, and *ilus* (purple yam, Figure 1.4: left); wild yam: *ba:lu*), taro (*galiyang*, Figure 1.4: right; and *tabèl*), sweet potato, and cassava, among others. They also plant rice, corn, peanut, tobacco, squash, and cowpea in their fields.

Before they began to use iron pans, bamboo had been an important material with which they cooked rice and viand (Figure 1.5: right). A piece of green bamboo is cut into a two-joint length, and a small window is made, into which they put washed rice and water to cook rice, or the flesh and fat of wild pig to cook a viand. Since the green bamboo gives off a good smell, bamboo-cooking is still their favorite way of cooking, in spite of its relative rarity.

Betel chewing is a mild stimulant widely used in Taiwan, Insular (Maritime) Southeast Asia as in the Philippines and Indonesia, Mainland Southeast Asia as in Cambodia, Laos, Thailand, Myanmar, and Vietnam, and in India and Pakistan (Zumbroich 2008). In Arta

Figure 1.5: Bamboo-cooking

culture, they use areca nut (*tèbbi*), betel leaf (*god*), and lime powder (*nusu*), sometimes with tobacco (*taba:ko*). They prepare a betel quid by wrapping areca nut and lime powder with a betel leaf. It is chewed until the saliva becomes red by a chemical reaction, during which the ingredients effect the nerve system, yielding mild pleasure. The ingredients for betel chewing are carried in the small pouch called *bayakèt* 'betel pouch' in Arta.

Arta people traditionally had a rich supernatural world, living with various kinds of spirits. Spirits are generally called *be:kut*, and are considered to be harmful to people (there are no beneficent spirits). Some spirits have specific names, such as *alilyo:gèn* 'spirits living in the mountains, crying "rerorerorero…", *mangidukès* 'the spirits living in the stream, which slap the legs of people causing them to become swollen', *karangèt* 'the spirits living on the banyan trees, causing people to become sick', *ansisit* 'small spirits living around anthills, causing people to become sick', and so forth. Faith healers (*bunu:gan*) are the only ones who can see the spirits, and they warn children against playing around spirit places. They also cured the sick people by scattering the spirit away from the body. There are no longer any faith healers among the Arta.

When someone died, just a small funeral is conducted. They prepare a wooden coffin, into which the body is placed, together with rice, viand, tobacco, lime powder, areca nuts, betel leaves, and clothes. The body is buried near the community. According to their supernatural belief, dead people become spirits, traveling around mountains and rivers far from their community, but sometimes coming to their community to see his/her children. If they

happen to see people in their travels, they may do them harm.

1.5   Arta prehistory

1.5.1   Arta as an Austronesian language

Austronesian languages constitute a relatively well-established language family, distributed primarily in Taiwan, insular Southeast Asia, Oceania (excluding Australia and a large part of New Guinea), and Madagascar just off of Africa (Figure 1.6). The language family is composed of about 1200 languages (Lewis et al. 2016), which amount to around one fifth of the world's languages. The total number of Austronesian language speakers is around 300 million, with Malay/Indonesian 10,296,000/22,800,000, Javanese 90,000,000, Tagalog 23,853,200 in terms of the total numbers of speakers (Blust 2013: 58, 71, 77).

Figure 1.6: Austronesian languages (Crowley 2005: 607; drawn by Malcolm Ross)

In spite of its geographical diversity, the genetic unity of the Austronesian languages are well-attested by historical-comparative linguistics. Most of the Austronesian historical linguists, as well as archeologists, agree that the homeland of Austronesian speakers is what

we now call Taiwan, from which all of the other Austronesian speakers spread southward into the other areas. The origin of the Austronesian population is firmly attested by the linguistic evidence that the first-order subgroup of the family tree is all composed of Formosan languages (indigenous languages in Taiwan), with the number of first-order subgroups remaining an issue (see Blust 1999, Ross 1995, 2009).[4]

Malayo-Polynesian languages (or Extra-Formosan languages) subsume all the Austronesian languages spoken *outside* of Taiwan (except Yami, which is politically included in Taiwan but is clearly subgrouped with Malayo-Polynesian). The ancestors of the Malayo-Polynesian speakers are assumed to have spread from Taiwan via Batanes islands into the Philippines (from north to south), and after settling down in Borneo, Sulawesi, the Moluccas and other islands in Indonesia, some of the populations spread into Madagascar, Mainland Southeast Asia (Chamic group), and Oceania (See Bellwood 1996/2005, 2004). The languages of the Philippines and western Indonesia, as well as Malagasy (spoken in Madagascar), Chamorro (Guam), Palauan (Palau) have some similarities in homorganic nasal substitution in a particular verb form (/maN-/: *mam-p/b...*, *man-t/d...*, *mang-k/g...*), and their relatively complex verbal morphology, suggesting the existence of the same genetic affiliation labelled as "Western-Malayo-Polynesian" (Blust 1977). However, there is no rigid phonological evidence for the subgroup, and the label is currently used just for a convenient label for the language group.

With regard to the languages spoken in the Philippines, excluding such languages as English, Spanish, Chinese, Spanish-origin creoles, various classifications have been attempted concerning the lower nodes of Malayo-Polynesian. Once "Proto-Philippine" was assumed, subsuming all the indigenous languages in the Philippines, (except the Sama-Bajaw languages of the southern Philippines), Yami in Taiwan, and some languages in northern Sulawesi. Although some researches still defend or assume the hypothesis (Blust 1991, 2005, Robinson and Lobel 2013, and Lobel 2013), the evidence for the proto-language is weak, with no firm phonological evidence provided (Reid 1982, Ross 2005). The classifications of the Philippine languages thus consist of relatively small subgroups. The well-attested linguistic

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[4]Reid (2012) is particularly suggestive in that he challenges the application of the traditional tree model, and proposes that there were four dialect/language chains in Taiwan (Northern, East, Central, Southwest Formosan dialect chains), and that one dialect of the East Formosan dialect chain ultimately developed into Proto-Malayo-Polynesian.

subgrouping of the Philippine languages suggested by Blust (2013: 740) and Reid (2013: 330) is shown in Table 1.2 (This includes the languages spoken in the geographical Philippines):

Table 1.2: Well-attested subgroups of the Philippine languages

1.	Bashiic	8.	South Mangyan
2.	Northern Luzon	9.	Kalamianic
3.	Manide-Alabat	10.	Palawanic
4.	Central Luzon	11.	Manobo
5.	North Mangyan	12.	Danao
6.	Inati	13.	Subanen
7.	Central Philippine	14.	Bilic

Now the Arta language belongs to the Northern Luzon subgroup (See Figure 1.7 for the genetic relationship of Arta vis-à-vis other Northern Luzon languages). Northern Luzon languages are widely distributed in the northern part of Luzon, surrounded by Bashiic languages such as Ivatan and Ibatan, spoken in Batanes islands in the north, and by Central Luzon languages such as Kapampangan and Sambal in the south. Northern Luzon languages include Ilokano, Meso-Cordilleran languages such as Bontok, Ifugao and Kalinga, Cagayan Valley languages such as Yogad, Ibanag and Gaddang, North-eastern Luzon languages including Dupaningan Agta, Pahanan Agta, Casiguran Agta, and Dinapigue Agta.

One piece of linguistic evidence to identify the Northern Luzon subgroup is the sporadic metathesis between *t … s > /s … t/, which is shared exclusively by NLzɴ languages, as in PMP *taŋis > PNLzɴ *saŋit (Reid 2006: 7). Although Reid (1989, 2013) does not provide such evidence for the subgrouping of Arta, the metathesis does exist as shown in (3):

(3)   a.   PMP *ditaqas > *disat* 'high (the sun)'

        b.   PMP *təRas 'hardwood, hard' > *sarat* 'narra wood'

Since PMP *q was lost and PMP *R changed into /r/ in Arta, the items in (3) are in accordance with regular sound changes that occurred in the language. The metathesis presented above seem to provide strong evidence for positing that Arta is subgrouped within other Northern Luzon languages.

Arta underwent another sound change PMP *R > /r/, which provides evidence for the subgrouping within the NLzn languages (see also Table 2.6 in Chapter 2). Northern Luzon languages have varying reflexes of *R. Arta and Ilokano reflect *R as /r/, Meso-Cordilleran

languages /l/, and North-eastern and Cagayan Valley languages /g/ (Reid 1989: 50–52, 58, Reid 2013: 338–340). Although Arta and Ilokano share the same reflex /r/, it is difficult to consider that these languages constitute a single subgroup partially because most of the forms that underwent *R > /r/ are not uniquely shared:

(4)   a.   *biRŋaw > Arta: *biringaw*, Ilk. *bərngaw* 'fly (n.)'

       b.   *huRas > Arta: *uras*, Ilk: *u:gas* 'wash'

       c.   *kaRat > Arta: *arat*, Ilk.: *kagat* 'bite'

       d.   *Raŋu > Arta *rangu*, Ilk. *gangu* 'wither'

       e.   *diRu > Arta *di:ru*, Ilk. *digo* 'broth, juice'

       f.   *Rapu > Arta *rapu*, Ilk. *gapu* 'be from'

As shown in the above data, Arta has more coherent reflexes of *R as /r/ than Ilokano. The forms which are expected to share the reflex of *R are reflected as different forms, which makes it difficult to subgroup the two languages as the "Ilokano-Arta" subgroup.

In Arta, PMP *j consistently changed into /d/, thus merged with *d, which exhibits a further difference from Ilokano, where *j is reflected as /g/ (Reid 1989).

1.5.2   Arta as a Negrito group

In spite of the language affiliation, Arta speakers are phenotypically different from Filipinos in that they have a darker skin, shorter stature, and frizzy hair (see the pictures of the speakers shown in this dissertation). The groups who have such physical characteristics are distributed in some areas in the Philippines, and have been called "**Philippine Negrito**" in the academic context, and Arta is one of these Negrito groups.

Notably, no Negrito population speaks non-Austronesian languages, nor do their languages constitute a single linguistic subgroup. Each ethnolinguistic group belongs to different nodes of different subgroups of Malayo-Polynesian languages (Figure 1.7).

It has been argued that the phenotypical differences between Negrito and non-Negrito populations indicate that at least two different waves of migrations into the Philippine archipelago occurred in the Paleolithic and Neolithic ages. Archeologists argue that the Austronesian population first came from Taiwan into the Philippines roughly around 4,000–5,000 years
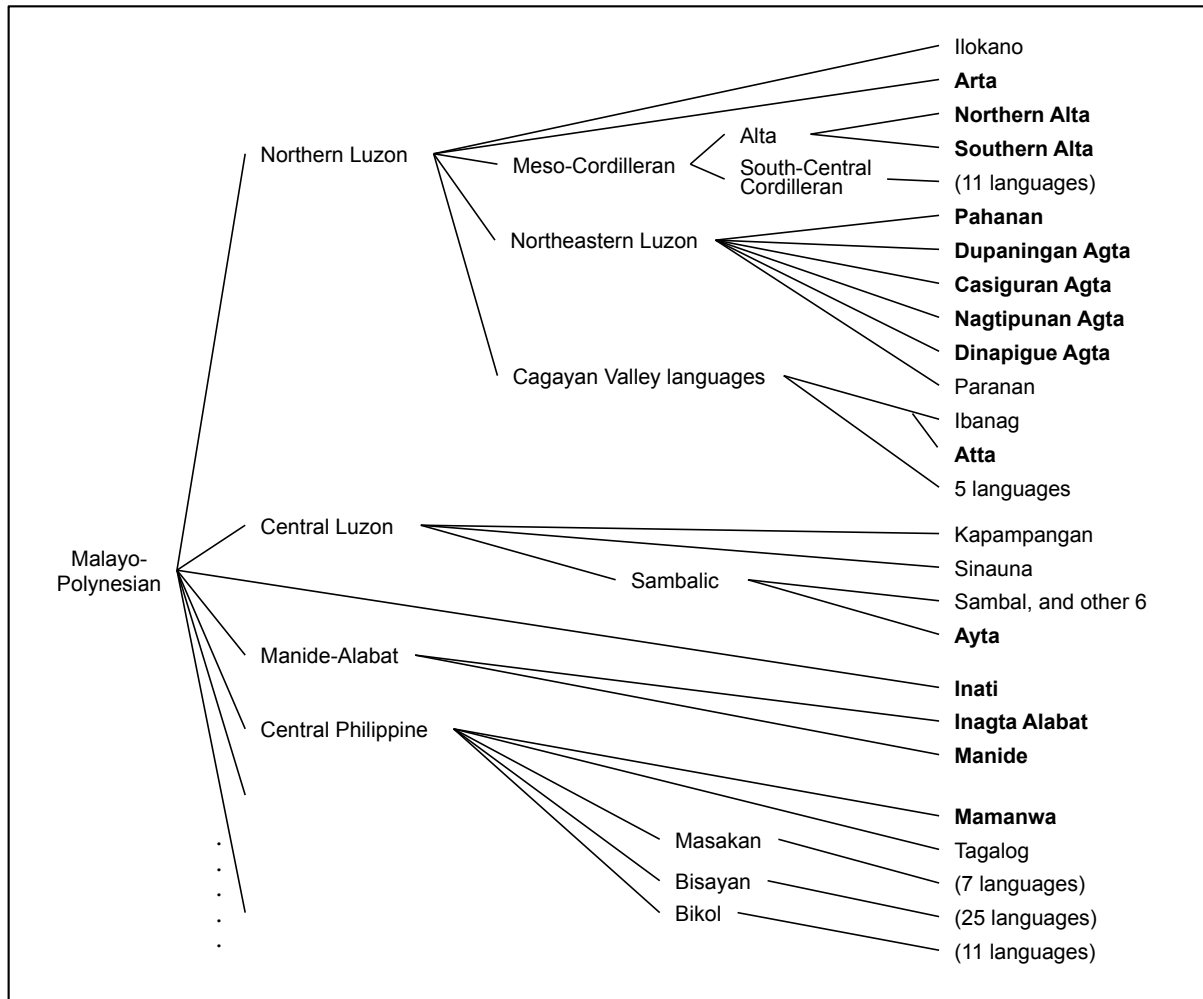
Figure 1.7: Some Negrito languages (in bold) vis-à-vis other Philippine languages

BP (Bellwood 1996/2005, Blust 2005), but with regard to the ancestors of Philippine Negrito groups, their migration into the Philippine archipelago dates back to the Paleolithic age around 30,000–50,000 years ago (Gunnarsdóttir et al. 2011, Jinam et al. 2012). The first settlers (i.e. the ancestors of the current Negrito groups) are ultimately relevant to the first dispersal of Homo Sapiens froum Africa. It is suggested by current genetic and archaeological studies that, after common ancestral populations of modern humans dispersed "out-of-Africa", probably through south Asia along the coast, the populations settled in the Southeast Asia as a second dispersal no later than 25–38,000 years ago, after the first dispersal into New Guinea, Melanesia, and Australia ∼62–75,000 years ago (Rasmussen et al. 2011).

The first migrants into the Philippines must have spoken non-Austronesian languages, as is currently observed in the non-Austronesian speakers in New Guinea and Australia. But the almost complete switch into Austronesian languages obscures their linguistic prehistory.

No particular morphological or syntactic substratum or residue is attested, and most part of the lexicons are of Austronesian origin (see Reid 1994 for possible non-Austronesian lexical items in Negrito languages). In other words, all of the Negrito populations in the Philippines surely underwent a radical language shift from non-Austronesian into Austronesian.

Now what kind of social contact between the early settlers (Negrito populations) and the newcomers (Austronesians) caused such a radical language switch? The difficulty estimating the prehistoric social contact lies in the fact that there must have been at least two distinct phases. In the early language contact, we need to recognize that there was an intimate contact between the two populations to the extent that the original non-Austronesian langugages of Negritos bacame extinct, completely switching into Austronesian languages. For example, Reid (1987) proposes the following scenario of their language contact: "[t]he kind of contact that seems most likely to have occurred is the type where the two races lived and worked together, their children growing up together, with Negrito bilingualism developing, and probably within the space of a few generations forgetting their original tongues."[5]

In the subsequent stage, however, at least some of the Negrito populations scattered in such remote areas that their languages that they learned from the neighboring Austronesian populations became dissimilar to the neighbor's languages. As shown in Figure 1.7, some current Negrito languages such as Arta, Inati, Manide, and Inagta Alabat are genetically quite different from other Austronesian languages. This is contrastive with Atta, one of the Cagayan Valley languages, which is mutually intelligible with Ibanag (a non-Negrito language). This indicates that the first type of Negrito languages underwent a long-time isolation that made the languages dissimilar to other neighboring Austronesian languages, with different degrees of subsequent contacts (see Lobel 2010, in which he identifies different reflexes of proto-phonemes in Manide, from which he illuminates that Manide had intermittent language contacts with different languages).

In the first stage of their social contacts, it is probable that both Negrito and non-Negrito groups were mutually beneficial, which must be one of the strong motivations for their "mutual symbiosis" (Headland 1987, Reid 1987):

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[5]Of course it is uncertain whether we need to assume that they lived in the *same* communities, or it is sufficient to suppose that they lived in the communities *adjacent* to non-Negrito communities.

> [I]t is almost certain that they were happy to join in with the newcomers in making rice fields and sharing in the harvest of rice. There is good reason to believe that the Negritos had a very carbohydrate-poor diet, and that in some areas at least, there would have been insufficient wild root crops to provide a satisfactory diet (Headland 1987). The introduction of rice agriculture must have introduced a source of deeply needed carbohydrates that brought the Negritos running. (Reid 1987: 57)

The benefit on the part of Negrito people was probably supported by the uniqueness of the earliest stage of cultivation". In his seminal book on the worldwide spread of farming in Holocene, an archeologist Peter Bellwood argues that *earliest* cultivators, who began agriculture in the frontier, were probably more affluent than hunter-gatherers or subsequent generations of farmers. Based on the case studies in the settlement of Maori in New Zealand, and of Polynesians in Hawaii, and Australian settlement by Europeans, he argues against the traditional "affluent forager" viewpoint, which regards hunter-gatherers as "happier, healthier, and less overworked than their unfortunate agricultural cousins" (ibid.: 19). He concludes that:

> [T]he *earliest* agriculturalists in healthy food-rich environments probably had even more enviable lives from the viewpoint of many inhabitants, including many hunter-gatherers, of our crowded and starvation-inflicted modern world. True, the rats, diseases, overcrowding, malnutrition, and environmental devastation caught up with the descendants of the first agriculturalists, in some cases very quickly indeed. But the generally low incidence of crowd diseases in hunter-gatherer societies and presumably also in loosely-packed earliest agricultural situations, like those on the colonial period temperate-latitute European frontiers in Australasia and the Americas, should make us think instead about "affluent earliest cultivators" rather than their hunter-gatherer counterparts. (Bellwood 2004: 19; italic original)

This kind of unique situation seen in the earliest stage of cultivation would have facilitated the social interactions of hunter-gatherers with the agriculturalists.

What motivates the subsequent stage in which some Negrito populations were scattered away into the mountainous areas or remote area from the original places? This may involve more than one reason. One of the probable factors, suggested in Reid (2013: 348–349), is the head-hunting practice that was prevailed among Austronesian groups until recently. They had been conducting head-hunting activities by cutting the head of a person from a neighboring group, bringing it back to their own community. Reid (2013) proposes the hypothesis that, as the number of the Austronesian population increased, this kind of ritual conducted by them became a threat to Negrito people, which forced them to be scattered away into the remote areas.

Another possible factor is already implied in the above discussion by Bellwood (2004). After a certain period of settlement and cultivation, the land inevitably becomes impoverished, bringing about the decrease of productivity. Furthermore, agriculture can afford a larger number of population than hunting and gathering. The demographic increase may thus have accelerated the sterility of lands, again leading to lower productivity. Shennan et al. (2013) provides an interesting result in the demographic change in mid-Holocene Europe, examining summed calibrated date probability distributions (SCDPD) with radiocarbon dates. In all the regions they examined (Scotland, Ireland, Wessex Sussex, Rhone Languedoc, Jutland, Scania, Danish Islands, Northern Germany, Central Germany, Rhineland–Hesse, Southern Germany, and Paris basin), the result shows rapid increases of the populations in a couple of hundred years, which followed the sharp decreases. Figure 1.8 shows the result of the rise and fall of the population densities in each region (red and blue regions show statistically significant deviations from the null model, and blue arrows indicate the first evidence for cultivation. Cal. BP (Before Present) means the calibrated radiocarbon dates, almost identical with calendar years, with "Present" fixed as 1950).

As opposed to the general assumption of steady population growth, the introduction of agriculture into Europe followed a sudden boom-and-bust pattern in the density of regional populations. They interpret it as the following: "(rather than external causes) [i]t is perhaps more likely that it arose from endogenous causes; for example, rapid population growth driven by farming to unsustainable levels, soil depletion or erosion arising from early farming practices, or simply the risk arising from relying on a small number of exploitable species" (ibid.
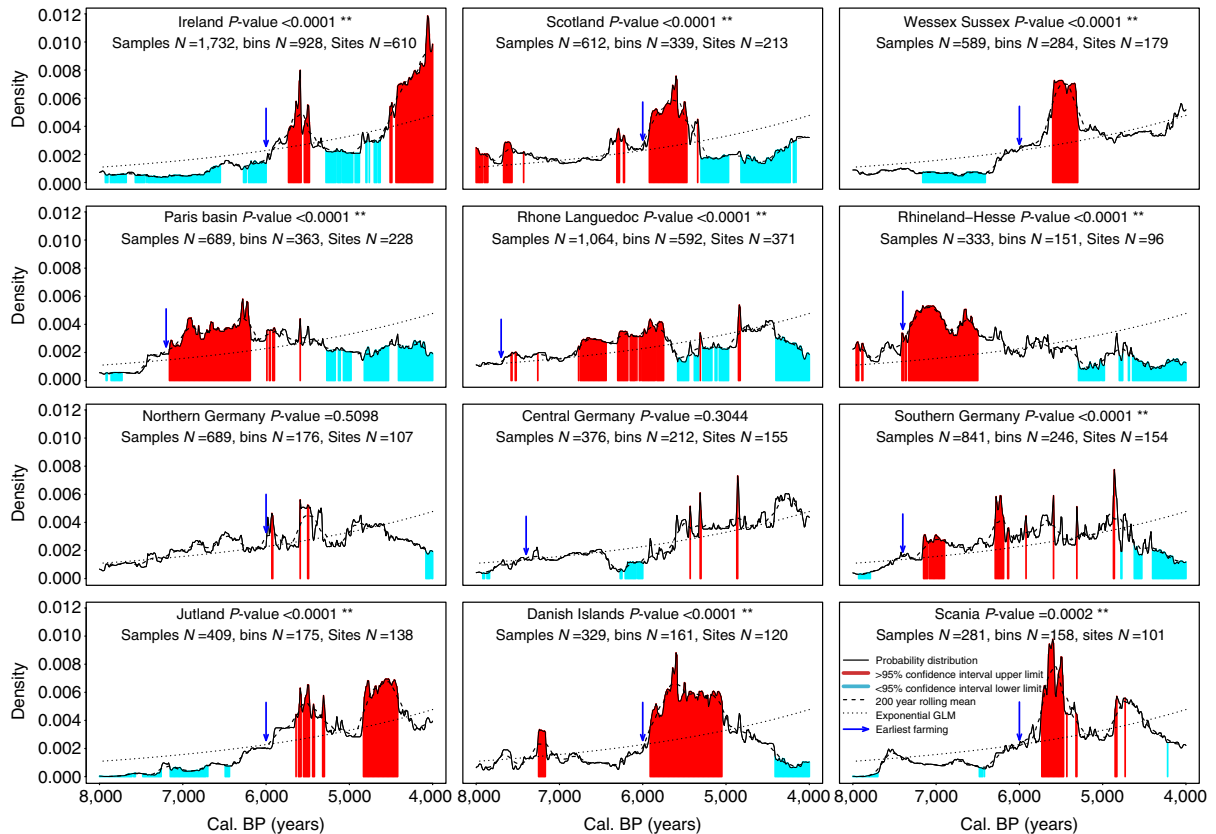
Figure 1.8: SCDPD-inferred population density change 8,000–4,000 cal. BP for each region. (Shennan et al. 2013: 4)

4).

If a similar demographic change would have occurred in some cases in the Austronesian context, it also seems to explain the rapid spread of Austronesian into Southeastern Asia and Oceania. And a similar logic would apply to the case of Negrito people, who had relied on the newcomers for carbohydrates. The subsequent non-affluent state of cultivators, with the unsustainable number of the populations, might have caused the collapse of mutual symbiosis between Negrito and non-Negrito groups. Resonant with the other negative factor, the blood-letting rituals by the Austronesians, it may have caused some Negrito populations including Arta to move into remote areas, facilitating the divergence of their languages from their neighbors.

1.6 Previous reference to Arta

The first academic contact with the Arta language is by Thomas Headland. Thomas Headland is an American anthropologist, who worked on a neighboring Negrito group Casiguran Agta (Casiguran Dumagat) in the eastern side of the Sierra Madre near the town of Casiguran, Aurora Province. During his fieldwork, he collected a wordlist of 213 items of Arta vocabulary from an Arta man named Sesar Ulanyo,[6] who said that he was living in Maddela but had come from "Disibu"[7] in Aglipay in Quirino province. The data collected is unpublished.

The only material already published is Reid (1989) "Arta, another Philippine Negrito language", an article written by Lawrence A. Reid. This is a quite important literature in Philippine and Austronesian linguistics, which draws attention to the peculiarity and uniqueness of Philippine Negrito languages. In that paper, he listed a large body of unique vocabulary that is not shared by other Philippine languages, and sketched segmental phonology (ibid.: 50) and some grammatical aspects, which includes three intransitive verbal affixes: *maR (ibid.: 62), *maN- (ibid.: 65), and *-um- (ibid.: 66), adjective and potentive prefixes (ibid.: 63–64), and person forms (ibid.: 66–67).

He reveals that Arta is one of the two languages in the Northern Luzon subgroup that reflect PMP *R as /r/, and the article identifies other phonological changes that were undergone in Arta. Based on the phonological and lexical evidence, he concludes that Arta is an isolate within the Northern Luzon subgroup of Malayo-Polynesian languages (Figure 1.7). This thesis can be seen as an updated and, hopefully, more comprehensive version of the description of the Arta language.

1.7 Field method and theoretical framework

1.7.1 Field method

I began my fieldwork in Quirino province in May 2012. Since then I have been working with Arta people for five years. My main language consultants are Bueno Delia, a woman

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[6]He was one of the Arta native speakers, but he died in 2015.

[7]In my interview, Arsenyo Ulanyo and Conching frequently refer to a place called Disubu This appears to correspond to "Disibu", and I suspect he mistakenly meant "Disubu".

approximately of the age of 55, living in the municipality of Nagtipunan; Ulanyo Arsenyo, a man approximately of the age of 60, living in the municipality of Maddela; Gumabon Lando, a man of the age of 30, living in Casiguran, Aurora province (formerly living in Nagtipunan, Quirino); and Ramos Karas, a man approximately of the age of 60, living in Dinalungan, Aurora province.

There are four kinds of data collected. The first is elicited lexical data which were collected with reference to *Lexical questionnaire for Asian and African languages, Vol.1* (Lexical questionnaire working group 1966). The questionnaire lists 1000 items of basic vocabulary that should be elicited in the lexical examinations. These entries are written in English, French, and Japanese, according to which I made two or three frame sentences for each entry in Ilokano with the assistance of Ilokano speakers. Then the sentences are translated into Arta by the language consultants. The translations are double-checked. The data is digitized into text data, and inputted into Fieldwork Language Explorer (FLEx).

The second is lexical data which were written in my fieldnotes. I wrote down some expressions in an unstructured way when Arta people taught me and when I heard unknown vocabulary in naturally occurred conversation that was not recorded. This is in part digitized as FLEx data, but some of them remain undigitized.

The third type of data is video-recorded spoken data. They are recorded in the field with a camcorder, and the file (MTS) was converted and compressed into MP4. Most of them were transcribed by ELAN, annotation software developed the MaxPlank institute for Psycholinguistics (Figure 1.9). The discourse data I transcribed so far are listed in Table 1.3.

The fourth type of data is Bible-translations. Since Arta people are currently Christians, I conducted the Bible-translation in part as a reward for their cooperations to my project. I obtained an Ilokano version of the Bible, and I translated some stories from Bible into the Arta language, some of which were already given to the local elementary school. We translated "Noah's ark" (Genesis 6–9), "Sower" (Matthew 13), "A Girl Restored to Life and a Woman Healed" (Mark 5 (21–43)), "Jesus' Teaching on Prayer" (Luke 11), and "The Parable of the Unjust Steward" (Luke 16).

One of the characteristics of this dissertation is that the grammatical description was based on the analysis of as much discourse data as possible, rather than elicited data. This

Table 1.3: List of video-recorded data that were already annotated

ID	Duration (h'm's)	Speaker	Genre	Topic
arta0001	1'43	B. Delia	Monologue	traditional house-building
arta0002	5'15	U. Arsenyo, two others	Conversation	traditional lifestyle
arta0003	22'01	U. Arsenyo, two others	Conversation	(cont.)
arta0004	11'00	U. Arsenyo, two others	Conversation	(cont.)
arta0005	2'38	B. Delia	Monologue	Pear film
arta0007	7'27	B. Delia	Monologue	The recent typhoon
arta0037	2'50	U. Arsenyo, Ruben	Conversation	How to raise children
arta0100 – arta0105	1'24'24	U. Arsenyo, Rita	Conversation	Various topics
arta0106 – arta0107	12'28	U. Arsenyo	Story-telling	Two folk tales
arta0108	22'01	B. Delia	Interview	Agriculture, etc.
arta0109 – arta0111	35'28	B. Delia	Interview	Spirits and funerals, etc.
arta0112	15'17	B. Delia	Interview	fishing, etc.
arta0499 – arta0501	1'29'51	B. Delia	Interview	firelighting, etc.
arta0502	32'44	B. Delia	Interview	her late husband, etc.
arta0503	19'06	B. Delia	Interview	her children, etc.
arta0506 – arta0510	2'14'53	R. Karas, B. Delia, etc.	Conversation	various topics
arta0513 – arta0514	1'25'00	B. Delia	Interview	grammatical elicitation
arta0515	26'49	U. Arsenyo, B. Delia	Conversation	what happened to Arsenyo
arta0520	1'27'54	B. Delia, neighbors	Conversation	Betel chewing, etc.
arta0521	39'47	Delia, neighbors	Conversation	Betel chewing, etc.

is a primary source for grammatical analyses because this data have richer extra-linguistic contexts and linguistic context (or co-text) enough to identify a particular pragmatic meaning, and specific usages of each grammatical construction. In the grammatical description that follows, each example may have an index such as "arta0003", which corresponds to one of those shown in Table 1.3; and "Noah, Bible", which corresponds to one of the stories of Bible. If an example is not indexed, it indicates that the example is an elicited sentence. The data shown in the table were transcribed by ELAN, and will be archived in ELAR (Endangered Language Archive), in SOAS, University of London. Considering the fact that the Arta language is hardly accessible to third parties, this approach is scientifically sound in that the analyses presented in this dissertation can be objectively verified.

1.7.2 Theoretical orientation

This dissertation aims at the comprehensive description of a particular language, making it difficult to apply a single unified framework straightforwardly to the descriptive project. However, it is also true that any descriptive study reflects some theoretical perspectives,
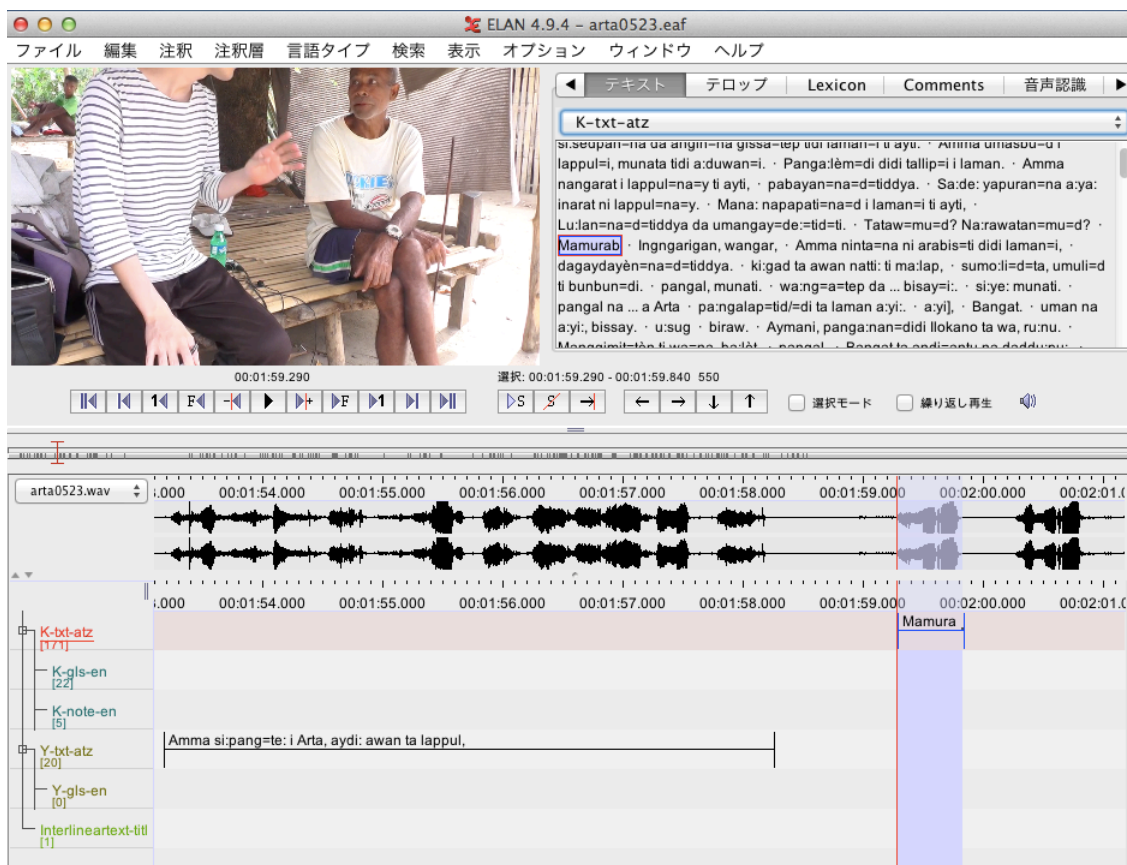
Figure 1.9: Transcribing with ELAN

whether it may be overtly mentioned or not. In fact, theoretical framework is of great help to provide a definition of each terminology in a coherent way. Furthermore, it may provide a new perspective on the analysis of the phenomena that have been dealt with, or shed light on new phenomena that have not dealt with in previous studies.

The theoretical background that will be applied to this descriptive study is some frameworks that may be subsumed under the functional tradition. First, for descriptive purposes, particularly in dealing with ergativity and argument structure, I employ Dixon's Basic Linguistic Theory (Dixon 1994, 2010a,b, 2012, Dixon and Aikhenvald 2000). I use A, O, and S as the labels for the transitive subject (agent), transitive object, and intransitive single core argument. Morphological (or intraclausal) ergativity, and syntactic (or interclausal) ergativity are also introduced into the analysis of the "pivot" argument (or subject), and I attempt to refine the binary distinction.

The second theoretical background is more substantial, that is, cognitive linguistics (Lakoff and Johnson 1980, Lakoff 1987, Langacker 1987a, 1991, 2008, Talmy 2000, Yamanashi 2016)

and related fields of functional linguistics (in particular what we may call "discourse-functional linguistics" conducted by such scholars as Talmy Givón, Wallace Chafe, Sandra Thompson, John DuBois, Mira Ariel, among others). There are several common assumptions and tenets shared in cognitive linguistics and discourse-functional linguistics, towards which the grammatical description is oriented. The first is the denial of syntactic autonomy (scholars differ in the degree of explicit denial of syntactic autonomy). Linguistic structure is viewed as emergent structures shaped by various external factors (Du Bois 1985, Hopper 1987, Langacker 1991). Cognitive linguistics argues against the syntactic autonomy by revealing remarkable iconicity between grammatical structure and semantics (Langacker 1975, 1999, 2004). In this dissertation I provide a richer semantic analysis on grammatical structure. I analyze the phenomena that have hardly been addressed semantically, such as the schematic meaning of adjectives, the identification of three distinct quantifiers in terms of the frame of reference, and the cognitive basis of pivot constructions.

The second viewpoint I will adopt is the nature of grammatical categories. For the past four decades, there has been a growing interest in the pervasive existence of prototype effect in linguistic categories (e,g, word classes, transitivity, agentivity, subjecthood, unergativity–unaccusativity, and so forth) as well as conceptual categories such as BIRD, FRUIT, and FURNITURE.[8] In this dissertation, a large number of linguistic categories will be shown to be fuzzy boundaries or prototype effect (or "category squish" by John R. Ross), as shown in the category gradience between dynamic verb, potentive verb, stative verb, and adjective, between argument and adjunct, between subordination and coordination, among others.

Third, cognitive linguistics does not make a supposed boundary between semantics and pragmatics (compare truth-conditional semantics, where the non-truth-conditional aspects of meaning is not dealt with).[9] In this dissertation, I will describe not only designated or denoted meanings of a form, but will also attempt to describe *implied* or *implicated* meanings conjured up by using a particular form. In other words, I incorporate non-truth-functional

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[8]See the following literature for the relation between prototype and a particular grammatical categories: Croft (1991, 2001) for word classes, Hopper and Thompson (1980), Rice (1987), Næss (2007) for transitivity, Lakoff (1977, 1987) for agentivity, Chafe (1994) for subjecthood, and Taniguchi (2005) for the gradient nature of unergative and unaccusative verbs.

[9]This stance is explicitly mentioned in Langacker (2008: 40–41). See also truth-conditional semantics or "I-semantics" vs. semantics for understanding or "U-semantics" compared in Fillmore (1985)

aspects of meanings into our semantic analysis if it is well-entrenched or conventionalized as a linguistic usage. The description of such implied or implicated meanings, or of the frame responsible for the understanding is best regarded as an updated version of anthropological semantics which can date back to Malinovsky. I believe that such rich descriptions of meaning will contribute to a "thick description" of their language and culture (cf. Clifford Geertz[10]).

Finally, cognitive linguistics and discourse-functional linguistics emphasize the importance on language use ("usage-based model"; Barlow and Kemmer 2000). Language use is a primary source from which children can learn their own language, and also the locus of language change (see Tomasello 2003, Bybee 2010). Recent technological development and the application of conversation-analytic methodology into linguistics made it possible to illuminate the relationship between linguistic knowledge and dynamic aspects of language use such as sequence organizations in conversation, turn-taking, gesture, eye-gazing, and the management of common ground.[11] In this thesis, I will examine how linguistic resources are used in the actual context, coordinated with non-verbal resources (see for example demonstratives and verb-modifying constructions, which crucially involves particular gestures with them).

1.8   The organization of this dissertation

This remainder of this dissertation is composed of nine chapters, with the conclusion (Chapter 11). Chapter 2 concerns phonology, exploring the synchronic phonological system in Arta and the diachronic process whereby the current phonological system developed from the proto-language (Proto-Malayo-Polynesian and Proto-Northern Luzon). Chapter 3 deals with morphology and morphophonemics, in which word, clitic, and affix are defined for the whole description, and major morphological processes observed in Arta are examined.

The remaining seven chapters (Chapter 4–10) are devoted to the grammatical description

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[10]"Thick description" is the model of ethnographic description advocated by Clifford Geertz in the context of interpretative anthropology. It emphasizes the description of webs of contexts and meanings beyond the physical behavior itself. See Geertz (1973).

[11]See Sacks et al. (1974), Clark (1986, 1996), Hayashi (2003), Thompson and Couper-Kuhlen (2005), Levinson and Wilkins (2006), and Enfield (2009, 2013).

of the language. After the introduction of basic terminologies prerequisite to the following descriptions in Chapter 4 (e.g. word classes and case marking system), noun phrases (Chapter 5) and adjective modifications (Chapter 6) are described in order. Chapter 5 deals with nouns, person forms, demonstratives, nominal markers, and specificity markers, all of which constitute integral parts of noun phrases in the language. Chapter 6 examines the structure of noun-modifying construction, which is not obligatory in noun phases, but has unique characteristics in it. Particularly, adjectives, partitive construction, and three types of quantifier are examined.

Chapter 7 serves as the introduction to the clause structure, based on which verbs (Chapter 8), verb phrases and tense-aspect-modality system (Chapter 9), and complex sentences (Chapter 10) are examined. Chapter 7 describes the argument structure that may occur in the verbal clause in Arta, and addresses the issue on the pivot and syntactic ergativity. Chapter 8 explores the verbal morphology and its relation to the syntax and semantics, which is probably the most complex part of the Arta grammar. Chapter 9 deals with other clausal phenomena such as the verb-modifying construction (adverbial modification), tense-aspect-modality system, and negation. Finally Chapter 10 concerns phenomena beyond a clause, which includes complement clauses, adverbial clauses, questions with an interrogative pronoun, and coordinations.

Chapter 2

Phonology

In this chapter, phonological aspects of the Arta language will be explored. Synchronic phonology is first described in §2.1, where segmental phonology and syllable structure and vowel length are discussed. The second topic is diachronic phonology, where we will explore how the current phonological system has developed from its proto-languages such as Proto-Austronesian (PAn), Proto-Malayo-Polynesian (PMP) and Proto-Northern Luzon (PNLzn).

2.1 Synchronic phonology

This section outlines the segmental and suprasegmental phonology of Arta; we first observe the consonant system in §2.1.1 and the vowel system in §2.1.2, and second, syllable structure and the role of mora are discussed in §2.1.3. Throughout this dissertation, I will use the orthographic representation set out in Table 2.1, phonemes and their phonetic values described in this section.

2.1.1 Consonants

The consonant inventory in Arta is set out in Table 2.2. Table 2.2 shows the current phonological system after some Spanish words were introduced; while most of the segments shown here are observed in non-Spanish lexical items, only the phoneme [ts] is considered to be the result of borrowing from Spanish, since it is observed in Spanish-origin words such as *direttso* 'straight', but not seen in the native vocabulary.

Table 2.1: Orthography with phonemes and phonetic values

phoneme	orthog-raphy	phenetic value	phoneme	orthog-raphy	phonetic value
/p/	*p*	p, p̄	/l/	*l*	l
/b/	*b*	b, b̄	/r/	*r*	r (trill)
/t/	*t*	t, t̄	/w/	*w*	w, ʊ, o
/d/	*d*	d, d̄	/j/	*y*	j, ɪ
/k/	*k*	k, k̄	/a/	*a*	a
/g/	*g*	g, ɣ, ḡ	/i/	*i*	ɪ, e
/ʔ/	’	ʔ	/e/	*e*	ɛ
/s/	*s*	ṣ, ʃ	/u/	*u*	ʊ, o
/h/	*h*	h	/o/	*o*	ɔ
/ts/	*ts*	ts	/ə/	*è*	ə
/tʃ/	*ty*	tʃ			
/dʒ/	*dy*	dʒ			
/m/	*m*	m			
/n/	*n*	n			
/ŋ/	*ng*	ŋ			

Table 2.2: Arta Consonants

	bilabial	alveolar	palato-alveolar	velar	glottal
stop	p / b	t / d		k / g	ʔ (’)
fricative		s [ṣ ~ ʃ]			h
affricate		ts	tʃ (*ty*) / dʒ (*dy*)		
nasal	m	n		ŋ (*ng*)	
liquid		l, r			
glide	w	j (*y*)			

Note: ( ) represents the orphography if it is different from a phonemic symbol

1

Some of minimal pairs and near-minimal pairs are shown in Table 2.3:

Table 2.3: Minimal pairs of consonants

/p/ vs. /b/	*para* /**p**ara/ 'for' (< Sp.)	*bara* /**b**ara/ 'lung'
g/ vs, /ŋ/	*bilag* /bila**g**/ 'dry'	*bilang* /bila**ŋ**/ 'number'
/s/ vs. /t/	*lawas* /lawa**s**/ 'week'	*lawat* /lawa**t**/ 'get up'
/t/ vs. /d/	*tidi* /**t**idi/ (plural absolute NP marker)	*didi* /**d**idi/ (plural oblique NP marker)
/p/ vs. /m/	*gimit* /gi**m**it/ 'make'	*gipit* /gi**p**it/ 'narrow'
/d/ vs. /n/	*ubud* /ubu**d**/ 'kind of vine'	*ubbun* /ubbu**n**/ 'young'
/d/ vs. /g/	*tanud* /tanu**d**/ 'needle'	*tanug* /tanu**g**/ 'sound'
/g/ vs. /b/	*lugun* /lu**g**un/ 'bag, container'	*lubun* /lu**b**un/ 'nest'
/l/ vs. /t/	*mula* /mu**l**a/ 'to plant'	*muta* /mu**t**a/ 'gummy secretion of eyes'
/w/ vs. /j/	*lawat* /la**w**at/ 'get up'	*layat* /la**j**at/ 'large'
/r/ vs. /l/	*uru* /u**r**u/ 'medicine'	*ulu* /u**l**u/ 'head'
	bu:ru /buːru/ 'new'	*bu:lu* /buːru/ 'knife'
/k/ vs. /g/	*atuk* /atu**k**/ 'smoke'	*katug* /katu**g**/ 'hard'
/ʔ/ vs. /Ø/	*ta'lu* /ta**ʔ**lu/ 'three'	talun /talun/ 'mountain'
/p/ vs. /m/	*lupuy* /lu**p**uj/ 'tired'	*lumuy* /lu**m**uj/ 'confort'
/b/ vs. /m/	*abang* /a**b**aŋ/ 'boat'	*amèng* /a**m**əŋ/ 'father (vocative)'
/n/ vs. /ŋ/	*tunu* /tu**n**u/ 'cook'	*tungu* /tu**ŋ**u/ 'make a fire'
/tʃ/ vs. /dʒ/	*tya* /**tʃ**a/ 'tea'	*dya* /**dʒ**a/ 'third singular oblique'
/t/ vs. /tʃ/	*tèn* /**t**ən/ (1st singular absolute pronoun)	*tyan* /**tʃ**an/ 'belly'
/d/ vs. /dʒ/	*da* /**d**a/ 'because'	*dya* /**dʒ**a/ (3rd singular oblique pronoun)

In the following sections, we examine the phonetic features and behaviors of each phoneme in Arta.

Stops

There are seven stops in Arta: /p/, /b/, /t/, /d/, /k/, /g/, and /ʔ/. Although all of them share the articulatory feature as stop, /p/, /b/, /t/, /d/, /k/, and /g/, on the one hand, and /ʔ/, on the other, differ in phonological behavior and phonotactics. We first examine phonetic and phonological characteristics of /p/, /b/, /t/, /d/, /k/, and /g/, named *supralaryngeals*, followed by the discussion on glottal stop.

Phonotactically, all of the supralaryngeal stops can occur in syllable-initial (onset), and -final (coda) positions, and word-initial, -medial, and -final positions. The following lists show

the distributions of these sounds: a. words containing word-initial (thus syllable-initial) stops, b. words containing word-medial (and still syllable-initial, and syllable-final) stops, and c. words containing word-final (thus syllable-final) stops, exemplified in (1–6):

(1) /p/

    a. *pu:nèd* 'rain', *pilyan* 'take off (one's clothes)'

    b. *nalupuy* 'be tired', *ara:ra:pa* 'friend'

    c. *kèrèpkèp* 'holding', *atèp* 'roof'

(2) /b/

    a. *bunbun* 'house', *bisagèn* 'break something'

    b. *ibud* 'tell, say', *yèbyèb* 'urinate'

    c. *kartibkartib* 'long-horned beetle', *asub* 'ash'

(3) /t/

    a. *tataw* 'know', *top* 'friend, helper'

    b. *pitèng* 'flea', *atdinan* 'give'

    c. *igit* 'eel', *ramut* 'root'

(4) /d/

    a. *don* 'leaf', *daw* 'to/for you' (second singular oblique)

    b. *gadè* 'trunk, ancestor', *andi* 'possessed thing'

    c. *tuttud* 'sitting', *ibarad* 'throw something'

(5) /k/

    a. *karagatan* 'stone', *ki:gad* 'until'

    b. *kakka* 'elder sibling', *buka:gan* 'female, woman'

    c. *asuk* 'smoke', *tu:rèk* 'write'

(6) /g/

    a. *gèda* 'trunk, ancestor', *gèlgèlèn* 'cut'

    b. *igit* 'eel', *wagwag* 'shaking'

    c. *matannag* 'fall', *mallègèd* 'wait'

The phonetic realizations of stops differs from those in English. In most cases they are not accompanied by any aspiration and there is no release in the coda position. They may phonetically be realized with aspiration in the syllable onset, but far from obligatory.

In syllable coda positions, they are pronounced with no release and aspiration. Thus, when the stops occur in a coda position, these sounds need to be distinguished in terms of changes in vowel quality involved with the closure. Phonetic realizations of stops in coda positions are shown in (7):

(7)   a. coda /p/ > [p˺]:

        atèp [ʔatəp˺] 'roof', *apdu* [ʔap˺du] 'gall bladdar'

    b. coda /b/ > [b˺]:

        karubukub [karubukub˺] 'throat', *'asub* [ʔasub˺] 'sweat'

    c. coda /t/ > [t˺]:

        beːkut [beːkut˺] 'ghost', *igit* [igit˺] 'eel'

    d. coda /d/ > [d˺]:

        ibud [ʔibud˺] 'say', *kiːgad* [kiːgad˺] 'until'

    e. coda /k/ > [k˺]:

        pokpoːkan [pok˺poːkan˺] 'hit', *kanakannak* [kanakannak˺] 'child, kid'

    f. coda /g/ > [g˺]:

        iːlug [ʔiːlug˺] 'egg', *ulag* [ʔulag˺] 'snake'

In Arta, a voiceless obstruent /t/ and voiced consonants /d/, /l/, and /n/ do not share the same point of articulation: /t/ is alveolar and /d, l, n/ are post-alveolar, as is observed in many Austronesian languages outside Taiwan (cf. see Blust 1999 for Pazeh).

If preceded by /a/, intervocalic /g/ is spirantized, phonetically realized as [ɣ]. Compare the following examples (8). In (8a), /g/ in *bagat* 'banana', and *paduyagèn* 'bend' is realized as a velar fricative, since both occurrences of /g/ occur intervocalically and the preceding vowel is /a/. /g/ of *baːlag* in (8b) remains [g] because it does not occur in an intervocalic position, and /g/ of *saleːgèd* in (8c) is also realized as [g] because the preceding vowel is not /a/.

(8)   /g/ > [ɣ] / a __ V

    a. *bagat* [baɣat] 'banana', *paduyagèn* [padujaɣən] 'bend'

    b. *ba:lag* [baːlag] 'flesh, meat'

    c. *sale:gèd* [salɛːgəd] 'pass by', *arigi* [ʔarigi] 'post'

Glottal stop is phonemic in Arta. Glottal stop is typically attested in word-medial positions, as shown in (10). It also appears in the vowel-initial word. The phoneme is optionally inserted before the vowel-initial words (with a significant variety among the speakers). In the case of word-final position, glottal stops may phonetically be found after the CV structure. This position of glottal stop is far from obligatory, thus the phonemic characteristics is unclear.

(9)   Word-initial:
    uru [ʔʊrʊ] 'medicine', *abi:* [ʔbɪː] 'body', *i:lug* [ʔɪːlʊg] 'egg'

(10)   Word-medial

    i intervocalic
      ba'it [baʔit] 'between',
      ma'is [maʔis] 'corn',
      aruti'it [ʔarutiʔit] 'lizard',
      ma'alap [maʔalap] 'can get' *ata'ay* [ʔataʔai] 'why'

    ii consonant cluster: *'C* /ʔC/
      ta'lu [taʔlu] 'three',
      ma'lèm [maʔləm] 'blood'

    iii consonant cluster: *C'* /Cʔ/
      bal'ong [balʔoŋ] 'well',
      al'u [ʔalʔu] 'mill',
      paw'it [pawʔit] 'send',
      palab'ub [palabʔub] 'trap (for a wild pig)'

Fricatives

There are two fricatives in Arta, /s/ and /h/. /s/ is found in word-initial, -medial, and -final positions, as illustrated in (11) – (13).

(11) Word-initial

sidung 'under (N.)', *sa:yan* 'ride'

(12) Word-medial

a. Intervocalic

kusay 'cat', *garasit* 'scrotum'

b. Consonant cluster I: *sC*

isbu 'urinating', *maski* 'also'

c. Consonant cluster II: *Cs*

dinsun 'stab', *digsèn* 'strength', *rangsat* 'wither'

d. Consonant cluster III: *ss*

gissa 'another', *kassandi* 'how'

(13) Word-final

parès 'wind', *ulès* 'blancket'

Although this sound is represented phonemically as /s/, it is pronounced as a voiceless (post-)alveolar laminal central fricative, which might be transcribed as [s̠] in IPA.[1] The point of articulation varies according to the adjacent vowels, but the sound is pronounced in a little retracted position from the alveolar. If the sound is followed by /i/, the sound is more retracted to the palato-alveolar, [ʃ]. Compare the following examples:

(14) a. *meppasu* [mɛppas̠u] 'hot'

b. *massay* [mas̠s̠ai] *mas-say* (INTR-ride) 'ride'

(15) a. *lusip* [luʃip] 'finger'

b. *sinumay* [ʃinumai] *s<in><um>ay* (<PAST><INTR>ride) 'rode/drove to'

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[1]See Pullum and Ladusaw (1996: 235)

The phonetic value of the grooved fricative as a post-alveolar laminal sound seems not so common in the Philippine languages. In some languages it is reported that grooved fricative is realized as a voiceless post-alveolar *apical* central fricative [s̠] in Guinaang Bontok (Reid 2005: 6), Eastern Bontok in Northern Luzon, and Tigwa Manobo in Mindanao (Jacobson 1979: 149), or as a voiceless fronted palato-alveolar fricative [ʃ₊] in Tagalog, Cebuano, Calamian Tagbanwa, Tina Sambal, and so on (Jacobson 1979: 149).[2] However, the normal realization of /s/ as a voiceless (post-)alveolar laminal central fricative seems rare in Philippine languages.

/h/ is clearly part of the synchronic phonology in Arta, but the functional load is quite low. All the items which contain /h/ may be borrowed words from neighboring languages:

(16)   *ahut* 'win, defeat' < Yogad *affut* 'loss, win, defeat'

       hayup 'animal' < Tagalog *hayup* 'animal, beast'

       bu:hay 'life' < Casiguran Dumagat *bu:hay* 'life, to live'

       hapon 'Japan' < Spanish

Affricates

It is argued here that Arta has two affricates *ty* /t͡ʃ/, and *dy* /d͡ʒ/ in synchronic phonology. Native lexemes (lexemes which have been used before the modern era) and borrowed items adopted after the Spanish era) are shown in (17) and (18), respectively:

(17)   Native lexemes

   a.   *tyan* /tʃan/ 'belly'

        abuttya /abuttʃa/ 'that hole'

   b.   *dya* /dʒa/ 'third singular oblique person form'

        diddya /diddʒa/ 'upstream'

        kamaddyang /kamaddʒaŋ/ 'a kind of bee'

        taddyor /taddʒor/ 'standing'

(18)   Modern borrowings

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[2]The names and phonetic symbol of the sound here follows Pullum and Ladusaw (1996), International Phonetic Association (1999), differing from the original ones used in Jacobson (1979) in which voiceless fronted palato-alveolar fricative [ʃ₊] is referred to as "voiceless fronted alveo-palatal grooved fricative [s̬]" (ibid.: 159).

   a.   *tyempo* /tʃempo/ 'time' < Sp.

      tya /tʃa/ 'tea' < Chinese/Sp.

      direttyo /direttʃo/ 'direct' < Sp.

   b.   *Meryjoy* /meridʒoy/ 'a name of an Arta female'

In native lexemes, /tʃ/ is followed by /a/, and /dʒ/, by /a/ and /o/, whereas in modern borrowings, /tʃ/ can occur before /e/.

    I elsewhere provided a different analysis on these two sounds: they are phonemically a consonant cluster of alveolar stops /t/ and /d/ and a glide /y/, but in the phonetic stage, they are realized as [tʃ] and [dʒ] (Kimoto 2014). However, this is not the only analysis; these sounds might be single phonemes.[3] The two possible analyses are presented in (19):

(19)   The two analyses of [tʃ] and [dʒ]

   a.   tʃan > /tjan/ or /čan/

   b.   dʒa > /dja/ or /ǰa/

This consonant-cluster analysis is primarily based on a historical fact. All of the examples with an affricate developed as a result of fusion: /tʃan/ 'belly' was a reflex of PMP *tian (PMP *tian > **tyan > *tʃan*), and /dʒa/ is a reflex of Proto-Northern Luzon (henceforth PNLzn) *diya. However this kind of historical fact does not work as evidence for claiming that affricates are synchronically consonant-clusters; there are many instances of the diachronic process whereby two segments have fused into a single segment such as vowel fusion (see §2.2.5). In fact, the synchronic distribution of affricates seems to indicate that affricates in Arta are not consonant-cluster but single phonemes. Trubetzkoy (1958/1969) provides criteria for distinguishing between a single phoneme and a phoneme cluster (*ibid.*: 56-62):[4]

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[3]I am grateful to Ritsuko Kikusawa for raising a question for the previous analysis I provided, and suggesting the alternative analysis.

[4] Below are the other rules for determining sounds as a single phoneme.

Rule V   A combination of sounds fulfilling the conditions of Rules I to III must be considered the realization of a single phoneme, if this produces symmetry in the phonemic inventory.

Rule VI   If a constituent part of a potentially monophonematic sound combination cannot be interpreted as a combinatory variant of any other phoneme of the same language, the entire sound combination must be considered the realization of a single phoneme.

Rule I   Only those combinations of sound whose constituent parts in a given language are not distributed over two syllables are to be regarded as the realization of single phonemes. (*ibid.*: 56)

Rule II   A combination of sounds can be interpreted as the realization of a single phoneme only if it is produced by a homogeneous articulatory movement or by the progressive dissolution of an articulatory complex.(*ibid.*: 56)

Rule III   A combination of sounds can be considered the realization of a single phoneme only if its duration does not exceed the duration of realization of the other phonemes that occur in a given language. (*ibid.*: 58)

Rule IV   A potentially monophonematic combination of sounds, that is, a combination of sounds corresponding to the conditions of Rules I to III, must be evaluated as the realization of a single phoneme, if it is treated as a single phoneme; that is, if it occurs in those positions in which phoneme clusters are not permitted in the corresponding language. (*ibid.*: 58)

First, regarding Rule I, /tʃ/ and /dʒ/ never appear as a consonant cluster overarching two syllables. Interestingly, if *abut* 'hole' takes *=ya* 'that' as a enclitic to form *abutya*, the actual sound becomes [a.but.tʃa]: /t/ is geminated, never pronounced as [a.bu.tʃa]. Thus these sounds meet Rule I (a necessary condition). Second, in terms of articulatory movements stated in Rule II, /ty/ and /dy/ are clearly a single unidirectional movement, in his term, "the dissolution" from the complete closure through being relaxed to form a stricture, and to the complete release, meeting this condition (a sufficient condition). Rule III needs some acoustic observation, thus this requirement is to be experimented. Finally, as will be discussed in §2.1.3 the eligible syllable structures in Arta are CV, CV: and CVC. If we should consider /ty/ and /dy/ to be consonant clusters, we would have to assume these two cases as the only special patterns which are allowed for the CCV syllable structure. Rather, it would be natural to consider the following story. These affricate sounds [tʃ] and [dʒ] are historical by-products created by the pressure of the syllable structure constraint; according as the reduction of bi-syllable forms such as *tian [ti.yan] and *diya [di.ya] to monosyllablic /tyan/ [tjan] and /dyan/ [djan], they had to reduce the onset cluster /tj/ and /dj/ to single phonemes

/tʃ/ and /dʒ/ because the syllable structure does not allow onset clusters. These facts indicate that /tʃ/ and /dʒ/ are single phonemes rather than consonant clusters.

Nasals

There are three nasals /m/, /n/, and /ŋ/ in Arta (for the orthographic convenience, I use *ng* to represent the velar nasal).

(20) Word-initial

/m/ *mata* 'eye', *mula* 'planting', *maski* 'also, even'

/n/ *no:not* 'mind', *na-pissay* (PST.POT-tear) 'be torn'

/ŋ/ *ngippèn* 'tooth', *ngadin* 'name', *ngèngkik* 'asthma'

(21) Word-medial

a. Intervocalic

/m/ *ama* 'father', *gimit* 'making, doing', *'um-angay* (INTR-go) 'go'

/n/ *ana:* 'child', *ina* 'mother', *'in-um-angay* (PST-INTR-go) 'went'

/ŋ/ *mangan* 'eating', *sa:ngan* 'how much, how many', *langit* 'daytime, day'

b. Consonant cluster I: nasal+C

/m/ *lumnèy* 'coldness', *kamkam* 'holding', *'um-bèr* (INTR-fly) 'fly to somewhere'

/n/ *gindat* 'until, while, *bunbun* 'house', *danmuwang* 'pass by'

/ŋ/ *sungdu* 'ending, finishing', *bungku* 'delicious'[5], *manga:burungburung* 'sad, pity'

c. Consonant cluster II: C+nasal

/m/ *dèmèdmèng* 'tomorrow', *likmang* 'weak, tasteless'[6], *tagmèk* 'wave'

/n/ *lumnèy* 'coldness', *kidni* 'kidney'[7], *sugnud* 'allowing'

/ŋ/ *gupngèn* 'cut'[8]

d. Consonant cluster III: geminates

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[5]cf. *meb-bungku* (ADJ-delicious) 'delicious'.
[6]cf. *mel-likmang a cape* (ADJ-weak LIG coffee) 'weak coffee'.
[7]from English *kidney*
[8]*gupèng-èn* (cut-TR) > *gupngèn* 'cut'

/m/ *amma* 'if, whether', *mammula* 'to plant'[9], *tamman* 'again, once more'

/n/ *menniyèt* 'sweet'[10], *kanakannak* 'child, kid, baby', *tannag* 'falling'

/ŋ/ *mengngina* 'expensive', *ingngarigan* 'for example'

(22) Word-final

/m/ *titam* 'we all (1+2PL.ABS)', *la:sèm* 'bitterness', *tadèm* 'blade'

/n/ *mabalin* 'finish'[11], *gilèngan* 'male, man', *tamman* 'again, once more'

/ŋ/ *si:pang* 'one', *lattong* 'outside', *paditèng* 'disease'

Some of the phonetic features observed in stops hold in nasals. Nasals which occur in syllable coda positions are not accompanied by any audible release, as illustrated in (23). Also, the place of articulation of /n/ is post-alveolar as in the case of /d/, pronounced in the backward position.

(23) *tadèm* [tadəm˺] 'blade', *sidung* [siduŋ˺] 'under'

Liquids

There are two liquids in Arta: lateral approximant /l/ and trill /r/. The two liquids can occur in all the phonotactic environments in which the language allows a consonant to occur:

(24) Word-initial

/l/ *laman* 'wild pig', *lu:lan* 'call', *lelle:* 'uncle'

/r/ *ramut* 'root', *rignèt* 'dirt', *rabis* 'cross'

(25) Word-medial

a. Intervocalic

/l/ *palattug* 'gun', *ta:hulu* 'ten', *'ulit* 'bark (of the tree)'

/r/ *ara:ra:pa* 'friend', *siran* 'old', *sirit* 'feces'

b. Consonant cluster I: liquid+C

/l/ *saltok* 'trap for rats', *kiwèlkiwèl* 'winding (trail, river)', *deldel* 'licking'

---

[9] *maN-mula* (INTR-plant) 'to plant'

[10] *meC-niyèt* (ADJ-sweet) 'sweet'.

[11] *ma-balin* (POT-finish) 'can finish'

/r/ *arta* '(Arta) person', *sarming* 'mirror', *arbiyan* 'call'

    c. Consonant cluster II: C+liquid

/l/ *matlèm* 'blood', *gètlu* 'fall', *dimlag* 'glitter'

/r/ *tapra* 'sunbeam'

    d. Consonant cluster III: geminates

/l/ *ballan* 'do not like, want', *sollot* 'to put', *tallib* 'cover, lid'

/r/ *makarrarro* 'coughing', *merre:say* 'fine (e.g. tree)', *marra:pug* 'jump'

(26)   Word-final

/l/ *dutul* 'first', *lappul* 'dog', *'abal* 'beetle'

/r/ *lugar* 'place', *wangar* 'stream', *mangi:yèr* 'cough'

In almost all cases, /r/ is a trill whether it occurs in word-initial, intervocalic, C+r/r+C clusters, or word-final position, but it may be pronounced as a flap when it occurs intervocalically between /i/ or in the r+C cluster. /l/ does not change into velarized lateral approximant (dark *l*) even in the syllable coda position.

(27)   *sirit* [sirit˺] or [siɾit˺] 'feces'

       arta [ʔarta] or [ʔaɾta] '(Arta) person'

Glides

Arta has two glides, palatal glide /j/ (represented by *y* in the orthography here) and labiovelar glide /w/. Both of the glides have a different phonetic quality depending on the position where they occur: if the glides occur in the syllable onset, actual phonetic values of /j/ and /w/ are palatal and labiovelar approximants, that is, [j] and [w] respectively; on the other hand, if the glides occur in the syllable coda such as /aj/, /uj/, /aw/ and /iw/, /j/ and /w/ are phonetically realized as [ɪ, e], [ʊ, o], with the length of the glide being almost the same as that of preceding vowel. Thus the vowel-glide sequence sounds like a sequence of two vowels.

A problem arises concerning the phonological nature of a phonetic sequence of a vowel and [ɪ] or [ʊ], frequently [aɪ], [uɪ], [aʊ] and [iʊ]. There are three possible phonological interpretations for the sequence: *a vowel sequence* (i.e., two vowels in two distinct syllables),

or *a diphthong* (i.e., a two-vowel cluster contained in the syllable nucleus), and *a vowel+glide cluster* (i.e., one vowel in the syllable nucleus and one consonant in the coda). First, we can say that the sequence is not a vowel sequence overarching two different syllables. There is some evidence against this interpretation. The first concerns intonational patterns sensitive to a syllable boundary. In Arta, when the speaker signals a boundary between two clauses, or signal the end of the utterance, they may stress the vowel of the FINAL syllable by gaining its loudness and/or making it longer. If a segment in question were a vowel of the final syllable, it could be a target of a stressed intonation. They are actually never stressed in this environment. Instead, the stressed intonation falls on the preceding vocalic segment. This pattern is manifested in passages of actual discourse shown in (28):

(28)   a.   ... *don na bag**at***, [dɔn.na.ba.gát] 'leaves of banana'

        b.   ... *ki:gad=t**ay***. [kɪː.gad.táɪ] 'until now'

The two phrases in (28) illustrate how emphatic stress may fall on the syllable. In (28a) the second /a/ in *bagat* is a target of stress since it is the vowel of the final syllable within the whole phrase; on the other hand, in the second example, the emphatic stress does not fall on the final [ɪ], but on the preceding [a]. This indicates that the [ɪ] segment is not a vowel consisting of a distinct syllable, but dependent of the preceding syllable nucleus. thus the first interpretation should be rejected.

There is another piece of evidence against this interpretation. In Arta, an aspectual enclitic *=di* has three allomorphs, *=d* after light syllable, *=di* after a heavy syllable, *de:* in some special cases (See p. 115 in §3.3.4). If a sequence of a vowel and the [ɪ] and [ɔ] constitutes one syllable, the syllable is a heavy syllable, thus *=di* should be used; whereas if the postvocalic [ɪ] and [ɔ] constitutes an independent syllable, the syllable is a light syllable, thus *=d* must be used. In fact, *=di* must be used, which again indicates that the first interpretation is wrong: the postvocalic segment is not a syllable nucleus vowel.

Let us next consider the validity of other interpretations: a diphthong (i.e., one vowel in the syllable nucleus within which the articulation transits from one place to another), and a vowel + glide cluster (i.e., one vowel in the syllable nucleus and one consonant in the coda). In Arta, there is a clear test to tell whether a syllable ends with a (nuclear) vowel or (coda)

consonant. When the first singular genitive person form *=ku* is encliticized to a host word,
it appears as /ku/ if the the ending of the host word is a consonant, whereas, if the ending
is a vowel, it appears as /u/ with the preceding vowel lengthened, as illustrated in (29) and
(30)[12]:

(29)   V# + /=ku/

      BASE FORM: /ila:ku/ + /=ku/

      ACTUAL FORM: *ila:ku=**ku***

      MEANING: 'I sell'

(30)   C# + /=ku/

      BASE FORM: /yarawat/ + /=ku/

      ACTUAL FORM: *yarawa:t=**u***

      MEANING: 'I get'

If a host word ends with a glide, the segment behaves in the same way as other consonants.
As illustrated in (31), the encliticization of /=ku/ induces the lengthening of the final syllable
of the host word, with the enclitic becoming *=u*, and never producing **tataw=**ku***.[13]

(31)   /y, w/# + /=ku/

      BASE FORM: /tataw/ + /=ku/

      ACTUAL FORM: *tata:w=**u***, (not **tataw=**ku***)

      MEANING: 'I know'

This fact tells us that although the sounds are phonetically similar to vowels, they are phono-
logically treated as consonantal segments, that is, there is good reason to consider these
sounds to be glides.

    Both /y/ and /w/ can occur in word-initial, -medial, and -final positions, illustrated in
(32) – (34):

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[12]If the host word ends with /n/, different fusional change occurs between the host word and the person
form. See §5.2.1.

[13]This is also the case with other suffixes such as *=am, ami, ita, itam*, in which the resultant forms are
sensitive as to whether the final segment of a host word is a vowel or consonant.

(32)   Word-initial

/y/   *ya:tèd* 'give', *yèkkan* 'viand, side-dishes', *yèbyèb* 'urinate'

/w/   *wagèt* 'water', *wasay* 'ax', *werwer* 'saliva'

(33)   Word-medial

   a.   Intervocalic

   /y/   *i:yan* 'fish', *ayu* 'tree', *a:yi:* 'this' (proximal demontrative)

   /w/   *awan* 'not, there is no', *kawiri* 'left, leftside', *iwa* 'put something somewhere'

   b.   Consonant cluster I: glide+C

   /y/   *kaykay* 'broom made of coconut midribs'

   /w/   *liwliw* 'around, surrounding area'

   c.   Consonant cluster II: C+glide

   /y/   *yèbyèb* 'urinate', *salyan* 'exchange, replace'

   /w/   *werwer* 'saliva' *wakwak* 'crow'

   d.   Consonant cluster III: geminates

   /y/   *mayyèkkan* 'make a viand', *mayya:na* 'give birth to a child'

   /w/   *lèwwalèwwa* 'spiderweb, cobweb'

(34)   Word-final

/y/   *aytay* 'now', *bubuy* '(domesticated) pig'

/w/   *tataw* 'know', *liwliw* 'around, surrounding area'

As shown here, in spite of the relatively low frequency of the occurrence in some word-medial environments such as (33b–d), glides can occur all the environments where consonants are allowed to occur.

Concerning the combinations with vowels, the following co-occurrences are observed:

(35)   a.   *y* + vowel combinations

   /ya/ *yarawat* 'get'

   /yi/ *a:yi:* 'this'

   /yə/ *yèbyèb* 'urinate'

/yu/ *ayu* 'tree'

/yo/ *mampe:ma:yon* 'take a rest'

b. *w*+vowel combinations

/wa/ *awan* 'not, there is no'(negator)

/wi/ *ngiwit* 'ugly'

/wu/ *tata:w-u* 'I know'

/wo/ (no instance)

/we/ *werwer* 'saliva'

/wə/ *bu:wèt* 'cloud rat'

(36) a. vowel – *y* combinations

/ay/ *kusay* 'cat'

/iy/ (no instance)

/ey/ *peyyanan* 'eat with someone'

/əy/ *manggèy* (mangga=DEFINITE) 'the mango'

/uy/ *di:muy* 'bathe'

/oy/ *libroy* (libro=y book=DEFINITE) 'the book'

b. vowel – *w* combinations

/aw/ *mabaw* 'cooked rice'

/iw/ *liwliw* 'around, surrounding'

/ew/ (no instance)

/əw/ *ba:kèw* 'corn'

/uw/ (no instance)

/ow/ (no instance)

There are some reasons for the heterogenous distributions depending on the vowels they co-occur with and the relative order between a glide and vowel. First, a reason for the lack of /wo/, /ow/ and /ew/ would come from the low frequency of the vowels /e/ and /o/ (See Figure ??). Second, a possible reason for the different distributions between /wu/ and /yi/ in (35) on the one hand, and /iy/ and /uw/ in (36) on the other hand, may reside in the different phonetic realizations of glides according to the position they fall on. As mentioned

above, when glides occur in the syllable onset position, they are realized as approximants
[j] and [w], respectively; if they occur in the syllable coda position, on the other hand, they
are realized as a [ɪ, e], [ʊ, o] with almost the same length as other vowels. This phonetic
character might make it difficult to differentiate them from long vowels /iː/ [ɪː ∼ eː], and /uː/
[ʊː ∼ oː], preventing /y/ and /w/ from occurring in the syllable final position.

2.1.2   Vowels

There are six vowels in Arta. The phonetic values in IPA and the orthography are shown in
Table 2.4, and minimal pairs and near minimal pairs for each vowel are set out in Table 2.5.

Table 2.4: Arta Vowels

	front	central	back
high	/i/ [ɪ ∼ e]		/u/ [ʊ ∼ o]
closed-mid		/ə/ [ə] (è)	
open-mid	/e/ [ɛ]		/o/ [ɔ]
low		a /a/	

Note: ( ) represents the orthography if it is different from a phonemic symbol

Viewed from general linguistic perspective, the relation between phonemes and its pho-
netic mappings seems interesting. The two high vowels /u/ and /i/ are articulated in lower
positions than [i] and [u], ranging from [ɪ] to [e] and, [ʊ] to [o] (although it is difficult to
represent the vowel qualities in IPA, /u/ can be produced lower than /i/), respectively. On
the other hand, the ranges of the lower counterparts, /o/ and /e/, are pronounced in more
opened positions, [ɛ] and [ɔ].

Phonetic realizations of vowels

Among the six vowels, four phonemes /i/, /u/, /e/, and /a/ have a wider range of allophones.
First, /a/ and /e/ may optionally be neutralized into schwa in certain conditions. They often
become schwa when /a/ or /e/ precedes a closed or mid-closed vowel such as /i/, /u/, and /ə/.
This is the case of *regressive assimilation* where a feature (closeness) of phonemes influence
a preceding sound:

3

Table 2.5: Minimal Pairs for Arta Vowels

/i/ vs. /e/	*di:ti* 'long ago'	*de:ti* 'recently'
	ti 'NP determiner'	*te* 'only, just'
	digdig 'arrive'	*degdeg* 'edge'
/i/ vs. /u/	*gimit* 'make, do'	*gimut* 'root'
	uli 'return'	*ulu* 'head'
/i/ vs. /ə/	*gilgil* 'rub gently'	*gèlgèl* 'cut with knife'
	linès 'move'	*linis* 'clean'
/u/ vs. /o/	*bubuy* 'pig'	*bo:buy* 'grandparent'
/u/ vs. /ə/	*kadut* 'knife'	*kadət* 'grass'
/u/ vs. /a/	*talingu* 'injury'	*taliŋa* 'ear'
	tannug 'to pour'	*tannag* 'fall down'
/a/ vs. /ə/	*bilag* 'dry'	*biləg* 'fast, quick'
	bagal 'sad'	*bagèl* 'thick'
/a/ vs. /e/	*ana:* 'child'	*ane:* 'termite'
/a/ vs. /o/	*taktak* 'hit'	*toktok* 'top of mountain'

(37)   Regressive asimilation of /a/ and /e/ > [ə]

   a.   /a/ > [ə] / __ C*u*

   /meddattun/ > [meddəttun] 'heavy'

   /dapug/ > [dəpug] 'carabao'

   b.   /a/ > [ə] / __ C*i*

   /ansi:na/ > [ənsi:na] 'therefore, so that'

   /taddi/ > [təddi] 'just, only'

   /tabbi/ > [təbbi] 'betel nut'

   c.   /a/ > [ə] / __ C*ə*

   /maŋka:rawəg/ > [məŋkə:rəwəg] 'play'

   /palləgədən/ > [pəlləgədən] 'be waiting'

   d.   /e/ > [ə] / __ C*i*

   /mesessibət/ > [məsəssibət] 'strong, powerful, stout'

   e.   /e/ > [ə] / __ C*ə*

   /meddəgəs/ > [məddəgəs] 'painful'

More complex situations are observed in the case of /i/ and /u/. Exact phonetic values of /i/ and /u/ in actual speech range from [ɪ] to [e], and [ʊ] to [o], depending on the phonological context in which they occur. In fact, a number of Philippine languages show phonetic variation in /i/ and /u/, and there is a general pattern which is applicable to many Austronesian languages: the vowel becomes higher if the syllable is open (CV), whereas it becomes lower if the syllable is closed (CVC) (Blust 2013).[14] This generalization, however, does not work in Arta. We find many examples against the generalization which would otherwise apply to many other languages:

(38)   *nintaku* [nɪ̩n.ta.ko̩] 'I saw'

If the above generalization were applicable to Arta, /i/ should be realized as [e] since the syllable is CVC, and /u/ should be [ʊ] since the syllable is CV, but the actual distributions are opposite.

To explain the phonetic distributions of /u/ and /i/ in Arta, it would be necessary to assume more than one condition that may influence their allophonic variations. I set a cluster of the following three conditions shown in (39); the more conditions /i/ or /u/ meets, the more probable it is that they are realized as *lower* sounds [o] or [e].

(39)   Conditions for low realization of /i/ and /u/

   A. There is at least one non-alveolar consonant adjacent to it.

   B. The following or preceding vowel is open or open-mid.

   C. It occurs in a word-final position.

The former two conditions are relevant to the context in which it occurs, and the latter to their own position within a word. The first condition A is relevant to the tongue position; if the vowels occur immediately before or after an alveolar or post-alveolar consonant such as /t, d, s, l, r/, and syllable onset /j/, the tongue becomes close sufficient to cause /i/ and /u/ to be assimilated to higher sounds. If they occur immediately before or after an non-alveolar sounds such as velars /k, g, ŋ/, laryngeals /ʔ, h/, and bilabials /p, b, m/, it does not

---

[14]See for example Robinson (2008) for Dupaninga Agta and Blust (2000) for Chamorro, where this general pattern is observed. Interestingly, Ruffolo (2004) reports the opposite relation between the open/closed syllable type and higher/lower allophones.

negatively affect the low realization of /i/ and /u/; rather it seems that the occurrence of a velar consonant /k, g, ŋ/ may have a positive effect on the lowering of /i/ and /u/.

Condition B concerns the vowel hight of adjacent syllables. If the adjacent syllables contain /a/, /o/ or /e/, then /i/ and /u/ tend to be pronounced in the lower position. This condition affects a phonetic realization as a global context over multiple segments; even if there is an alveolar consonant in the syllable onset, /i/ and /u/ in the syllable may be pronounced in the lower position given that a preceding vowel is /a/.

The condition C concerns the relative position of the vowel within a word. Although phonetic motivations are unclear, a vowel in the word-final position tends to be pronounced in a lower position than in other positions.

Let us test how these conditions work in actual context. I extracted some instances which contains /i/ or /u/ from annotated sound data (ELAN)[15], where the correlations between the actual vowel quality and the values of the three parameters were assessed for each instance.

If all the three conditions are satisfied, /i/ and /u/ are always lowered as [e] or [o]:

(40) +A, +B, +C

   ninta=ku [nɪn.ta.k**o**] 'I saw'

   balla꞉ng=u [balla꞉ŋ**o**] 'I don't like'

   kusay=i [kʊsay**e**] 'the cat'

   si꞉pang=i [si꞉paŋ**e**] 'the one'

If a vowel meets two of those conditions, most of the sounds are lowered, but some instances are found in a little higher position:

(41) a. Low

      kabba꞉t=u [kabba꞉t**o**] 'I like' (−A, +B, +C)

      angi꞉ng=u [ʔaŋ**e**꞉ŋo] 'I go to' (+A, +B, −C)

      lati [lat**e**] '(kind of) rattan' (−A, +B, +C)

   b. Higher

      arigi=na [ar**e̞**gɪna] 'its post' (+A, +B, −C)

---

[15]ELAN is software for the creation of annotations on video and audio resources, distributed by Max Plank Institute for Psycholinguistics; available at: https://tla.mpi.nl/tools/tla-tools/elan/

pantaddu:ng=u [pantaddʊ:ŋo̞] 'I wear a hat' (+A, −B, +C)

salamming=i [salammɪŋe̞] 'the mirror' (+A, −B, +C)

a:du [a:do̞] 'a lot of' (−A, +B, +C)

If a vowel meets one of those conditions and violates the other two, it is likely to be pronounced with a higher position:

(42)   a.   Higher

kuku=ku=y [ko(higher)ko(higher)ko=y] 'my fingernail' (+A, −B, −C)

   b.   High

lèngdit=i [ləŋdɪtɪ] 'the cutboard' (−A, −B, +C)

dinammuwang [dɪnammuwaŋ] 'have passed' (−A, +B, +C)

If a vowel violates all of the conditions, it is invariably realized as [ɪ] or [ʊ]:

(43)   High: −A, −B, −C

ulu-ku=y [ʔu.lu.koɪ] 'my head'

linumdèptèn [li.num.dəp.tən] 'I dived'

tidi:na [tɪ.dɪ:.na] 'those' (demonstrative)

The result indicates that at least two of them should be satisfied for obtaining the lowered /i/ and /u/.

2.1.3   Syllable, mora, and vowel length

Phonological status of vowel length in Arta

One of the interesting typological features observed in many Philippine languages involves the realization of contrastive word accents (or stresses) as vowel length on the penultimate open syllable.[16] This phonetic manifestation shows a clear typological difference from English (stress accent) and Japanese (pitch accent). The following minimal pairs from Tagalog, Ilokano and Bikol illustrate the point:

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[16]This section is a modified version of a paper to be published as Kimoto (2017).

(44) Tagalog *áso* [ʔaːso] 'dog' vs. *asó* [ʔaso] 'smoke'

Ilokano *bára* [baːra] 'hot' vs. *bará* [bara] 'lung'

Bikol *bága* [baːga] 'ember' vs. *bagá* [baga] 'truly!'
(Zorc 1993: 18)

In Arta, vowel length is also phonemically distinctive, as in *biːlèg* 'bracelet' vs. *bilèg* 'fastness', *ana:* 'child' vs. *a:na:* 'children'. /i/, /a/, /u/ have long and short phonemic contrasts; /e/ and /o/ always appear as long vowels /e:/ and /o:/ unless they are reduced as a short vowel within the CVC syllable template (long vowels cannot appear within CVC) /ə/ (orthorgraphically represented as *è*) does not have a long counterpart.

How should long vowels be interpreted phonologically? This may be seen as vowel length as it is, or as the phonetic manifestation of the stress (or accent) system as in the case of other Philippine languages (see Zorc 1993). Nevertheless, the present study demonstrates that it is phonologically the length of a vowel, rather than the phonetic manifestation of the stress system in two respects. First, if the long vowel is really a manifestation of lexical stress, the place of the stress may shift by affixation as in English: *phótograph > photógraphy > photográphic*. In fact, this kind of prosodic shift is attested in the languages analyzed as having a stress (or accent) system, as in Ilokano (*ba:sa > basa:-en* 'read' and *la:wa > kalawa:-en* 'to widen') and in Tagalog (*gu:gol > gugu:l-in* 'to spend' and *tu:ro > turo:-an* 'to teach'). However, this kind of shift is not observed in Arta, as shown below:

(45) *pe:nas > pe:nas-an*, (not *pena:s-an*) 'wipe'

di:muy 'bathing' *> pandi:muy-an*, (not *pandimu:y-an*) 'bathing place'

ka:lig > ka:lig-èn, (not *kali:g-èn*) 'carry, transfer something'

The second defining feature is that each word (not a *root*) has one stress nucleus. Even if two stresses are observed within a single word, they have a phonetic asymmetry to the extent that one stress is considered to be primary, the other secondary (e.g. *dòcuméntary, téxt-bòok*). This is not the case in Arta. Several words do have more than one long vowel without such phonetic asymmetry. Consider the following forms below:

(46) More than one long vowel can occur within one word

ta:me:ta 'different' *> ta:ta:me:ta* 'quite different'

na:na:b (*na:na:bèn*) 'remember, recall'

no:no:t (*no:no:tèn*) 'think'

pe:be:bu:d=u 'I am asking'

Since none of these two facts favour the long-vowel-as-stress analysis, this contrast will be treated more appropriately as the phonological long-short distinction of vowels.

Mora and synchronic phonology

In many of the world's languages, prosodic and/or metric structures are sensitive to a different "weight" of syllables defined by the vowel length and other syllable features. The unit of the syllable weight is called *mora*, and a monomoraic syllable defined as an open syllable with a short vowel. Languages may differentiate a monomoraic syllable (light syllable) with a short vowel (CV), a bimoraic syllable (heavy syllable) with a long vowel (CV:), and, in some languages, a trimoraic syllable (superheavy syllable) with a superlong vowel (CV::). Many languages such as Japanese and Latin count a coda consonant as having one mora. This means that there are two patterns for classifying syllables in terms of mora count, as shown in (47,48):

(47)   Pattern A (coda consonants are counted)

    a. monomoraic syllable: CV

    b. bimoraic syllable: CV:, CVC

    c. trimoraic syllable: CV::, CV:C

(48)   Pattern B (coda consonants are NOT counted)

    a. monomoraic syllable: CV, CVC

    b. bimoraic syllable: CV:, CV:C

    c. trimoraic syllable: CV::, CV::C

In the case of Arta, the moraic classification of syllables can be shown in (49) and generalized in (50):

(49)   Arta (coda consonants are counted)

    a. monomoraic syllable: CV

  b. bimoraic syllable: CV:, CVC

  c. *trimoraic syllable: CV::, CV:C

(50) Mora constraint on syllables: The syllable must not exceed two moras

First, as illustrated below, the syllables in Arta behave in a way similar to pattern A, that is, a syllable with a coda consonant and a syllable with a long vowel behave in the same way. The language is not allowed to have trimoraic syllables such as CV:: (superlong vowel), and CV:C (long vowel and coda consonant). If morphological conditions require such syllable structure, these syllables should be reduced into CV:, and CVC, respectively. This constraint can be paraphrased as (50): "The syllable should not exceed two moras." Now let me introduce some mora-sensitive phenomena in Arta phonology, which support the statement in (49) and (50).

Allomorphs of enclitics The mora count is necessary for generalizing some allomorphemic conditions. Two enclitics, *=di* 'already, just now' and *=pa* 'just, try doing, do a little' are sensitive to the mora count of the preceding syllable to which they attach. If the preceding word ends with a bimoraic syllable, then *=di* and *=pa* must appear, but if the preceding word ends with a monomoraic syllable, *=d*, and *=p* must be used instead. The following example with *=di* illustrates the point:

(51) CVC + *di awan=di* (NEG=already) 'It does not exist already.'

   CV: + *di mebbuyu:=di* (bad-smelling=already) 'It has already become bad-smelling.'

   CV + *di nappati=d* (died=already) 'S/he has already died.'

The condition under which different allomorphs may occur, cannot be explained solely in terms of vowel length nor only according to whether the preceding syllable is open or closed. Rather, this fact indicates that *=p* and *=d* may appear if the preceding word ends with a monomoraic syllable, whereas *=pa* and *=di* may appear if the preceding word ends with a bimoraic syllable, with coda consonants counted as 1 mora in the language.

Vowel length alternation The moraic constraint on the maximal weight of the syllable structure, explicated in (49,50), predicts alternating vowel length of "potentially long" vowels. If a long vowel appears in a closed syllable, it is compressed, being realized as a short

vowel, whereas it is realized as a long vowel if it appears in an open syllable. This alternate

realization of some "potentially long" vowels is not applied only to the native lexemes (52a),

but also to Spanish and English loan words (52b):

(52) a. //latto:ŋ//[17] > *lattong* (/lattoŋ/) vs. *latto:ng=i* (/latto:ŋi/) 'outside'

     //sa:y// > *mas-say* vs. *sa:y-an* 'ride on'

     //dage:t// > *man-daget* vs. *dage:t-èn* 'sew'

     //du:t// > *dut* vs. *du:t=i* 'firewood'

   b. //hapo:n// > *hapon* vs. *hapo:n=i* 'Japan'

     //pantalo:n// > *pantalon* vs. *pantalo:n=i* 'pants'

     //hamba:g// > *hambag* vs. *hamba:g=i* 'handbag'

     //bolpe:n// > *bolpen* vs. *bolpe:n=i* 'ballpoint pen'

Each lexeme, which potentially has a long vowel, exhibits different realizations of the vowel

according to the type of syllable in which it occurs. The first pattern blocks the realization

of long vowels because of the presence of a coda consonant, whereas the second pattern,

without a coda consonant, allows the vowel to be realized as long. This clearly comes from

the moraic constraint on the syllable structure, where any trimoraic syllable like CV:C is not

allowed to occur.[18]

A similar case can be seen in nominalizing circumfixes *paC- -èn* and *paC- -an*, which

cause the lengthening of the following vowel. This is illustrated in (53,54), where *tapik*,

bisag, *lagip*, and *sirit* undergo the lengthening of the first syllable by the affixation of *paC-*

-èn or *paC- -an*. However, the circumfixes do not trigger the lengthening of the vowel if

the syllable in question has a coda consonant. The syllable structure again preempts vowel

lengthening, because of the moraic-constraint on the syllable structure where a trimoraic

syllable such as CV:C is allowed to occur in Arta.

(53) *pat-**ta:**pik-èn* 'slapping something'

    *pab-**bi:**sag-èn* 'breaking something'

---

[17]Double-slashed forms represent abstract lexical forms, whose actual forms are influenced by the syllable structure in which they occur.

[18]Another account for this vowel length alternation would be that the enclitic *=i* and the suffixes *-an* and *-èn* might be triggering the lengthening of a preceding vowel. These formatives however do not have an ability to lengthen a preceding vowel; in fact, the following realizations do not include any lengthening: /asuk/ > *asuk* vs. *asuk=i*, /pabay/ > *pabay* vs. *pabay-an*, /idut/ > *idut-èn*.

> *pal-**la:**gip-an* 'telling something, story'
>
> *pas-**si:**rit-an* 'defecating somewhere'

(54) *pag-**gim**t-èn* 'making/doing something'

> *pap-**pis**say-èn* 'tearing something'
>
> *pat-**tut**tud-an* 'sitting on, something to sit on'
>
> *pag-**gus**gus-an* 'scratching something'

All of the above data illustrate that the mora count is at work at least in the synchronic phonology in Arta. In addition, the mora count also explains the development of the short-long contrast in vowels as shown in §2.2.5.

2.2   Diachronic phonology

In this section, phonological changes which occurred in Arta are discussed. A list of PMP reconstructed phonemes and their reflexes in Arta is shown in Table 2.6.[19]

Table 2.6: Reflexes of PMP phonemes

PMP	Arta	PMP	Arta	PMP	Arta
*p	/p/	*R	/r/	*a	/a/
*t	/t/	*l	/l/	*i	/i/
*k	Ø ~ /k/	*m	/m/	*u	/u/
*q	Ø	*n	/n/	*ə	/ə/
*b	/b/	*ŋ	/ŋ/	*a+i	/e:/
*d	/d/	*h	Ø	*a+u	/o:/
*j	/d/	*w	/w/		
*g	/g/	*y	/y/		

2.2.1   Reflexes of PMP consonants

The reflexes of *p, *t, *b, *g

In Arta, PMP *p, *t, *b, and *g remained unchanged, reflexed as *p, t, b* and *g*:

(55)   PMP *p > /p/

    a.   PMP *qatəp > *atèp* 'roof'

    b.   PMP *supsup > *supsup* 'suck'

    c.   PMP *ŋipən > *ngippèn* 'tooth' (with a sporadic /p/ geminate)

    d.   PMP *pusuq > *pusu* 'heart' (with *q > Ø)

(56)   PMP *t > /t/

    a.   PMP *zukut > *dut* 'firewood, fire' (with the loss of *k)

    b.   PMP *taliŋa > *talinga* 'ear'

    c.   PMP *gatəl > *gitèl* 'itchy'

---

[19]Note that in PAn and PMP, *R represents a reconstructed phoneme probably pronounced as [ɣ], and *q represents back velar stop. The following sources were used for examining diachronic changes in phonology: Blust and Trussel (2010 –) for Proto-Austronesian and Proto-Malayo-Polynesian, Reid (1979) for Proto-Northern-Luzon, Rubino (2000) for Ilokano, Davis and Mesa (2000) for Yogad, Reid (1971) for Gaddang, Isneg, and Itawis, Robinson (2008) for Dupaningan Agta, Headland and Headland (1974) for Casiguran Dumagat, English (1989) for Tagalog, and Lobel (2010) for Manide. Unless other sources are referred to, the references for each data will not explicitly mentioned.

    d. PMP *kutu > *utu* 'lice' (with the loss of *k)

(57)   PMP *b > /b/

    a. PMP *buliq > *buli* 'buttock'

    b. PMP *buŋa > *bunga* 'fruit'

    c. PMP *qabu > *abu* 'ash'

    d. PMP *tubuq > *tubu* 'grow'

(58)   PMP *g > /g/

    a. PAN *gayaŋ > *gayang* 'lance'

    b. PMP *basag > *bisag* 'shatter, break' (with Low Vowel Fronting)

    c. PWMP *gusgus > *gusgus* 'scratch'

The reflexes of *s

As argued in Reid (1989), *s remained unchanged in most cases:

(59)   PMP *s > /s/

    a. PMP *susu > susu 'breast'

    b. PMP *qulès > *ulès* 'blanket'

    c. PPh *basag > *bisag* 'shatter, break' (with Low vowel fronting)

    d. PMP *pusuq > *pusu* 'heart' (with the loss of *w)

    e. PWMP *gusgus > *gusgus* 'scratch'

There are important exceptions for *s > /s/. Some noun phrase markers and independent pronouns beginning with *s were reflected as /t/ except *siya* (third singular independent pronoun).

(60)   Noun phrase markers[20]

    a. PMP *si > *ti* (personal absolutive)[21]

---

[20]Source: Ross (2002: 51)

[21] This *ti* might have come from PAn *Ci reconstructed by Ross (2006: 529). PAn *C was reflected as PMP *t.)

b. PMP *si > *ti* (oblique definite)

cf. PMP *ta/*sa > *ta* (oblique indefinite)

(61)   a. PNLzn[22] *siyakən > *tèn* (first singular independent pronoun)

b. PNLzn *siʔikaw > *taw* (second singular independent pronoun)

c. PNLzn *siʔikita > *tita* (first singular + second singular independent pronoun)

d. PNLzn *siʔikami > *tami* (first exclusive plural independent pronoun)

e. PNLzn *siʔikamuyu > *tam* (second plural independent pronoun)

f. PNLzn *siʔkitam > *titam* (first inclusive plural independent pronoun)

g. PNLzn *siʔida > *tidi* (third plural independent pronoun) (with low vowel fronting)

cf. PNLzn *siya > *siya* (third singular independent pronoun)

The reconstructed forms of personal pronouns are considered to be the combination of *si (noun phrase marker) + *ʔi (absolutive case marker) + pronoun (Reid 1979: 3). The irregular reflex of *s as /t/ may be a loan from one of the Cagayan Valley languages, which regularly reflected *s as /t/, or from one of the Northeastern Luzon languages, most of which reflected the personal noun phrase marker as *ti* (Robinson and Lobel 2013: 142–143).

/t/ reflex of *s is also found in other items, but most of them may be borrowed from a neighboring langauge Yogad, or other Cagayan Valley languages:

(62)   a. PMP *asuk > *atuk, asuk* 'smoke' cf. Yogad, Gaddang *atuk*

b. PPh *bakəs > *babakat* 'old lady' (with *ba*-reduplication and *ə> /a/) cf. Yogad *babakat*

c. PAn, PPh *bukas > *bukkat* 'open' (with a k-gemination) cf. Yogad *bukkat*

d. PMP *beRas > *baggat* 'rice between harvesting and cooking; husked rice' cf. Yogad, Isneg, Itawis *baggat*

e. PAn *bəsuR > *battug* 'full, sated, satisfied' cf. Yogad *battug*, Isneg *battùg*, Itawis *báttug*, Ibanag *vattug*.

---

[22]Source: Reid (1979)

Merger of *d, *z, and *j

In Arta, *d, *j, and *z were merged into a single phoneme /d/. First, *d remained unchanged as exemplified in (63):

(63)   PMP *d > /d/

      a.   PMP *qalad > alad 'fence'

      b.   PMP *dahun > don 'leaf'

      c.   PAn *daŋdaŋ > dingding 'roast' (with Low Vowel Fronting)

*d > /g/ is also found in PMP *dakit > gikit 'raft', which may have been borrowed from an unknown source (cf. *rakit* in Dupaningan Agta, *rakit* in Ilokano, *gakit* in Yogad.) /r/-reflex of *d is found in PMP *SadiRi > *arigi* 'post', which was probably borrowed from *arigi* in Yogad.

    As shown in (64), *j was reflected as /d/ in most cases with two exceptions (see also Reid 1989).

(64)   *j > /d/

      a.   PMP *ijuŋ > *adung* 'nose'

      b.   PMP *pusəj > *pusèd* 'navel'

      c.   PMP *qapəjuq > *apdu* 'gallbladder' (with *ə> Ø, *q > Ø)

      d.   PMP *lənəj > *lènèd* '(the sun) sets'

      e.   PMP *huaji > *wadi* 'younger sibling' (with *h > Ø, *u > /w/)

      f.   PMP *ŋajan > *ngadin* 'name' (with low vowel fronting)

  cf.   /g/-reflex of *j:

      a.   PWMP *si(ŋ)jəm > *sagèm* 'ant'

      b.   PMP *bilaj > *bilag* (*i-bilag* 'dry something under the sun')

Bilag, a form with a *g*-reflex of *d, may be a loan word from Yogad *bilag* 'something put in the sun to dry', or Casiguran Dumagat *bilag* 'sun'. The source of *sagèm* is unknown.

    *z is reflected as /d/ in Arta. One exception *su:ru, tu:ru* 'learn, teach' would be a borrowing from Ilokano *súru*, and/or Tagalog *túru*.

(65)　*z > /d/

 a.　PMP *bəzak > *pèda* 'step on' (with irregular *b > /p/ and the loss of *k)

 b.　PMP *pahəzam > *padam/paddim* 'lend' (with the loss of *h and a subsequent vowel fusion)

 c.　PMP *hinzam > *indim* 'borrow' (with the loss of *h and LVF)

 d.　PMP *tazem > *tadèm* 'blade'

 cf.　PMP *tuzu > *su:ru, tu:ru* 'learn, teach' possibly via Ilokano *súru*, Tagalog *túru*.

The loss of *k

Although Reid (1989) concluded that Arta has lost *k in all positions, it seems that *k is reflected as both zero and /k/ in the language, with some unknown conditions for the split:

(66)　*k > Ø

 PMP *kutu > *utu* 'lice'

 PMP *zukut > *dut* 'firewood, fire'

 PMP *utək > *uta* 'brain'

 PMP *kua > *wa* 'filler for word that cannot be recollected'

 PMP *kulit > *ulit* 'bark of trees'

 PMP *kaRat > *arat* 'bite'

 PMP *hikan > *i:yan* 'fish' (with the loss of *h)

 PMP *anak > *ana:* 'child'

 PMP *kita > *ita, inta* 'see'

(67)　*k > /k/

 bungku 'delicious'

 bisuruk 'bolo'

 PMP *anak > *kanakannak* 'child', *kakka:nak* 'children'

 PMP *bəRək > *bèrèk* 'young pig' (with *R > /r/)

 PMP *=ku (first singular genitive pronoun) > *=ku*

Among the items listed in (67), the first three items may be unique in Arta, thus difficult to consider it to be borrowed. However, the most conclusive evidence comes from *bèrèk* and

=*ku*. *bèrèk* contains *R > /r/, which is the unique sound change exclusively seen in Arta and Ilokano among Northern Luzon languages. Since Ilokano does not have *bèrèk* (Rubino 2000), and given that the borrowing from Ilokano is not extensive and only a recent language contact, it is difficult to consider it to be a borrowing from Ilokano but Ilokano lost the item. =*ku* has many allomorphs after consonants (e.g. *ibud + =ku > ibu:d=u* 'I will say', *bunbun + =ku > bunbu:ng=u* 'my house'), but it is realized as /ku/ after vowels, as in *mata=ku* 'my eyes', *ulu=ku* 'my head'. It is reasonable to consider this person form to be a retained form; *k was lost after word-final consonants, *ibud=ku > *ibu:d=u* (with a compensatory lengthening), **bunbun=ku* > *bunbu:ng-u* (with a assimilation of /n/ and subsequent compensatory lenghthening), whereas *k retains as /k/ after vowels perhaps to avoid a syllabic fusion like *ulu:* or *mataw*. If the form =*ku* after a vowel were a borrowed form, we could hardly explain how this kind of complex distribution was borrowed; no neighboring languages have such a disturbution (in fact vowel-final words take =*k* but not =*ku* in many neighboring languages).

*R > /r/

As discussed in Reid (1989), the reflex of PMP and PAn *R is generally /r/ (see also (4) in §1.5.1). This innovation is only seen in Arta and Ilokano within the Northern Luzon subgroup. Arta, however, has a *g*-reflex of *R in 5 out of 13 instances; most of them are probably loans, not directly inherited from PMP.

(68)   *R > /r/

    a. PAn *RaməC > *ramut* 'root' (with *C > /t/ and sporadic *ə> /u/)

    b. PAn *baRaq > bara 'lung' (with *q > Ø)

    c. PAn *bəRŋaw > *biriŋaw* 'fly (n.)' (with *ə> i and the /i/ insertion)

    d. PMP *baqəRu > *bu:ru* 'new' (with *aqə> /u:/)

    e. PMP *bəRək > *bèrèk* 'young pig'

    f. PMP *kaRat > *arat* 'bite' (with the loss of *k)

    g. PMP *huRas > *uras* 'wash' (with *h > Øand *R > /r/)

(69)   *R > /g/

a. PMP *beRas > *baggat* 'rice' (with the gemination of consonants after schwa and subsequent *ə> /a/) cf. Yogad *baggat*

b. PMP *qitəluR > *i:lug* 'egg' (with the loss of *q and the second syllable *tə) cf. Yogad *i:lug*

c. PMP *hulaR > *ulag* 'snake' (with the loss of *h) cf. Casiguran Dumagat, Dupaningan Agta: *ulag* 'snake'

d. PMP *daRat > *digit* 'sea' (Low vowel fronting after *R > /g/) cf. Casiguran Dumagat: *diget*; Dupaningan Agta: *diget*

e. PMP *niuR > *i:yug* 'coconut' (with the loss of *n)

Reflexes of PMP liquids

The reflex of *l is /l/; a reflex of *r is not well-attested so far.

(70) *l > /l/

a. PMP *luhəq > *luwa* 'tears' (with the loss of *h and *q)

b. PMP *gatəl > *gitèl* 'itchy'

c. PMP *quləs > *ulès* 'blanket'

Reflexes of PMP nasals

PMP nasals remained unchanged: *m, *n and *ŋ were reflected as /m/, /n/, and /ŋ/.

(71) *m > /m/

a. PMP *tazəm > *tadèm* 'blade'

b. PMP *hinzam > *indim* 'borrow' (with the loss of *h, *j > /d/ and LVF)

c. PAn *timij > *timid* 'chin' (with *j > /d/)

d. PMP *mula > *mula* 'field, farm'

(72) *n > /n/

a. PWMP *lənəj > *lènèd* '(the sun) sets' (with *j > /d/)

b. PMP *ŋajan > *ngadin* 'name' (with *j > d)

    c. PMP *tian > *tyan* 'leg'

    d. PMP *anak > *ana:* 'child'

(73)   *ŋ > /ŋ/

    a. PMP *ŋajan > *ngadin* 'name' (with *j > d)

    b. PMP *ŋipən > *ngippèn* 'tooth'

    c. PWMP *liŋət > *lingèt* 'sweat'

    d. PMP *ijuŋ > *adung* 'nose'

The reflexes of PMP *h and *q

PMP *h is lost in Arta in all the environments, as shown below:

(74)   *h > zero

    a. PMP *huaji > *wadi* 'younger sibling' (with *j > /d/ and *u > /w/)

    b. PMP *huRas > *uras* 'wash' (with *R > /r/)

    c. PMP *hadu > *a:du* 'a lot of'

    d. PMP *dahun > *don* 'leaf' (with a subsequent vowel fusion)

    e. PMP *luhəq > *luwa* 'tears' (with a subsequent /w/ insertion and *əq > /a/)

    The reflex of glottal stop was lost in word-medial, and word-final positions, whereas in the word-initial position, since all the vowel-initial words begin with an inserted glottal stop, *q seems to be merged into the word-initial glottal stop. More precisely, however, whether the merger happened or not is unclear because it is possible that the loss of *q might have occurred before developing the regular insertion of glottal stop.

(75)   *q > Ø (word-medial, and -final)

    a. PMP *taqu > *tataw* 'know' (with the Ca- prefix or reduplication, *ta-*)

    b. PMP *bituqən > *bitun* 'star'

    c. PMP *tuqəlaŋ > *tulang* 'bone'

    d. PMP *luhəq > luwa 'tears'   (with the loss of *h)

    e. PPh *basəq > *bisa* 'wet'

(76) *q > /ʔ/ (word-initial)

    a. PMP *quma > *uma* [ʔuma] 'field, land'

    b. PMP *qujiŋ > *uding* [ʔudiŋ] 'charcoal'

(77) Ø > /ʔ/ (word-initial)

    a. PMP *anak > *ana:* [ʔanaː] 'child'

    b. PMP *ijuŋ > *adung* [ʔaduŋ] 'nose'

2.2.2 Reflexes of PMP vowels

*a and Low Vowel Fronting

The Arta reflex of PMP *a is generally /a/, but there are some instances where it became /ə/ or /i/. *a > /i/ is a sporadic change which may occur when the preceding consonant is a voiced stop: /b/, /d/ or /g/. This is an areal feature called 'Low Vowel Fronting (LVF)', found in Negrito languages of eastern Luzon, such as Northeastern Luzon languages (e.g. Dupaningan Agta, Casiguran Agta, Nagtipunan Agta; (Robinson and Lobel 2013)), Manide (Lobel 2010), Southern Alta (Reid 1991) among others. Interestingly, this is not found in non-Negrito languages in the area.

(78) *a > /a/

    a. PMP *lima > *lima* 'arm, five'

    b. PMP *wasay > *wasay* 'ax'

    c. PMP *buŋa > *bunga* 'fruit'

    d. PMP *quma > *uma* 'field'

(79) *a > /ə/:

    a. PMP *amaŋ > *amèng* 'father'

    b. PMP *inaŋ > *inèng* 'mother'

    c. PMP *taytay > *talèytèy* 'bridge' (with a fossilized infix <al>)

(80) Low Vowel Fronting (LVF): *a > /i/ after the voiced stops: /b/, /d/ and /g/

    a. PMP *gatəl > *gitèl* 'itchy'

   b. PMP *batu > *bitu* 'stone'

   c. PMP *ŋajan > *ngadin* 'name' (with *j > d)

   d. PPh *basəq[23] > *bisa* 'wet'

   e. PAn *daŋdaŋ > dingding 'roast'

   f. PPh *basag[24] > *bisag* 'break, shatter'

   g. PMP *daya > (di + daya) *diddya* 'upstream' [25]

   h. PNLzn *=da[26] > =di (third plural genitive pronoun)

   i. PMP *ba > (di + ba) *dibbi* 'below, under, low'

The reflexes of PMP *i

PMP *i is generally reflected as /i/, except for the three items in (82):

(81)   PMP *buliq > *buli* 'buttock'

      PMP *lima > *lima* 'five, hand'

      PMP *qujiŋ 'charcoal' > *me'-'uding* 'black' (with *j > d)

      PMP *kulit > *ulit* 'bark, skin' (with *k > Ø)

      PMP *laŋit > *langit* 'blue sky, morning'

(82)   PMP *tian > *tyan* /tʃan/ 'leg'

      PMP *ijuŋ > adung 'nose'

      PMP *si(ŋ)jəm > sagèm 'ant'

   tyan in (82) may be explained by monosyllabification, where the CV cluster *ti* changed into affricate /tʃ/ to meet the syllable constraint in Arta. The second case PMP *ijuŋ > *adung* 'nose' has no explanation, and may be a borrowed item from a langauge with /d/-reflex of *j. *si(ŋ)jəm > *sagèm* 'ant' has also /a/ reflex of *i, but since it contains the *j > /g/ change, it is probably a borrowing.

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[23]Source: Lobel (2010)

[24]Source: Lobel (2010)

[25]*di* appears to be an old locative form *di (p.c. Dr. Lawrence A. Reid); cf. *dingatu* 'upper side', *dibiliw* 'north', *diso:no* 'inside', *dilod* 'downstream'

[26]Source: Reid (1979)

The reflexes of PMP *u

*u was generally reflected as /u/ as shown in (83):

(83)   PMP *qulu > ulu 'head'

PMP *susu > susu 'breast'

PMP *kulit > ulit 'bark, skin'

PMP *bulus > bulus 'flow'

PMP *huRas > uras 'wash' (with *h > Ø, and *R > /r/)

However, if the vowel had to lose its syllabic position under the following conditions, *u became a glide /w/. First, by the loss of onset consonants, the sequence of *Cua changed /wa/:

(84)   PMP *kua > *wa* 'filler for word that cannot be recollected'

PMP *huaji > *wadi* 'younger sibling' (with *h > Ø, and *j > /d/)

Second, by the loss of an intervocalic consonant, the sequence *aCu changes /aw/:

(85)   PMP *taqu > *tataw* 'know' (with the *Ca-* prefix or reduplication, ta-)

The reflexes of PMP *ə

The reflexes of PMP *ə are /ə/ and /a/; this split is complementarily distributed: /ə/ reflex of *ə appears in the word-initial and word-internal position, whereas /a/ reflex of *ə appears in the word-initial or word-final position.

(86)   *ə> /ə/

PMP *tazəm > *tadèm* 'blade'

PMP *ŋipən > *ngippèn* 'tooth'

PMP *gatəl > *gitèl* 'itchy'

PMP *qatəp > *atèp* 'roof'

PMP *lənəj > *lènèd* '(the sun) sets' (with *j > /d/)

PMP *bəRək > *bèrèk* 'young pig'

PMP*qətut > *ètut* 'fart'

(87)   *ə> /a/

PMP *mutəq > *muta* 'gummy section of eyes'

PMP *luhəq > *luwa* 'tears' (with the loss of *h and *q)

PPh *basəq > *basa, bisa* 'wet' (with the loss of *q and LVF)

PMP *utək > *uta* 'brain' (with the loss of *k)

The *ə> /a/ change correlates with the loss of final consonants *q and *k. This change may indicate that the schwa sound cannot occur in the word-final open syllable.

2.2.3   Gemination after schwa

Among Northern Luzon subgroup, Cagayan Valley languages, Ilokano and Northeastern languages of Luzon except Casiguran Agta underwent consonant gemination after schwa (e.g. PMP *əlad 'wing' > Dupaningan Agta, Pahanan Agta, Nagtipunan Agta *allad* 'feather'; Robinson and Lobel (2013)). In Arta, most of the inherited items do not geminate consonants after schwa:

(88)   No gemination after schwa

PMP *lənəj > *lènèd* 'sink'

PMP *bəRək > *bèrèk* 'young pig'

PMP *lətaw > *lètaw* 'float'

PMP *səlat > *salat* 'between'

PMP *bəzak > *pèda* 'step on'

PMP*qətut > *ètut* 'fart'

It is true that there are items containing a consonant gemination after schwa as listed in (89), but they are probably borrowed from Cagayan Valley languages. *baggat* 'rice' is probably from Yogad considering /t/ reflex of *s and /g/ reflex of *R. *bèngngèg* 'deaf' may be borrowed from Gaddang *bèngngèg* because *R in this item is reflected as /g/. *appat* 'four' may be borrowed from Yogad, Gaddang or Isneg, because if it were Arta, *ə would be reflected as /ə/ in this environment. The only problematic item is *annèm* 'six', which might be borrowed from a language listed below with a subsequent phonological change, or from an unidentified source.

(89)   Gemination after schwa

       PMP *beRas: *baggat* 'rice' cf. Yogad *baggat*

       PMP *bəŋə: *bèngngèg* 'deaf'

       cf. Gaddang *bèngngèg*; Dupaningan Agta, Yogad: *bangngag*

       PMP *əpat: *appat* 'four' cf. Yogad, Gaddang *appat*, Isneg *qappat*

       PMP *ənəm: *annèm* 'six'

       cf. Yogad *annam*, Isneg, Central Cagayan Agta *annam*, Casiguran Agta *ènèm*, Ilokano

       ènnèm.

2.2.4   s/t metathesis

Although Reid (1989) claims that Arta is an isolate within Northern Luzon languages, he does not explicitly provide evidence for the hypothesis that Arta belongs to the Northern Luzon subgroup, thus cannot eliminate the possibility that it is an isolate within a higher subgroup, Malayo-Polynesian like another Negrito language Manide (Lobel 2010). The comparative study, however, suggests that Arta is identified as a language within Northern Luzon subgroup. As argued in Reid (2006), Robinson and Lobel (2013), one of the defining features of Northern Luzon subgroup of Malayo-Polynesian langauges is a metathesis from *t...s to /s...t/. in his subgroupingsuch as PMP *taŋis > PNLzn *saŋit 'cry', PMP *Ratus > *Rasut 'hundred'. Since Arta shows quite low percentage of the vocabulary retention, it is difficult to identify this phenomenon, but the following two items do exhibit the s/t metathesis:

(90)   PMP *ditaqas > *disat* 'high (the sun)'
       PMP *təRas 'hardwood, hard' > *sarat* 'narra wood'

This s/t metathesis is however a sporadic change in Arta as well as in other Northern Luzon languages; for example, PMP *-tas > *tastas* 'to tear' is the one which did not undergo the metathesis.

2.2.5 Development of vowel length contrast

In many Philippine languages, Vowel-length contrast on the *penultimate* syllable is attested, as shown in the Tagalog, Ilokano, and Bikol examples in §2.1.3.[27] Zorc (1979) also lists Aklanon, Balangao, Cebuano, Hanunoo, Ibanag, Ifugao, Isneg, Kalinga, Kapampangan, Sambal as languages with such vowel-length contrast (Zorc 1979: 241). Based on the fact that cognate forms among these languages share the same length on the penult, he argues that the contrastive word accent system may be attributed to "Proto-Philippines", as shown in Proto-Philippine (PPH) *da:Raq 'blood' cf. Isnag *da:ga*, Ilokano *da:ra*, Ifugao *da:la*, Kapampangan Sambal *da:ya*; PPH *da:lan 'path, trail' cf. Aklanon, Balangao, Cebuano, Bikol, Hanunoo, Ibanag, Isneg, Kapampangan, Ilokano *da:lan*.[28]

This is not the case in Arta, however. all of the forms inherited from PPH lost their vowel length contrasts in the language:

(91) PPh *qaba:Ra[h] > *abaga* 'arm'

PPh *ku:tu[h] > *utu* 'lice'

PPh *si:ku > *siku* 'elbow'

PPh *tu:bu > *tubu* 'grow'

PPh *su:su > *susu* 'breast'

PPh *qu:lu > *ulu* 'head'

PPh *bu:lan > *bulan* 'moon'

PPh *ŋa:jan > *ngadin* 'name' (with *j > /d/, *a > /i/)

PPh *ka:yuh > *ayu* 'tree, wood'

A comparison with other Philippine languages which are considered to retain the old accentual system may also indicate that Arta lost penultimate long vowels (the following data for Isneg, Bontok, Ifgaw, Ilokano, Cebuano, and Bikol are collected from Blust and Trussel (2010 –)):

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[27]This section is a modified version of a paper to be published as Kimoto (2017).

[28]Although Zorc labelled the hypothetical proto-language as "Proto-Philippines" in his previous publications, and this paper cites his reconstructed data with the same label Proto-Philippines for the purpose of comparing reconstructed forms with Arta forms, he no longer holds to a Proto Philippines. (Zorc p.c.); in fact, recent studies (Reid 1982, Ross 2005) point out the lack of evidence to justify Proto-Philippines as a distinct proto-language from Proto-Malayo-Polynesian.

(92)   Arta: *dudun* 'locust'

      cf. Isneg, Bontok, Ifugaw, Ilokano *du:dun*, Cebuano *du:lon*, Bikol *du:ron*

    Arta: *lutu* 'cook'

      cf. Isneg, Bontok, Ifugaw, Ilokano *lu:tu*, Bikol *lu:toʔ*

    Arta: *mula* 'to plant'

      cf. Isneg, Bontok, Ilokano *mu:la*

    Arta: *pusèd* 'navel'

      cf. Isneg *pu:sag*, Bontok, Ilokano *pu:səg*, Ifugaw *pu:hog*, Bikol *pu:sod*

These data strongly indicate that the long vowels in Arta are not the short-long contrast inherited from a proto-language common to languages retaining the old accent system. In what follows, it is shown that there are three types of lexeme with long vowels which should be treated separately: onomatopoeic words, borrowings, and inherited forms. After observing long vowels seen in onomatopoeic words and borrowings (where the reason why onomatopoeic words should be treated separately will also be mentioned), the most puzzling case, inherited forms containing long vowels is discussed. It is shown that long vowels in inherited forms independently developed by the loss of PMP consonants and subsequent compensatory lengthening or vowel fusion, both of which, arguably, involve the mora count conservation.

Long vowels in onomatopoeic words

Some ideophones, more specifically, expressions imitating sounds (onomatopeoia) contain long vowels. The following five items with a long vowel are found in my corpus:

    (16) *tattara:kot* 'cock-a-doodle-doo (a cry of roosters)' *ku:tak* 'cluck (a cry of hens)' *be:w* 'a cry of deer' *ku:rèk* 'chicken' *pi:yèk* 'chick'

    The first three words are the imitations of animal's crying. The rest of them are the names of animals probably via the semantic shift metonymically from the typical sound they emit. From a methodological perspective, these words should be treated separately from other non-onomatopoeic words. It is often the case that onomatopoeic words tend to develop differently in terms of sound change. This in fact occurred in the history of the Japanese

language; Komatsu (1989) argues that some onomatopoeic words retained the sound /p/ as in /pitoku pitoku/ (a sound of a small bird's crying) even after /p/ changed into /ɸ/ in Classical Japanese. The important point is that even if the above items had been inherited from a proto-language, these are not counterexamples. They might have developed subsequently after the loss of the old accentual system, or might have retained a long vowel in it independently of the loss of accentual system.

Long vowels in borrowed items

A large number of items containing long vowels seem to be borrowings from Yogad and Ilokano (and Spanish and English via these languages). The following items share the same surface forms with those in Yogad. The items containing /k/ are clearly borrowings because *k was lost in Arta. The formative ta: in ta:gatut, ta:hulu, and ta:ribu, which probably underwent the change from *sa 'one' > /ta:/, exhibits *s > /t/ a sound change characteristic of Cagayan Valley languages, not of Arta. The sources of *ka:ya* and *la:ku* is unclear because Ilokano also has the same forms. Considering the large number of lexical items shared with, thus possibly borrowed from, Yogad, it seems that there are a smaller amount of borrowings with a long vowel than expected. This may reflect a historical change which occurred in Yogad, one of the languages which lost the old accentual system, with a large number of lexical items having a short penult.

(93) Possible borrowings from Yogad

illa:yug 'long'

i:lug 'egg'

ka:ya 'can, be able to'

ki:gad 'until'

ki:bu 'mix'

la:ku 'buy'

le:but 'walk around'

li:nis 'clean'

no:not 'think'

ta:gatut 'one hundred'

ta:hulu 'ten'

ta:ribu 'thousand'

tu:rak 'write'

u:bi 'violet/purple yam'

(94) shows a list of forms shared with Ilokano. These forms are likely to be borrowings because they have a long penult, and in fact Ilokano is a language which retains the old accentual system, with a large number of items having a long penult. If they should be inherited forms from PMP, they would have been reflected as short vowels. Borrowings from Spanish and English are also found possibly via Ilokano or Yogad, as shown in (95,96):

(94)   Possible borrowings from Ilokano

       badu:ya 'kind of cake'

       inda:yun 'hammock'

       ta:wa 'window'

       ba:sa 'read letters'

       bu:ya 'watch TV'

       tu:luy 'continue'

       bi:lin 'order'

       uga:li 'habit, custom'

(95)   Borrowings from Spanish

       amerika:no: 'American' (< Americano)

       antipa:ra 'goggles' (< antiparras)

       ari:na 'flour' (< harina)

       binta:na 'window' (< ventana)

       bisi:ta 'guest' (< visita)

       hapon (//hapo:n//) 'Japan'

       ka:da- 'each, every' (< cada)

       kalsa:da 'paved road' (< calzada)

       kande:la 'candle' (< candela)

       kasape:gu 'matches' (< casa de fuego)

kla:se: 'class' (< clase)

pantalon (//pantalo:n//) 'pants' (< pantalon)

sakripi:syu 'sacrifice' (< sacrificio)

taraba:hu 'work' (< trabajo)

(96) Borrowings from English

ba:bay 'good-bye'

basket (//baske:t//) 'basket'

bolpen (//bolpe:n//) 'ballpoint pen'

hambag (//hamba:g//) 'handbag'

me:kap 'makeup'

As the above data indicate, Arta has been borrowed a large number of items from Yogad, Ilokano, Spanish, and English. Original stresses of the items in the source languages were re-interpreted as a long vowel when borrowed into Arta. And interestingly, two vowels /o/ and /e/ are always reinterpreted as long vowels, as in *kla:se:* 'class', /bo:lpe:n/ (e.g. *bolpe:n=i* 'a specific ballpoint pen'), /hapo:n/ (e.g. *hapo:n=i* 'a specific Japanese person'), regardless of whether the vowels had originally a stress or not. The possible reason for the reinterpretation will be considered in §2.2.5.

Even though we consider the influences of borrowings, we still find other lexical items with long vowels. These items lead us to consider the third case, in which inherited forms from Proto-Malayo-Polynesian have a long vowel as a result of several kinds of sound changes.

Compensatory lengthening

The first type of process in which vowel lengthening occurs is COMPENSATORY LENGTHENING. Compensatory lengthening is a phonological process in which the loss of a coda consonant triggers the lengthening of an adjacent segment. A typical case is the vowel lengthening triggered by the loss of the following consonant, as in Latin *kasnus > ka:nus 'gray' Hayes (1989: 260). The following items in Arta also illustrate the same point:

(97) *manuk > *manu:* 'bird'

*anak > *ana:* 'child'

*buyuk > *buyu:* 'bad-smelling'

*abak > *abi:* 'body' cf. AltaS: *abek*

*buliq > *buli:* 'buttocks'

The development of long vowels seems to result from the loss of *k in the case of *manu:*, *ana:*, *buyu:*, and *abi:*, and the loss of *q in *buli:*. Since the language has the lowest percentage of retentions of reconstructed PMP vocabulary of Philippine languages (27%; Reid 1989), not much evidence can be provided. However, in all the cases in which a coda consonant is lost, the preceding vowel is lengthened.

Compensatory lengthening can be explained in terms of the conservation of mora count, as argued by Hayes (1989, 1995). Remember that in Arta both CV: and CVC are treated as bimoraic. As depicted in Figure 2.1, by dropping a coda consonant, /k/ in this case, a mora becomes empty, which is assigned to the preceding vowel by its lengthening (in the following illustration, σ represents a syllable, and μ the mora).
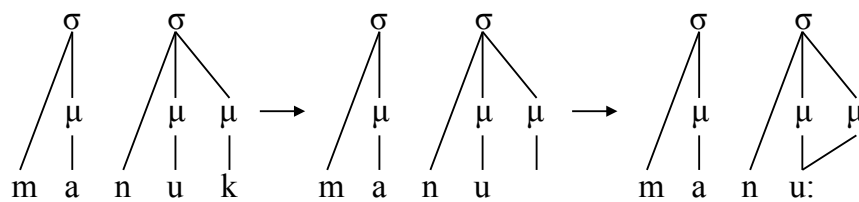
Figure 2.1: Compensatory lengthening in *manuk > *manu:*

A more complex pattern of compensatory lengthening is found in person forms. The following enclitic person forms underwent the loss of *k.

(98)   PNLzn (Reid 1979) > Arta

*=ka > *=a* (2SG.ABS)

*=kamuyu > *=am* (2PL.ABS)

*=kami > *=ami* (1PL.ABS)

*=kita > *=ita* (1+2SG.ABS)

*=kitam > *=itam* (1+2PL.ABS)

*=ku > *=ku* or *=u* (1SG.GEN)

The above forms are synchronically peculiar as well. They differ from other paradigmatically-related items in that they exhibit a complex morphophonemic alternation conditioned by the type of a segment to which they attach. More specifically, if the preceding word ends with a consonant (except /n/) as in (99A), a vowel before the consonant is lengthened, and, in the case of *=ku*, /k/ is dropped. If the preceding word ends with /n/ as shown in (99B), /n/ is velarized, and the preceding vowel lengthened and, in the case of *=ku*, the deletion of /k/ occur. If the preceding word ends with a vowel as shown (99C), it is just followed by the enclitic in case of *=ku*, *=ita* and *=itam*, and, in the case of *=am* and *=ami*, /y/ is inserted between the host word and enclitic.

(99)   Morphophonemic alternations

    A. after a consonant:

        babakat 'old woman' > + *=ami* > *baba**ka:t=ami*** 'we are old women'

        lusip 'nail' + *=ku* > *lu**si:p=u*** 'my nails'

    B. after /n/:

        buka:gan 'woman' + *=ami* > *buka:**ga:ng=ami*** 'we are female'

        bunbun 'house' + *=ku* > *bun**bu:ng=u*** 'my house'

    C. after a vowel (in case of *=ku, =ita, =itam*)

        mata 'eye(s)' + *=ku* > *ma**ta=ku*** 'my eyes'

        after a vowel: insertion of /y/ (in case of *=am/=ami*)

        me:na 'go' + *=am/=ami* > *me:**nayam/yami*** 'You/we will go'

How should this complex set of morphophonemic alternations be interpreted in terms of a historical development? This synchronic fact seems to be subsumed into "double-flop" (Hayes 1989: 265), which is a subtype of compensatory lengthening. A double flop may occur when there are a cluster of consonants consisting of a syllable coda and a following onset consonant. After the loss of the onset consonant, the preceding coda consonant is re-interpreted as an onset consonant of the following syllable, and the empty mora carried by the original coda consonant is borne by the preceding vowel by lengthening. Consider the case of *lusip* 'nail' + *=ku* > *lusi:p=u* 'my nails', following the illustration in Figure 2.2:
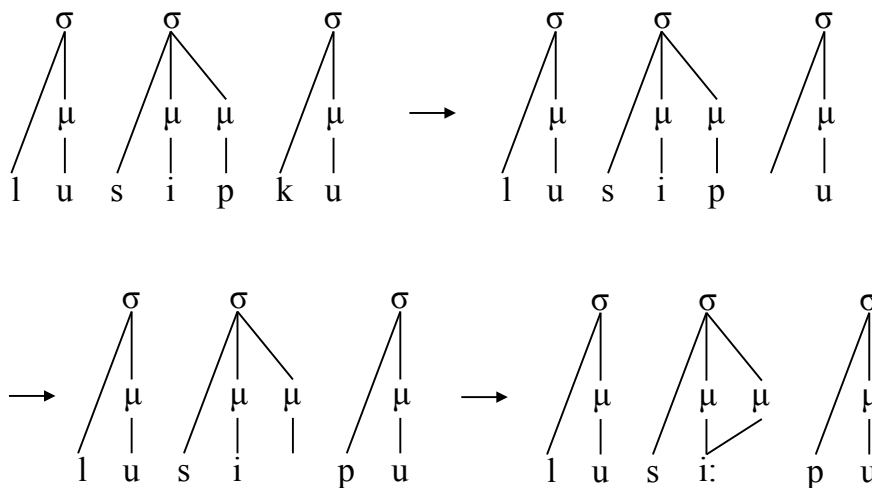
Figure 2.2: Compensatory lengthening (double-flop)

In this case, after the loss of the onset consonant /k/, the preceding segment /p/ is re-interpreted as the onset consonant probably by a universal principle of stable, unmarked syllable structure. This leads to the floating of the mora by the shift of /p/, thus being resolved by the lengthening of the preceding vowel /i/ to bear the mora. The velarization of /n/, in (99B), as in *buka:gan* 'woman' + *=ami* > *buka:ga:ng=ami* 'we are female', must be a result of assimilation to /k/; thus it is more likely that this change occurred at the initial stage of the double-flop (Figure 2.2), that is, before the loss of /k/.

Positing the mora as an explanatory apparatus is further supported by the asymmetrical relation between the loss of coda and onset consonants. The moraic account predicts that the loss of onset consonants does not trigger a compensatory lengthening because the onset consonants do not bear a mora, unlike the coda consonant. Consider the following phonological changes involving the loss of onset consonants:

(100)   *kutu > *utu* 'lice'

        *kua > *wa* 'what-cha-ma-call-it'

        *kulit > *ulit* 'bark, skin'

        *kaRat > *arat* 'bite'

        *kan > *an* 'eat'

The items shown in (100) demonstrate that a long vowel did not develop after the loss of an onset consonant; in fact, none of the items with the loss of an onset exhibit vowel length-

ening. This suggests that vowel lengthening in inherited forms involves the mechanism of mora count as an explanatory apparatus.

Vowel fusion

The second process in which long vowels emerged, is vowel fusion caused by the loss of intervocalic consonants. Vowel clusters *a+a, *u+u, *a+i, and *a+u lead to the emergence of four long vowels /a:/, /u:/, /e:/ and /o:/, respectively. Among them, /e:/ and /o:/ are interesting in that they are the phonemes that PMP did not have, and which developed by vowel fusion.

The following items exhibit vowel fusion *a+a > /a:/ and *u+u > /u:/:

(101) *a+a > /a:/

    *sakay > //sa:y// 'ride on' *mas-say* (INTR-ride), *sa:y-an* (ride-TR) 'ride on'

    *ka-ama-ən > *ka:man* 'big'

    *di *tahaw > //dita:w// 'outside' *ditaw* 'outside', *dita:w=i* 'the specific outside space'

(102) *u+u > /u:/

    *dukut > //du:t// 'fire' (cf. *dut* 'fire' vs. *du:t=i* 'the fire')

    *baqəRu > *bu:ru* 'new' (with a vowel harmony /a/ > /u/)

Note that, although *sakay, *tahaw and *dukut exhibit vowel fusions caused by the loss of intervocalic *k, given the mora constraint on syllable structure, a long vowel appears only if the word-final consonant is resyllabified as an onset consonant as in *sa:y-an* 'ride on' and *du:t=i* 'the fire'.

The process of *a+a > /a:/ and *u+u > /u:/ is also observed in synchronic variations in some cases. A reduplication of a vowel-initial base, and the prefixation of *ma-* and *maka-* (potentive verb prefixes) followed by /a/-initial bases, trigger vowel fusion.

(103) *ma-ʔalap > *ma:lap* or *ma'alap* /maʔalap/ 'can get, succeed'

    *maka-ʔaŋay > *maka:ngay* or *maka'angay* 'can go into'

(104) *ʔa-ʔana: (reduplication of *ana:) > *a:na:* 'children'

    *ma-ʔarawat-an > *ma:rawatan* 'can grasp, understand'

This involves the fact that an intervening glottal stop between two adjoining morphemes is synchronically on the verge of disappearing. Apart from PMP *q which was lost at an

early stage, Arta has another glottal stop, which is inserted before a vowel-initial base word regardless of whether the base word is realized by itself /ʔana:/ 'child', or undergoes further derivations /ʔa-ʔana:/ 'children'. However, as shown above, many items have free variation in terms of the presence or absence of /ʔ/ as in (103), while some items do not allow the presence of /ʔ/ as in (104). And the loss of /ʔ/ triggers vowel lengthening.

This kind of vowel lengthening by vowel fusion is illustrated in Figure 2.3. By the loss of an intervocalic consonant, two vowels adjoin each other. This leads to the re-interpretation of two homogeneous vowels as one long vowel. Note that this process again involves the conservation of mora count. The number of moras after the resyllabification remains the same unless the structure violates the moraic constraint on syllable structure. As mentioned above, the reason why *dukut and *sakay are realized with a short vowel *dut* and *say* respectively, is that a trimoraic syllable such as *du:t* and *sa:y* is not allowed by that synchronic constraint.
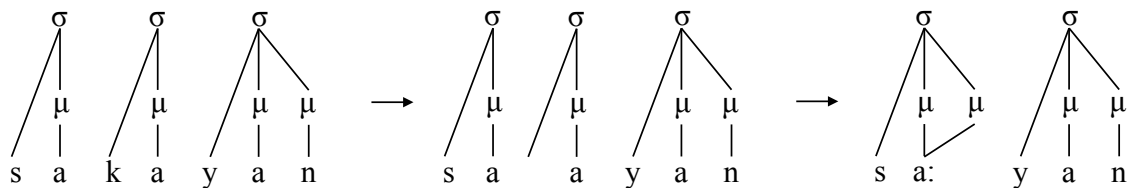
Figure 2.3: Vowel fusion

Vowel fusion is also responsible for the development of two new phonemes /e:/ ([ɛ:]) and /o:/ ([ɔ:]). /e:/ emerged by the loss of *h and *k in the following items:

(105)   *ahi, *aki > /e:/

         *unahik > *une:* 'climb a mountain'

         *bahi > *beb-be:* 'aunt' (with reduplication)

         *laki > *lel-le:* 'uncle' (with reduplication)

         *maki- > *me:-, mi:-* (comitative verb prefix)

(106)   *a+u > /o:/

         *dahun > /do:n/ 'leaf' (e.g. *do:n=i*)

         *lahud > /di-lo:d/ 'downstream' (e.g. *dilo:d=i*) (with the fossilized prefix *di-*)

*a+i > /e:/ ([ɛ:]) and *a+u > /o:/ ([ɔ:]) are again observed in synchronic morphophonemic alternation. If *ma-/maka-* or *pa-* (causative marker) is prefixed to a base beginning with /i/ or /u/, vowel fusion occurs, realized as /me:/, /make:/, and /pe:/, on the one hand, and /mo:/, /mako:/, and /po:/, on the other. This again involves the loss of the intervening glottal stop. This type of prefixation, however, hardly exhibits a variant with /ʔ/ except the case in (109).

(107)   *maka-/ma- (stative), pa- + i > /make:/, /me:/, /pe:/

        *maka-ʔidəm > *make:dèm* 'sleepy'

        *maka-inum > *make:nom* 'drunk'

        *ma-ʔidəm > *me:dèm* 'sleepy'

        *i-pa-ʔita (see) > *ipe:ta* 'show'

(108)   *ma-ʔuras-an > *mo:rasan* 'can be cleaned'

        *ma-ʔulit-an > *mo:litan* 'can be peeled'

        *pa-ʔudiŋ-ən > *po:dingèn* 'darken'

(109)   *ma-ʔune: > *ma'une:* or *mo:ne:* 'can climb'

It should be noted that vowel fusion did not occur in the case of vowel+glide clusters such as *ay and *aw. In Casiguran Agta, *ay was fused into /ɛ/ (Headland and Healey 1974), but that is not the case in Arta. With one exception where *patay is reflected as /pati/, *ay is reflected as /ay/.

(110)   *ay > /ay/ (cf. *ay > /ɛ/ Casiguran Agta)

        *aŋay > *angay* 'go' (cf. Casiguran Agta aŋɛ)

        *anay > *anay* 'termite' (cf. Casiguran Agta anɛ)

        *wasay > *wasay* 'ax, hatchet'

        *patay > *pati* 'die'

(111)   *aw > /aw/

        *ulitaw > *ulitaw* 'unmarried man'

        *tahaw > *di-taw* 'inside' (with the fossilized prefix *di-*)

        *biRŋaw > *biringaw* 'fly (n.)'

        *lətaw > *lètaw* 'float'

In this section, it is observed that /e/ and /o/ in borrowed items are always long vowels unless the length is overridden by the constraint on syllable structure. It seems difficult to understand the reason why only these two vowels are always long. However, the above discussion on the historical development of /e:/ and /o:/ provides one reasonable account: the feature of length which the two vowels acquired via the fusion of *a+i and *a+u, must be applied to vowels in loanwords. At the first stage, /e:/ and /o:/ were seen exclusively in items which underwent vowel fusion. But in the process of interpreting borrowing items containing [ɛ] and/or [ɔ] as the instances of the two existing vowels /e:/ and /o:/, the feature [+long] also penetrated into borrowed items.

Competing motivations

The above section argued that long vowels in Arta are observed in inherited forms from PMP, and they developed through compensatory lengthening and vowel fusions, both of which are subsumed under the principle of mora-count conservation. This suggests that the mora-based principle played a significant role in Arta, as well as the moraic constraint on eligible syllable structure. However, this does not imply that the mora is affecting the phonetic and phonological organization in the language. Rather, a more naturalistic view would be that it is at work interacting, and sometimes competing, with other factors which may affect the organization ("competing motivations" Du Bois 1985). Some apparent exceptions to the mora principles indicate interactions between the mora and other factors such as sociolinguistic and phonetic aspects.

The first case in which the regularity of the mora may be affected involves borrowings. The two lexical items *trabajo* in Spanish and *truck* in English were borrowed into Arta, meaning 'work' and 'car', respectively. They are peculiar in that they have an onset cluster /tr/. This structure seems unstable in the phonology of Arta; in fact, they exhibit the following phonetic variations with/without vowel insertions:

(112)   Spanish *trabajo* > Arta [trak] ∼ [tărak] ∼ [tarak] 'car'

           English *truck* > Arta [traba:hu] ∼ [tăraba:hu] ∼ [taraba:hu] 'work'

The onset cluster consisting of /t/ and /r/ may or may not have the insertion of [a] with

different lengths. It is difficult to assume abstract phonological representations for each lexical item, and difficult to posit any specific syllable structure or mora count. Rather, this should be considered to be a case in which the application of mora count is unstable after adopting an unstable structure by borrowing.

A more puzzling case is found in inherited forms. The following two items are not explained by the borrowing of "unstable structure" from outside of the language, because they seem to be reflexes of PMP *diya, *tiyan, respectively. However, their reflexes again show instability in terms of the mora count and syllable structure:

(113)   *tiyan > [tĭ(j)an] ~ [t͡ʃan] 'belly'

diya > [dĭ(j)a] ~ [d͡ʒa] 'to him/her/it' (3SG.OBL)

Each item may be pronounced like a bisyllabic word, or may be pronounced with the palatalization of /t/ and like a monosyllabic word ([j] is parenthesized because whether a glide should be recognized is difficult to judge purely in terms of phonetic observation). Furthermore, even when there is no palatalization of /t/, [i] is pronounced as shorter (hence the diacritic above [i]), and it is not obvious as to whether the words should be regarded as monosyllabic or bisyllabic words. This of course means indeterminacy of the mora count, as well. This indeterminacy might be interpreted as a case in which the items are undergoing a gradual change from bimoraic to monomoraic words. This however seems overgeneralized. It does not explain exactly why these particular items are undergoing change in mora count, and it is shown above that the mora count was conserved, rather than reduced, in the process of phonological change. A more crucial factor applying to this particular case would be attributed to phonetic aspects. This seems to involve the fact that a sequence of two segments *iy shares the same phonetic features: front, close, and unrounded, thus it is easy to produce with a reduction. And more crucially, the articulatory movement from /t/ or /d/ to /a/ constitutes a single unidirectional movement from a complete closure to a fully opened position. The pressure by the ease of this particular articulatory movement may facilitate a reduction to monosyllabic words, over the principle of the mora-count conservation.

2.3   Conclusion

In this chapter, I examined the synchronic phonology and explored the diachronic develop-
ment of phonological structure from Proto-Malayo-Polynesian. In §2.1, consonant and vowel
inventories were observed, where I discussed two points among others. Glides in Arta are
phonologically not part of diphthongs, rather they should be regarded as consonants; allo-
phonic variations of /i/ and /u/ are determined by three factors: (A) whether or not they
have at least one non-alveolar consonants adjacent to /i/ or /u/, (B) whether or not the fol-
lowing or preceding vowel is an open or open-mid vowel, and (C) whether they occur in a
word-final position or non-final position. The mora plays a pivotal role in the language for
predicting the allomorphy of some enclitics, and vowel-length alternations. In §2.2, reflexes
of PMP consonants and vowels were identified and found that consonants and vowels are
relatively conservative in that all the consonants and vowels remained unchanged except
*k, *h, *q, and *R. On the other hand, new phonemes /e/ and /o/ emerged in Arta, which
can be considered to have developed through two kinds of fusion: *a+i > /e:/ and *a+u >
/o:/, respectively. Although accentual system seen in some other Philippine languages has
lost in Arta, the language developed short-long contrast of vowels through compensatory
lengthening and vowel fusion.

Chapter 3

Morphology and morphophonemics

3.1 Defining word, clitic and affix

Although the word is a quite significant unit for providing a language description, and is a theoretical basis for distinguishing many theoretical constructs such as phrase vs. word, clitic vs. affix, syntax vs. morphology, many linguistic theories and descriptive grammars have presupposed that it is easy to define the word. This may be partially influenced by the modern orthography of many western languages, where a word boundary is explicitly indicated by a blank space. However, as convincingly argued by Arnold Zwicky (e.g. Zwicky 1977, Zwicky and Pullum 1983, Zwicky 1985), the segmentation of words is not a straightforward matter (for attempts to define word, clitic, and affix on empirical ground, see also Hattori 1950, Aikhenvald 2002, Haspelmath and Sims 2010).

The inherent difficulty for defining words may lie in the fact that, viewed from a diachronic perspective, free words, clitics, and affixes actually constitute a continuum: free words may gradually become phonologically dependent small words, clitics, then some being fused as affixes, as advocated by Talmy Givón "yesterday's syntax is today's morphology", or vigorously studied by grammaticalization theory (see further Givón 1979, Heine et al. 1991, Bybee et al. 1994, Hopper and Traugott 2003. In addition, cognitive linguistics, a functionally-oriented linguistic theory, models a "usage-based approach" to grammar, where even synchronically morphology and syntax allegedly form a continuum (Bybee 1985, Langacker 1987a, 2000, 2008, Barlow and Kemmer 2000, Croft and Cruse 2004). In typological

studies, some researchers have recognized that the dichotomy between morphology and syntax is arbitrary, because it seems impossible to provide a universal definition for "word" (Haspelmath 2011).

In spite of the fluid nature of morphology and syntax, and the possible continuum between "free word", "clitics", and "affixes", I continue to employ these labels for descriptive purposes, by providing empirical criteria to define them. The first reason is that any string of sound has to be represented by a linear writing system. In particular, in descriptive and typological literature, glossed sentences separated by symbols like "X Y", "X=Y", and "X-Y" are widely used, and descriptive grammars should be readable and comparable in the typological perspective. Second, it is beneficial in some respects. If these terms are able to be used with caution based on the language-internal behavior, it contributes to revealing unknown facts regarding the language.

In the following two sections, I classify problematic small particles into free words, clitics, and affixes by observing their behavior in terms of criteria provided in previous literature (Bloomfield 1926, Hattori 1950, Zwicky 1977, 1985, Zwicky and Pullum 1983, Aikhenvald 2002, Haspelmath and Sims 2010).[1] After listing the items to be attested, with tentative labels for the items, we will provide evidence for determining each category.

3.1.1   Free forms (words) vs. bound forms

Table 3.1 shows some problematic free words, clitics in Arta with examples and translations. The items listed in the table includes two kinds of free words: (i) nominal markers for introducing noun phrases (see §5.4), and (ii) ligature *a*, a formative to introduce adjectival and adverbial modification, and forming complement clauses (see §6.1.3, 9.1, and 10.1); seven kinds of clitics: (iii) demonstratives (§5.3), (v) one subset of absolutive person forms *=tèn,*

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[1]It should be noted that the application of criteria provided in the literature to particular languages has difficulty because the nature of words, clitics and affixes differ considerably among languages and items. For example, Haspelmath and Sims (2010) establishes three criteria to distinguish free forms from bound forms, one of which is stress assignment: "clitics never bear their own stress (ibid.: 196)". This does not work in Arta since the language has no stress system (See §2.1.3). In his test for distinguishing clitics from affixes, Hattori (1950) states that if a word can intervene between the two elements in question, one of the two elements is a clitic, as in *a=book > a=nice book.* This may be applicable to some nominal markers, but it is not applied to many other cases, because many clitics have their own slot vis-à-vis the host word as in a sequence of a verb plus bound pronominal form, modifiers for the host word should often be placed outside the sequence. In this section, therefore I arrange a list of criteria applicable to the language, to test for distinguishing free words, clitics and affixes.

=taw, =tid (§5.2), (vi) epistemic modality (§9.4), (vii) phasal markers to frame the event in the larger context as in *=di* 'already', *=pa* 'just for a while', and *=tep* 'still, so far' (§9.3), (viii) the other subset of bound absolutive person forms (absolutive-A) *=a, =am, =ami, =ita, =itam* (§5.2), and (ix) bound genitive person forms. For a contrastive test, we will examine one kind of affix: (x) tense-aspect markings ⟨in⟩ and *paC*.

To define "free form" (or word) in Arta, the following two tests are employed here:

(1)   a.   **Independent occurrence** (cf. Bloomfield 1926: 155–56)

The form is a free word if it can constitute a single utterance.

b.   **Potential pause** (cf. Haspelmath and Sims 2010: 196)

The form is a free word if an utterance can be interrupted at a boundary between the form and adjacent items.

The result is shown in Table 3.2, in comparison with items which are undoubtedly free words such as *bagat* 'banana', and *meppasu* 'cold'. It shows that none of particle-like elements in Arta pass the first test as to whether the element can stand alone as an independent utterance. This result seems to be motivated by the fact that every particle-like elements listed are function word, not content word. Function words are typically difficult to become the target of pragmatic focus, thus these forms in Arta may not constitute an independent utterance. The impossibility of independent occurrences for person forms (iv, vii, ix) is also supported by the fact that another set of person forms must be used if the form constitute an independent utterance: *tèn* (1SG.ABS), *taw* (2SG.ABS), *tam* (2PL.ABS), *tami* (1PL.ABS), *tita* (1+2SG.ABS), *titam* (1+2PL.ABS), *siya* (3SG.ABS), and *tid* (3PL.ABS) (see topical person forms in Table 5.2 in §**??**).

Regarding the second test for a potential pause, (i) nominal markers and (ii) ligature pass the test, whereas the other classes of particles do not. The items (i) – (ii) (beyond the horizontal broken line) can thus be seen as *non-prototypical* free words in that they do not satisfy the first test, the possibility of an independent occurrence, but pass the latter test. Since the rest of the items do not pass either test, they can be recognized as **bound forms**, which will be divided into clitics and affixes in the next section.

Table 3.1: Free words, clitics, and some affixes in Arta

		Items	Examples	Translations
Free words	(i) nominal marker	*i* (singular definite) *tidi* (plural definite) etc.	*killèk **i** kusayi.* (small SG.DEF water)	The water became small.
	(ii) ligature	*a*	*killèk **a** kusay* (small LIG cat)	a small cat
Clitics	(iii) demonstrative	=*ti* (PROX) =*tina* (MED) =*ta* (DIST), etc.	*iwa=ku=p=**ti*** (put 1SG.GEN just PROX)	I'll just put it here.
	(iv) absolutive-B person form	=*tèn* (1SG) =*taw* (2SG) =*tid* (3PL)	*Apu=ku=**tid**.* (grandchild 1SG.GEN 3PL.NOM)	They are my grandchildren.
	(v) epistemic modality	=*antu* 'really' =*wada* 'possibly' =*mina* 'I wish' =*an* 'they say'	*Mas Malala:ki=antu.* (more good=really)	It must be better.
	(vi) phasal marker	=*di/d* 'already' =*pa/p* 'just' =*tep* 'still'	*iwa=ku=**p**=ti* (put 1SG.GEN just here)	I'll just put it here.
	(vii) absolutive-A person form	=*a* (2SG) =*am* (2PL) =*ami* (1PL) =*ita* (1+2SG) =*itam* (1+2PL)	*Mandi:mu:y=**a**=d.* (bathe 2SG.NOM now) *Med-dayèg=**a*** (ADJ-fat 2SG.NOM)	Take a bath now. You are fat.
	(viii) specificity marker	=*i* (specific) =*ti* (specific past) =*tidi* (specific pl.)	*i kusay=**i*** (DET cat SPC)	the small cat (which I know)
	(ix) genitive person form	*ku* (1SG) *mi* (1PL) *mu* (2SG) *muyu* (2PL) *ta* (1+2SG) *tam* (1+2PL) *na* (3SG) *di* (3PL)	*mata=**na*** (eye 3SG) *iwa=**ku**=p=ti* (put 1SG.GEN just here)	his/her eyes I'll just put it here.
Affixes	(x) tense-aspect	*paC-* (progresssive) *-in-, n-* (perfect)	***pad**-di:muy* (PRG.INTR.bathe) ***n**an-di:muy* (PRF.INTR.bathe)	be taking a bath took a bath

Table 3.2: Free words vs. bound forms

	Independent occurrence	Potential pause
cf. nouns	Yes	Yes
(i) nominal marker	No	Yes
(ii) ligature *a*	No	Yes
(iii) demonstrative	No	No
(iv) absolutive-B	No	No
(v) epistemic modality	No	No
(vi) phasal marker	No	No
(vii) absolutive-A	No	No
(viii) specificity marker	No	No
(ix) genitive	No	No
(x) tense-aspect	No	No

3.1.2 Bound forms: Clitics vs. affixes

Clitics are usually understood as elements which "act like single-word syntactic constituents in that they function as heads, arguments, or modifiers within phrases, but like affixes in that they are "dependent in some way or another, on adjacent words" (Zwicky 1994: xii). However, to differentiate clitics from affixes is a difficult issue because the concept "clitic" is an umbrella term, having a fluid status between free words and affixes (specifically inflectional affixes), and used in quite different senses by different researchers (see Zwicky 1994). In this section, I will employ the following four criteria to test whether each item has a clitic-like or affix-like status.

	Morph. Alternation I	Morph. Alternation II	Host word selection	Movement
(iii) demonstratives	CL	CL	CL	__
(iv) absolutive-B	CL	CL	CL	CL
(v) epistemic modality	CL	CL	CL	—
(vi) phasal marker	CL	CL	CL	—
(vii) absolutive-A	AFX	AFX	CL	CL
(viii) specificity marker	CL / AFX	CL / AFX	CL	CL
(ix) genitive	AFX	AFX	CL	CL
(x) tense-aspect	AFX	AFX	AFX	AFX

(2)   a.   **Morphophonemic Alternation** (Zwicky and Pullum 1983: 504, Haspelmath and Sims 2010: 198–9)

I   If the element *causes* the morphophonemic alternation of the host word, it is more like an affix.

II   If the element *undergoes* morphophonemic alternation, it is more like an affix.

b.   **Host word selection** (Hattori 1950: 85, Zwicky and Pullum 1983: 503, Haspelmath and Sims 2010: 198)

If the element can co-occur with a host of various syntactic categories, it is more like a clitic.

	Independent occurrence	Potential pause
cf. nouns	Yes	Yes
(ii) ligature *a*	No	Yes
(iii) demonstrative	No	No
(iv) absolutive-B	No	No
(v) epistemic modality	No	No
(vi) phasal marker	No	No
(vii) absolutive-A	No	No
(viii) specificity marker	No	No
(ix) genitive	No	No
(x) tense-aspect	No	No

c. **Possible freedom of movement** (Haspelmath and Sims 2010: 200)

If, in a particular construction, the element can be placed in a different position from the word which is syntactically and/or semantically more relevant to it, it is more like a clitic (called "special clitic").

The result of their applications to the Arta particles is shown in Table 3.3. CL represents the item behaves like a typical clitic, and AFX represents the items behave like a typical affix, seen from the criteria.

Table 3.3: Clitics vs. Affixes

		Morph. Alternation I	Morph. Alternation II	Host word selection	Movement
(iii)	demonstratives	CL	CL	CL	—
(iv)	absolutive-B	CL	CL	CL	CL
(v)	epistemic modality	CL	CL	CL	—
(vi)	phasal markers	CL	CL / AFX	CL	—
(vii)	absolutive-A	AFX	AFX	CL	CL
(viii)	specificity marker	CL / AFX	CL / AFX	CL	—
(ix)	genitive	AFX	AFX	CL	CL
(x)	tense-aspect	AFX	AFX	AFX	AFX

Let me show behavior patterns for each items of (iii)–(x). The first criterion to distinguish clitics from affixes is whether the formatives can trigger/undergo a morphophonemic alternation. The items labeled (iii) – (vi) do not trigger or undergo any morphophonemic change, whereas the items belonging to the other categories may trigger or undergo a morphophonemic alternation. This is a topic to be explored in §3.3. A few examples of alternation are provided here:

(3)   Morphophonemic alternation triggered by the items:

     a. (viii) Specificity marker *=i*

        tabla 'board' + *=i* (SPC) > *tablè=y* /tabləy/ 'a board which I know'

     b. (ix) Genitive person form *mi*

        bunbun 'house' + *=mi* (1PL.GEN)> *bunbum=mi* 'my house'

(4)   Morphophonemic alternations that the items undergo:

a. (vii) Pragmatic particles *=di*

nasungdu 'finished' + *=di* > *nasungdu=d* 'just finished'

b. (ix) Genitive person form *=ku*

bunbun 'house' + *=ku* (1SG.GEN)> *bunbuːng=u* /bunbuːŋu/ 'my house'

The results of another test, host word selection, are illustrated below. demonstrative particles can occur with person forms (the example shown below), phasal markers (see an example shown in Table 3.1), and verbs.

(5)   a.   *Matti:=tèn=ti.*

remain=1SG.ABS=here

I will remain here.

One series of absolutive person forms (Absolutive I), here *=tid, =tèn,* can occur with other person forms, verbs, adjectives, and so on.

(6)   a.   *Apu=ku=tid.*   b.   *l⟨in⟩⟨um⟩dèp=tèn*

grandchild=1SG.GEN=3PL.ABS   ⟨PST⟩⟨INTR⟩dive=1SG.ABS

They are my grandchildren.   I dove.

c   *Med-digsèn=tèn.*

ADJ-strong=1SG.ABS

I am strong.

Epistemic modality markers can be placed immediately after verbs as in (7a), phasal markers as in (7b), adjectives (see Table 3.1), person forms (7c), and so on.

(7)   a.   *Mangay=mina   i   pangattinan=mu.*

come=hopefully   SG.ABS.DEF   living.place=2SG.GEN

(lit.) I wish your living place came! (Let your kingdom come!)

b.   *Illa:yug=tep=mina   i   langit=i.*

long=ANT=hopefully   SG.ABS.DEF   daytime=SPC

If only the daytime were longer.

c. *Me:ta=mi=mina.*

see=1PL.GEN=hopefully

I wish we could see it.

Phasal markers can occur with person forms (See Table 3.1), verbs as in (8a), adjectives as in (8b), and so on:

(8)   a. *T⟨in⟩⟨um⟩anakwan=di.*

⟨PST⟩⟨INTR⟩change=already

(Our life) has changed.

b. *Me-ninniyèt=di   i   mangga=y.*

ADJ-sweet=already   SG.ABS.DEF   mango=SPC

The mango has become sweet.

Another series of absolutive person forms (Absolutive-A) can occur with verbs, adjectives (See Table 3.1), among others. Specificity markers can occur with nouns (Table 3.1), person forms and adjectives, as shown below:

(9)   a. *ka:man=i   a   ayu*   b. *mata=ku=y*

big=SPC   LIG   tree   eye=1SG.GEN=SPC

big tree   my eyes

Genitive person forms can occur with verbs, nouns, as already shown in Table 3.1; finally, tense-aspect formatives occur only certain verbs after transitive/intransitive verbal affixes are attached to the root, as exemplified in Table 3.1.

The final criterion, a possible freedom of movement, is illustrated in so-called the 'rising' phenomenon, where a critic may move away from the original host word, attaching to the word that is higher in the composite structure. The following sentences exemplify how rising can be identified:

(10)   a. *Awan=tèn   maka-'angè'angès.*

NEG=1SG.ABS   POT-breathe

I cannot breathe.

b. *Awa:ng=u*   *tataw*   *mang-kansion.*

   NEG=1SG.GEN   know   INTR-song

   I do not know how to sing.

In (10a), *awan* takes a absolutive person form *=tèn*, whereas in (10b) it takes a genitive person form *=ku*. The different case realizations of the forms are determined by the argument structure the main verb takes. Since *maka-'angè'angès* in (10a) is an intransitive verb, requiring the single core argument S to be realized as absolutive, then the first singular person form is also realized as absolutive. Since *tataw* in (10b) is a transitive verb, requiring the A argument to occur in genitive case, then the first singular person form is realized as a genitive form.

Note however that, after the raising occurs, the person form may remain in the main verb position, as in the following examples:

(11)   a. *Awan=tep=tèn*   *M⟨in⟩a-korkor=tèn.*

        NEG=still=1SG.ABS   ⟨PST⟩POT-hungry=1SG.ABS

        I am not hungry yet.

   b. *Awan=mu*   *tataw=mu*   *diyu?*

        NEG=2SG.GEN   know=2SG.GEN   honeybee

        Don't you know honeybees? (arta0003)

In the above cases, both the negation marker and the main verbs which follow take the same person forms *=tèn* and *=mu*. This indicates that the presence or absence of person forms on the main verb is not governed by a syntactic rule, but relate to pragmatic factors, which needs further research.

(x) tense-aspect affixes cannot move from the main verb, thus this should be ascribed to the characteristics of affixes. [2]

The results examined here reveal that the boundary between affixes and clitics is far from clear-cut: different criteria provide partially overlapped but inconsistent results. In particular, two morphophonemic tests judge more particules as affixes, but syntactic tests (host

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[2]It should be noted that in other cases, since they do not change their forms according to the syntactic/semantic information within a main verb, it is difficult to claim that the form is raised from the "original" position. In Table 3.1 I used "—" to indicate that the criterion is not applicable to some clitics.

word selections and possible freedom of movement) judge more particles as clitics. I define here (ii) demonstratives – (ix) genitive person forms as clitics (or enclitics) because, as mentioned above, the term clitic has been used for a formative which behaves as a syntactically independent word, but as a phonologically dependent form.

Let us now turn to the discussion of the word-internal structure. In the following section, we examine morphological strategies employed in the language: reduplication, infixation, prefixation, and suffixation.

3.2   Morphological strategies

3.2.1   Reduplication

Reduplication is one of the most productive morphological processes in that there are various types of reduplication depending on the formal variation, the meaning they convey, and the word class of reduplicants to which the process applies. In this section, we differentiate two types of reduplication: *lexicalized reduplication* seen within lexemes, which are no longer productive and semantically opaque, and *grammatical reduplication*, being productively applied to bases, with relatively transparent grammatical meaning such as aspect and plurality.

Lexicalized reduplication

Lexicalized reduplication refers to a kind of reduplication where in spite of the apparent coping process, the process is synchronically nonproductive. For example, some roots in Arta such as *gusgus* 'scratch', and *korkor* 'hunger' are clearly reduplicated forms of smaller elements from a morphological perspective, but their components (*gus, kor*) are far from productive. The meaning may also be quite opaque; it is unclear how the meanings of components and reduplication process contribute to the composite meanings. The following items listed in (12–14) exhibit full reduplications of CVC components (or *doubled monosyllables*). They carry clearly onomatopeic or mimetic meanings as shown in (12), to lesser degree onomatopeic or mimetic meanings in (13), and not onomatopeic and totally opaque meanings in (14):

(12) *tok-tok* 'a hitting sound'

tak-tak 'a hitting sound with higher pitch'

kor-kor 'hunger or the sound emitted from the stomach when being hungry'

hèw-hèw 'the sound of barking of a dog'

(13) *gus-gus* 'to scratch'

sop-sop 'to suck'

tas-tas 'to tear'

gèl-gèl 'to cut meat'

wag-wag 'to shake'

bèg-bèg 'wind'

(14) *dig-dig* 'to arrive'

wer-wer 'saliva'

rama-rama 'finger'

yèb-yèb 'to urinate'

ngèt-ngèt 'to chew'

kam-kam 'to hold'

kab-kab 'to embrace'

ding-ding 'to roast'

liw-liw 'fishing rod'

In other cases, the forms are partially reduplicated. Although these forms may be analyzed into smaller formatives, they no longer convey plural or augmentative meanings:

(15) C_1V_1- reduplication

ta-taw 'to know'

(16) $C_1V_1C_1$- reduplication

beb-be: 'aunt'

kak-ka: 'elder sibling' (cf. *wadi* 'younger sibling')

lel-le: 'uncle'

tut-tud 'sit'

(17) $(C_1)V_1C_2V_2$- reduplication

　　ara-ara:pa [ara:ra:pa] 'friend'

Lexicalized reduplication appears to be motivated by phonological and/or semantic factors. Some of them have a semantic motivation in that some of the reduplications mean the action that is typically conceptualized as occurring repeatedly, or the object that is conceptualized as consisting of multiple elements. This is the case for onomatopeic roots of (12), *gèl-gèl* 'to cut meat', *gus-gus* 'to scratch', *wag-wag* 'to shake' in (13), and *rama-rama* 'finger' *ngèt-ngèt* 'to chew' in (14); they are typically conceptualized as consisting of multiple elements or actions.

In other cases, particularly in the latter half of examples shown in (15,16), reduplications seem to be phonologically motivated. They are reduplicated to create a disyllabic root, which is more stable in phonology. In fact, Robert Blust observes that over 90% of all lexical bases in Proto-Austronesian are disyllabic, and reports that this tendency is also seen in a large number of current languages (Blust 2007). In Arta, most roots are bisyllabic with the exceptions of *top* 'companion' and *dut* 'fire, firewood'; thus bisyllabic roots seem to be more natural and stable than monosyllabic roots. The historical change that occurred in *bebbe:* 'aunt' and *lelle:* 'uncle' illustrates this tendency. PMP *bahi and PMP *laki changed into unstable monomoraic words *be: and *le: by the loss of intervocalic consonants, and the subsequent reduplications yielded the current forms *beb-be:* and *lel-le:* with hardly any semantic shift.[3] Some reduplications would have occurred primarily by the phonological motivation, which is recurrently observed in Austronesian languages.

Grammatical reduplication for nouns

Another type of reduplication, grammatical reduplication, is attested in nouns, adjectives, and verbs. In the case of nouns, reduplication indicates that *the referent consists of multiple objects or a large amount of mass entity*. Here 'plurality' is not suitable for the semantic characterization, since the meaning is quite different from, say, the English singular–plural system where *one countable* object is contrasted with *more than one countable* object. In Arta, as for countable objects, the reduplicated forms are used only when the referent is construed

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[3]Note that they continue to refer to a single person; the plural counterparts are *bebbebbe:* and *lellelle:*.

as being composed of *multiple* objects, and, unlike English plural forms, they can be used for mass entities if it refers to a large amount of mass, e.g. *pu:pu:nèd* 'a lot of rain, heavy rain'. The reduplication may thus be characterized as meaning a "augmented" referent.[4]

Reduplication patterns differ depending on whether the item is human or non-human noun. First, if the noun is non-human, (i) C_1V_1:- or (ii) $C_1V_1C_2V_2$- must be used. The choice between the two patterns appears to be determined by the syllable structure of the base form: if the first syllable of the base is monomoraic, i.e., an open syllable with a short vowel, the first type of reduplication should be used as in (18). On the other hand, if the first syllable of the base is bimoraic, i.e., a closed syllable or open syllable with a long vowel, the second type of reduplication should be used as shown in (19). This rule is applied to all items except *barowasi > ba:-barowasi* 'clothes', in which the second type of reduplication is applied in spite of the fact that the first syllable of the base is monomoraic.

(18) $\underline{C_1V_1}$-$C_1V_1 < C_1V_1$...

    ayu-ayu < ayu 'trees'

    talu-talun / taluta:lun < talon 'mountains'

    buki-bukid < bukid 'mountains'

    kadè-kadèt < kadèt 'grass'

    buku-buku < buku 'joints of bamboo'

    wagè-wagèt < wagèt '(much) water'

    lanu-lanut < lanut 'vines'

    kara-karagatan < karagatan 'stony place'

    mula-mula < mula 'fields'

    lagi-lagip < lagip 'noises from multiple sources'

    kuwa-kuwarto < kuwarto 'rooms'

(19) $\underline{C_1V_1}$:-$C_1[V_1$: / $V_1C_2] < C_1[V_1$: / $V_1C_2]$...

    ba:-ba:lag < ba:lag 'meat'

    bu:-bunbun < bunbun 'houses'

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[4]Although most cases are described under the rubric of "augmented" meaning, some items have an opposite meaning, that is dimunitive, such as *lappul* 'dog' vs. *la:lappul* 'small dog', and *pulot* 'loinclothes' vs. *pulopulot* 'diaper'. In the most schematic level, the grammatical reduplication for nouns serves as a "non-prototypical" instance of the concept.

do:-don < don 'leaf'

pu:-pu:nèd < pu:nèd 'a lot of rain, heavy rain'

ngi:-ngipèn < ngippèn 'teeth'

ka:-karsa:da < karsa:da 'road'

ka:-kande:ro < kande:ro 'pans'

ma:-ma'is < ma'is 'corn'

pi:-pi:yèk < pi:yèk 'chicks'

ku:-ku:rèk < ku:rèk 'chickens'

ba:barowa:si < barowa:si 'clothes'

Second, if the item is an animate noun, the augmented meaning is indicated either by the consonant gemination of the second consonant, or $C_1V_1C_1$- reduplication with, if possible, a vowel lengthening of the second syllable of the base:

(20) $(C_1)V_1\underline{C_2}C_2V_2... < (C_1)V_1C_2V_2...$

   gillangan < gilangan 'males'

   bukka:gan < buka:gan 'females'

   aggani: < agani: 'non-Negrito people'

   amma < ama 'fathers'

   ullitaw < ulitaw 'unmarried young men'

   maddit < madit 'unmarried young women'

   appu < apu 'grandparents, grandchildren'

   assawa < asawa 'spouses'

(21) $\underline{C_1V_1C_1}\text{-}C_1V_1\underline{:}\ C_2... < C_1V_1C_2...$

   a. With a vowel lengthening:

      bab-ba:bakat < babakat 'old women'

      dad-du:pu < dupu 'old men'

   b. With no vowel lengthening:

      beb-bebbe: < bebbe: 'aunts'

      lel-lelle: < lelle: 'uncles'

      lal-lappul < lappul 'dogs'

> *a-ana: < ana:* (< *'a"ana:) 'someone's children'

In (21), the vowel lengthening must occur if the first syllable of the base is CV (see §2.1.3 for the relationship between vowel length and the eligible syllable structures). The choice between the two types of reduplication shown in (20,21) seems to be lexically determined except one phonological constraint: in the case of the first type, the intervocalic consonant of the forms is a single consonant for the consonant gemination.

Grammatical reduplication for adjectives

In Arta, adjectives are marked by, in most cases, *meC-* as well as *ma-* and bare forms. Reduplication is employed when it refers to an intensified property, a much higher point than the norm on a particular scalar property scale[5]. in the case of *meC-*, which is by far the most productive strategy for making adjectives, the intensified form is *meCeC-*, as shown below:

(22) *meC-*adjective: *meCeC-*

mepeppasu < meppasu 'very hot'

melellayat < mellayat 'very wide, very large (area)'

me'e"a:du < me"a:du 'plenty of, so many, so much'

The other two types of adjectives, *ma-* and bare adjectives, which are much less productive, form an intensified form in various ways:

(23) *ma-*adjectives:

marakèt 'bad' > *mememmarakèt* 'very bad'

malala:ki 'nice, good' > *mememmalala:ki* 'very nice, good'

(24) bare adjectives:

$C_1V_1C_1$- . . . *kakka:man < ka:man* 'very big'

C_1V_1:- . . . *bu:bu:ru < bu:ru* 'brand new', *ta:ta:me:ta < ta:me:ta* 'quite different'

$C_1V_1C_2V_2$ . . . *kilèkillèk < killèk* 'very small size/amount of'

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[5]This definition is rather tentative. See for the semantics of grading and adjective: Sapir (1944), Lyons (1977: Ch. 9), and Croft and Cruse (2004: Ch.7).

Grammatical reduplication for verbs

Reduplication is most frequently observed in verbs. It is applied to the root of the verb, and the whole base takes a verbalizing affix to signal its valency, voice, grammatical aspect and so forth: *man-di:ma-dima* (INTR-RDP-walk) 'walk for a long time'. There are eight types of reduplication observed, with different productivity and applicability. Some templates may be influenced by neighboring languages. Shown below is the list of reduplications which can be applied to verbs:

(25)   a.   *Vowel lengthening*: vowel lengthening of the first syllable:

    b.   *Ca- reduplication*: the reduplication of the first consonant plus /a/

    c.   *Ca:- reduplication*: the reduplication of the first consonant plus /a:/

    d.   *CV:- reduplication*: the reduplication of the first syllable excluding the coda, with the vowel lengthened

    e.   *CVC- reduplication*: the reduplication of the first syllable including the coda, or the first syllable and the onset of the second syllable

    f.   *CVCV- reduplication*: the disyllabic reduplication excluding the coda consonant of the second syllable.

    g.   *CVCVC- reduplication*: full disyllabic reduplication including the last coda.

    h.   *CV:CVC- reduplication*: full disyllabic reduplication including the last coda, with the first vowel lengthened.

The first type of reduplication, *Vowel lengthening* is the reduplication of the initial vowel of the root. This is attested in intransitive verbs taking *m*aC-. It appears that it signals the action is performed for a long time or in a intensified fashion.

(26)   a.   *mal-<u>lagip</u>* > *mal-<u>la:gip</u>* 'talk too much or to unnecessary extent'

    b.   *Mebeb-bilèg   mal-<u>la:gip</u>.*

      ADJ.RDP-fast   INTR-RDP.talk

      (His) talking is very fast.

Ca- reduplication, the reduplication of the first consonant plus a vowel /a/, is observed in intransitive verbs taking *m*aN- and *m*aC- prefixes. It signals that the action is performed for

a long time and/or by several participants:

(27) a. *man-ta-tuttud* 'be sitting for a long time'

   man-ta-tim 'drink for a long time, be drinking at the moment'

   man-da-dagsu 'lie for a long time'

   b. *ma-ta-tim* '(more than one person) drink, drink for a long time'

   ma-la-lattong 'get out of something one after another, continuously'

   mal-la-lagtu 'jump several times, repeatedly'

This type has an apparent variant *Ca:- reduplication* found in intransitive verbs with *m*aN- and ⟨um⟩, transitive verbs with *-èn*, and one irregular verb *tataw* 'know'.[6] However, since both types of reduplication can occur in *m*aN- verbs, they may have different meanings.

(28) a. *mang-ga:-gèlgèl* 'to be cutting something which takes a relatively long time.'

   b. *y⟨um⟩a:-yèbyèb* 'urinate'

   c. *ga:-gèlgèl-èn* 'cut something which takes a relatively long time.'

   d. *ta:-tataw* 'be familiar with' cf. *tataw* 'know'

CV:- reduplication, the reduplication of the first CV, excluding the coda, with the vowel obligatorily lengthened. This occurs in stative verb introduced by *ma-*. This is seen in the following one item, thus it is still difficult to capture the function:

(29) *mina-ri:-rigga'ay* '(several parts) are eroded'

CVC- reduplication is the reduplication of the first syllable including the coda, or if the first syllable is CV, the first syllable plus the onset of the next syllable. This is seen in *m*aN- and *-an* verbs. This reduplication seems also to indicate that the action is repeated several times or lasts long:

(30) a. *mam-bul-bulus* 'be crawling'

   b. *tok-toktok-an* 'hit repeatedly'

   pal-palattug-an 'shoot a gun repeatedly'

   an-anu:s-an /ʔan.ʔa.nuːsan/ 'tolerate for a long time'

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[6]'Irregular verbs' refer to the verbs which does not take an transitivity affix but has its own valency, *tataw* 'know something' and *kabba:t* 'want something' are irregular transitive verbs which, if intransitivized, take *makaN-* as seen in *Tatin makantataw did?* (who INTR-know 3PL.OBL) 'Who knows them?'.

CVCV- reduplication is a disyllabic reduplication, which lacks, if any, the coda consonant of the second syllable. This occurs with *m*aN- intransitive, *-an* and *i-* transitives, and stative verbs with *maka-*:

(31)   *mam-pase-pasensi* 'tolerate'

   pala-palattug-an 'shoot a gun repeatedly'

   (with unknown difference from *pal-palattug-an* in (30))

   i-mula-mula 'plant something in a large area, extensively'

   maka-'angè-'angès /makaʔaŋəʔaŋəs/ '(with negative marker) cannot breathe'

   maka-iya-iyakkan 'I'm craving for viand'

Finally, *CVCVC-* and *CV:CVC- reduplication* are full disyllabic reduplications including the last coda. These two disyllabic reduplications are applied to different verb types; the former is applied to ⟨um⟩, and the latter to *m*aN-verbs:

(32)   *CVCVC- reduplication*

   k⟨um⟩abang-kabang 'go crawling'

(33)   *CV:CVC- reduplication*

   man-di:ma-dima 'stroll, walk'

   man-na:nguy-nanguy 'swim'

   mam-bi:lèg-bilèg 'doing something in a hurry' cf. *meb-bilèg* (ADJ-fast) 'fast'

   man-su:yan-suyan '(the stream) flows'

   mang-ki:dèb-kidèb '(stars) are twinkling'

Semantically, this type of reduplication seems to represent internally complex event. The whole activity consists of multiple subparts, typically repeated actions. The above items with full disyllabic reduplication seem to denote or foreground that the event expressed has an activity aspect,[7] which may be performed by multiple body movements, such as steps for walking, movements of limbs for crawling, and strokes for swimming. In other cases, the flow of a stream consists of the murmur or bubbling of a stream, and a starry night, the twinkles of countless stars. Note that this differs from mere repetitions as shown above. In

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[7]See Croft (2012: Ch.3) for a detailed description and illustration of Aktionsarts (or lexical aspects).

typical repetitive actions, composite event E_x is not radically different from the sub-events $E_{1...n}$ which constitute the whole; for example, *to kick it repeatedly* might be understood as the sum of *to kick it once.* However, what this reduplication represents is an event which is not a mere sum of sub-events; instead, it is a higher-order (Gestalt) conception consisting of another type of sub-events as seen in the relationship between [WALK] and [STEP].

3.2.2 Infixation

In spite of its typological rarity, infix is widely attested in Philippine and Formosan languages. In Arta, there are two important infixes ⟨*in*⟩ and ⟨*um*⟩, as well as three fossilized infixes carrying rather less functional load, called here "lexicalized infix".

Lexicalized infixes

In Austronesian languages, there are fossilized infixes which are usually inserted after the initial consonant of the root (see Li and Tsuchida (2009) for Formosan languages, and Lopez (1977) and Shiohara and Furihata (2011) for Philippine and Indonesian languages). Blust (2013) provides reconstruction of these infixes as PAn *⟨al⟩, *⟨aR⟩ and *⟨ar⟩, and Li and Tsuchida (2009) *⟨al⟩, *⟨ar⟩, and *⟨aN⟩. Both of the two studies identify the first two reconstructed forms, *⟨al⟩ and *⟨aR⟩. In Arta, three infixes ⟨*ar*⟩, ⟨*al*⟩, and ⟨*ag*⟩ are found in several lexemes; ⟨*ar*⟩ and ⟨*al*⟩ seem to reflect *⟨aR⟩ and *⟨al⟩, repectively, whereas ⟨*ag*⟩ may be a loan since *R is not reflected as *g in Arta. All the items bearing these infixes are shown below:

(34)   *g⟨ar⟩aygay* 'arrow for wild pigs'

   ng⟨ar⟩atngat 'kind of vine'

   k⟨ar⟩agkag 'kind of ant'

   t⟨ar⟩adtad 'run away, escape'

   s⟨ar⟩angsang 'climb a mountain'

(35)   *t⟨al⟩èytèy* 'bridge'

   k⟨al⟩èskès 'esophagus'

   p⟨al⟩akpak 'to clap'

   t⟨al⟩agtag 'road'

(36)   *t⟨ag⟩aytèy* 'comb' cf. Yogad *tage:tay* 'comb', Ilokano *sagaysay* 'comb'[8]

Although these infixes are fossilized in the lexicon and no longer productive, it is clear that they can be identified as infixes because all the items above are analyzed as infixed CVC-reduplication. in the case of the items in (34), for example, ⟨ar⟩ is infixed after the first consonants of *gay-gay, ngat-ngat, kag-kag* and *tad-tad.*

Since the infixes are highly lexicalized, it is difficult to extract a function of ⟨ar⟩, ⟨al⟩, and ⟨ag⟩. In his survey, Blust (2013: 389) points out that these infixes mark plurality in several languages such as Hanunóo (the Philippines), Toba Batak and Sundanese (Indonesia); while in many cases, the semantic contribution of the infix(es) is obscure. This semantic opacity holds true for the infixes in Arta. Although some items may be explained by plurality as in *k⟨ar⟩agkag* 'kind of ant' (typically conceptualized collectively) and *p⟨al⟩akpak* 'to clap', it is difficult to attribute the meaning of plurality to other items such as *g⟨ar⟩aygay* 'arrow for wild pigs' and *k⟨al⟩èskès* 'esophagus'.

⟨*um*⟩ and ⟨*in*⟩

⟨um⟩ and ⟨in⟩ have been some of the most important grammatical markers since the time of Proto-Austronesian until now. Each is reconstructed as PAN *⟨um⟩, an intransitive affix, and *⟨in⟩, indicating perfect aspect among other functions (Ross 2002, 2009, Blust 2013)[9], and it remains the case in Arta. The infixation rule can be modeled as shown below:

(37)   ⟨um⟩ and ⟨in⟩ must be placed before the first vowel of the base.

(38)   a. *langit* > *l⟨um⟩angit* '(it will) clear up'

        pissay > *p⟨in⟩issay* 'torn something'

    b. *arabis* > *um-arabis* 'cross'

        adu:pan > *in-adu:pan* 'helped'

The infixation rule in (37) implies that if the base begins with CV, the infixes are inserted after the initial consonant, whereas if the base begins with a vowel, the infixes are inserted

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[8] I assume that this item is probably borrowed from Yogad or other Cagayan Valley language. This is apparent because the sound correspondence between Yogad /t/ and Ilokano /s/ may mean the sounds are reflexes of *s, and since the reflex of *s in Arta is /s/, the item must have been borrowed from a Cagayan Valley language where the reflex of *s is /t/.

[9] See Reid (1992) for morphological and semantic change in *⟨in⟩ in Philippine languages, with a special focus on Ilokano and Tagalog.

base-initial position, behaving as a prefix. It seems to me that this generalization is simpler and more valid than another possible formalization: "infixes must be inserted after the first consonant of the base", with the assumption that seemingly vowel-initial bases in fact begin with a glottal stop (e.g. /ʔarabis/ > /ʔ⟨um⟩arabis/ 'cross'). As will be discussed in §3.3.1, the glottal stop in that position is on the verge of being neutralized with zero in Arta. It is phonetically optional, freely alternating with zero, though some, if not all, morphological processes do treat it as a consonant.[10] I establish the infixation rule (37) in a neutral way as to whether we posit the stem-initial glottal stop in Arta (see §3.3.2 for further evidence for the analysis).

3.2.3 Prefixation

Just as shown in reduplication and infixation, prefixes are also divided into two kinds of prefixations: lexicalized prefixations and grammatical prefixations. Lexicalized prefixes are observed in spatial nouns, and grammatical prefixes in verbal, adjectival morphology and derived nouns.

Lexicalized prefixes

Lexicalized prefixes refer to the prefixes which are no more productive, only observed in some lexemes. The following items contains a fossilized prefix *di-*, which can trace back to PMP *di or *da, a locative or deictic marker (if the proto-form is *da, it underwent low vowel fronting (LVF), changing from *a to /i/ after voiced stops (§2.2.2)):

(39)   *di (locative) plus spatial expressions:

    a. *dibbi* 'underneath, the lower part, bottom'

       (*di-/*da-*ba 'ʟᴏᴄ under, below' with LVF and sporadic gemination)

    b. *diso:no* 'inside'

       (*di-/*da-*so:no (unknown source))

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[10]In fact, it is quite common that morphological patterns may exhibit a structure reminiscent of an older phonetic/phonological system, as seen in an English irregular plural form of *mouse* > *mice* which reflects the old umlaut process (Campbell 2004: 22-23).

c. *diddya* 'upstream'

(< *di-/*da-*daya 'ʟᴏᴄ upstream' with LVF and monosyllabification)

d. *dilod* 'downstream'

(< *di-/*da-*lahud 'ʟᴏᴄ downstream' with the loss of *h and *a+u > /o/)

e. *dingatu* 'the upper part, the top'

(cf. Ilokano *nga:to* 'height')

f. *dibiliw* 'ʟᴏᴄ north'

(*di-/*da-*biliw (unknown source))

Many of them are analyzable into PMP *di and several locational or directional expressions. Note that not all spatial expressions take a frozen prefix *di-*; rather, we find many spatial expressions without it: *lattong* 'outside', *kanawan* 'right side', *kariwi* 'left side', *abaga:tan* 'south', and so forth.

Another fossilized prefix *e-* denotes 'person from'. The application of the prefix is more limited, with two items found in my data collection:

(40)   a. *e-dilod* 'downstream people (=Arta people)'
         (PMP *ʔi- 'person from' + *dilod* 'downstream')

       b. *e-mo:nayan* 'big-river people (=Yogad people)'
         (PMP *ʔi- 'person from' + *mo:nayan* 'Cagayan river')

In spite of its limited applicability, these names for calling themselves are of great interest because it could be one piece of evidence for identifying their prehistory (see Reid (2013) for an extensive study on Negrito names). The latter item *e-mo:nayan* is an old term which my old informant heard from her father to refer to Yogad and perhaps other Cagayan Valley people. In Arta, *mo:nayan* refers to the Cagayan river flowing in Luzon, probably segmentable to *mo:nay-an*.[11]

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[11]Since Casiguran Agta has a term *mo:nay* 'rice grain which is of good quality because every husk has a full kernel in it' (Headland and Headland 1974: 101), *mo:nay-an* may also mean 'the place where people can harvest good quality of rice grain'.

Grammatical prefixes

Grammatical prefixes are those which are productively used to index a grammatical cate-
gory, transitivity, voice, and other grammatical meanings. Morphologically, there are two
subtypes: (i) prefixes which end with an underspecified consonant such as a geminated con-
sonant (e.g. adjective prefix *meC-*) and an assimilated nasal sound (e.g. intransitive prefix
maN-), and (ii) simple prefixes with fully-specified segments (e.g. *pa-* (causative prefix)). The
first pattern with underspecified consonants will be described in §3.3.2. The latter type of
prefixes, composed of fully-specified segments, is exemplified in (41):

(41)　a.　*pa-* (causative prefix)

　　　　pa-pati-n 'kill'

　　b.　*mayka- (mayka-, ika-)* (ordinal numeral prefix)

　　　　mayka-ta'lu 'third'

　　c.　*i-* (transitive verb prefix)

　　　　i-ayèd 'give'

　　d.　*ma-* (stative verb prefix)

　　　　ma-to:lay 'can live'

　　e.　*maka-* (stative verb prefix)

　　　　maka-yèbyèb 'be about to urinate'

These prefixes may undergo phonological alternations, however, if the base which takes a
prefix begins with a vowel. This will be discused in §3.3.

3.2.4　Suffixation

Cross-linguistically, languages prefer suffixes to prefixes (Himmelmann 2014), but in Arta
there are a plenty of prefixes (and infixes), but much fewer suffixes. The following two
suffixes are the ones observable in the language:

(42)　a.　*-èn* (transitive verb suffix)

　　　　e.g. *angu:t-èn* 'smell something'

　　　　　　pilak-èn 'to tear into strips'

b. *-an* (transitive verb suffix, nominalizer)

　　 e.g. *angu:t-an* 'kiss someone'

　　　　 subg-an 'scold someone'

　　　　 gilèng-an 'male' (cf. *gilèng* 'penis')

　　　　 ayuayu-an 'forest' (cf. *ayu* 'tree')

3.3　Morphophonemics

Morphophonemics, or morphophonology is a study of the phonological changes caused by the combination of morphemes. In this section, we examine the processes whereby various sound alternations are created on the morphophonemic level. In §3.3.1, the nature of vowel-initial glottal stop which appears in the stem-initial position is considered. In §3.3.2–3.3.4 the description of various phonological alternations caused by prefixation, infixation, suffixation, and cliticization, and of their allomorphs is provided in order.

3.3.1　Vowel-initial glottal stop

We saw in the preceding chapter (§2.1.1) that the glottal stop that appears in the stem-medial position is considered a phoneme. However, glottal stop does phonetically appear in other positions: a stem-initial position before a vowel, and word-final position after a vowel. In the latter case, the sound may appear in the utterance-final position when the speaker puts emphasis on the utterance, thus the sound should be explained in intonational and pragmatic terms.[12]

　　Morpheme-initial glottal stop is more problematic. There is a controversy over the phonological status of stem-initial glottal stop among the scholars who study Philippine languages; some scholars argue that it is a phoneme (e.g. Reid 2010: 442), others not (Robinson 2008: 72, for Dupaningan Agta). I argue that at least in the case of Arta, it is *a phoneme inserted before a vowel-initial stem.* There are two points to be discussed separately: (i) whether it is a phoneme or not, and (ii) whether it is inserted into the stem-initial position before a vowel,

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[12]The phenomenon is beyond the scope in this basic descriptive work. However, this type of glottal stop seems to function as signaling the segmentation defined in terms of the syntactic construction or information structure.

or inherent in the lexemes as a stem-internal glottal stop.

There is morphophonemic evidence for defining it as a phoneme. Stem-initial glottal stop can be treated as a consonant in some morphological processes. First, if a prefix ends with a vowel, and it attaches to a vowel-initial stems, stem-initial glottal stop may appear between the stem and the prefix. For instance, if the causative prefix *pa-* attaches to a stem beginning with /a/ as in *pa-* + *angay* 'go', *pa-* must not omit the stem-initial glottal stop, thus realized as *pa'angay* 'make someone go'. Second, there are some prefixes that trigger a consonant geminate with a stem-initial consonant such as *meC-* + *subèg* > *mes-subèg* 'angry'. If the stem begins with a vowel, the consonant to be filled must be glottal stop, as in *meC-* + *a:du* > *me''a:du* 'a lot of'. This indicates that vowel-initial glottal stop can be a target for forming a consonant geminate, just as other consonants to be geminated. These two cases suggest that stem-initial glottal stop is a phonological target *visible* to phonological operations, not a phonetic variant which happens to wander into word-initial position.

Second, I claim that the glottal stop is considered to be an *inserted* phoneme before a stem-initial vowel. It is not phonologically contrastive with zero, i.e. [V-] and [ʔV-] are not a phonemic contrast. If a stem begins with a vowel, the insertion occurs automatically, thus fully predictive. This suggests that the existence of glottal stop should not be attributed to the lexical information, rather it is automatically inserted before a vowel-initial stem.

Note however that, although stem-initial glottal stop is a phoneme, it is safe to consider it to have a *peripheral* membership as a phoneme, compared with other phonemes. First, glottal stop in that position is not longer obligatory. It freely alternate with zero in actual speech, with significant variations among individual speakers. Second, the stem-initial glottal stop in Arta seems to be on the verge of being lost. In reduplication of animate nouns, an expected plural form of *ana:* [ʔana:] 'child' would be *a''ana:* /ʔaʔʔna:/ by CVC- reduplication, but the actual form is *a:na:* [(ʔ)a:na:], lacking glottal stops. As seen above, if *pa-* is followed by /a/, the glottal stop remains intervocalically, but if it is followed by other vowels, glottal stop is deleted, with the two vowel fused into a long vowel, as in *pa- uding* > *po:ding* 'make something black', *pa- inas -an* > *pe:nasan* 'sharpen with something' (see further illustration in (51) and (52) in §3.3.2). This is quite different from stem-initial glottal stop, which would never be deleted *ba'it* > **bet* 'gap, between'.

For the two reasons, predictability and non-obligatoriness, the stem-initial glottal stop is not represented in my orthography though this dissertation except in the case that the glottal stop appears obligatory in morpheme boundaries as in *me"a:du* 'a lot of'.

3.3.2   Prefixes and morphophonemic alternations

Geminate consonants and nasal assimilation

Some prefixes trigger several kinds of morphophonemic alternations, and one of the most prominent processes is consonant gemination. The prefixes that trigger consonant gemination are shown below:

(43)   a.   *meC-₁* (adjective prefix)

   mep-pasu 'hot'

   b.   *meC-₂/me:-* (comitative prefix)

   meb-bu:lun/me:-bu:lun 'go with someone'

   c.   *ma(C)-* (intransitive prefix)

   mar-ratang 'buy'

   d.   *paC-* (progressive, nominalizing prefix)

   parratang 'be buying'

   e.   *ti(C)-* (intransitive prefix)

   tit-taddyor 'be standing'

   f.   *mangi(C)-* (intransitive reciprocal prefix)

   mangip-pakèt 'get married'

In these cases, the consonant adjacent to the base (represented as *C*) fully assimilates to the first consonant of the base. For example, if *ratang* 'buying' takes *maC-* to form an intransitive verb, the C of *maC-* assimilate to the first consonant of the base, here /r/, resulting in *mar-ratang*. In most cases, however, the consonant gemination is optional, frequently reduced to a single consonant as in *maratang*. In the case of a vowel-initial base, glottal stop is inserted before the prefixation, thus the geminated consonant is always glottal stop (e.g. *meC- uding > me"uding/me'uding* /meʔʔudiŋ/ or /meʔudiŋ/ 'black'), except in the case of (43d) *paC-*,

which alternates with *pa:ng-* /paːŋ/ before a vowel (e.g. *paC- uras > pa:nguras* /paːŋuras/ 'wash (dishes)').

In the case of *maN-* (intransitive verb prefix, the reflex of PMP *maN-[13]), there is another assimilation process whereby the final consonant assimilates in place to following consonants. The prefix becomes /mam/ before bilabials, /man/ before alveolar consonants, and /maŋ/ before velar consonants. Again, in the case of vowel-initial bases, the insertion of glottal stop before the vowel triggers /N/ to be realized as velar nasal.

(44) *maN-*

    a. /mam/ before bilabial consonants

       mam-bugay 'to hunt', *mam-passu* 'boil'

    b. /man/ before alveolar consonants

       man-nanguy 'swim', *man-tu:rèk* 'write'

    c. /maŋ/ before velar consonants

       mang-gurugud 'run', *mang-ka:rawèg* 'play'

    d. /maŋ/ before vowels

       mang-uras 'wash (dishes), *mang-asawa* 'have a husband/wife'

Aphaeresis

Another type of allomorphy which frequently occurs in prefixes is aphaeresis, the loss of word-initial sounds. There are two kinds of aphaeresis: the loss of single vowels, and that of CV syllables. The first pattern is observed in *in-i-* (circumstantial transitive, perfect) > *ni-*, as well as the prefixal variants of ⟨um⟩, ⟨in⟩⟨um⟩: *um-* and *inum* before a vowel > *m-* and *num-*, respectively. Both forms with and without aphaeresis appears to be correct usage, although forms without aphaeresis seldom observed in natural speech:

(45)   a. *in-i-bud* 'said' > *nibud*

      b. *um-angay* 'go' > *m-angay*

      c. *in-mu-angay* 'went, gone' > *n-um-angay*

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[13]For a recent reconstruction of verbal affixes in PMP, see Ross (2002).

Again this phaeresis shows the weak phonemic status of glottal stop. As shown §3.2.2, I present the infixation rule in (37) without reference to the putative glottal stop in stem-initial position. If the stem-initial glottal stop were treated in the same way as other consonants, an aphaeresis would not occur, because consonants can block the loss of vowels. This aphaeresis shows that stem-initial glottal stop has the peripheral phonemic status and this is one of the reasons that I characterize the infixation rule without positing the glottal stop.

CV syllables may be dropped in the case of complex prefixes with past tense ⟨in⟩. This is formalized as follows in the case of an infixed prefix *m⟨in⟩aN-*, where the first syllable /mi/ is dropped:

(46)   Aphaeresis and reanalysis

    1. Infixation of ⟨in⟩

       maN- >(inflection)> m⟨in⟩aN-

    (CV aphaeresis *(mi)naN-*)

    2. nasal substitution between /m/ and /n/

       ***m**aN- >(derived to)> **n**aN-*

Originally, the perfect form of *maN-* would have been an infixed form *m⟨in⟩aN-*. After the apaeresis of the first syllable /mi/, the perfective form became *naN-*, reanalyzed as a nasal substitution between /m/ and /n/. The following forms show this type of aphaeresis:

(47)   *minaN-* (the perfect form of intransitive prefix *maN-*)

    minan-sappu > nan-sappu 'boiled'

(48)   *minaC-* (the perfect form of intransitive prefix *maC-*)

    minap-pati > nap-pati 'died'

(49)   *minangiC-* (the perfect form of reciprocal prefix *mangiC-*)

    miangip-pakèt > nangip-pakèt '(they) have got married'

(50)   *mina-* (the perfect form of derived stative prefix *ma-*)

    mina-rangu > na-rangu '(plants) dried, died'

Vowel fusions between prefix and base

Vowel-initial stems and vowel-final prefixes may be fused, making morpheme boundaries unclear. It is the case when stems beginning with /i/ or /u/ take a causative prefix *pa-* or derived stative prefix *ma-, maka-*. If *pa-, ma-* and *maka-* attach to /i-/, /peː/, /meː/, and /makeː/ are derived, and if they attach to /u-/ /poː/, /moː/, /makoː/ are derived:[14]

(51) Stems beginning with /i/:

   a. *i-pa̲-ita > ipe̲ːta* 'show'

   b. *ma̲-ita > me̲ːta* 'can see'

   c. *maka̲-idèm > make̲ːdèm* 'sleepy'

(52) Stems beginning with /u/:

   a. *pa̲-uding-èn > po̲ːding-èn* 'make something black'

   b. *ma̲-ulit-an > mo̲ːlitan* 'have been peeled'

This morphophonemic alternation is completely parallel with the historical development of new phonemes /e/ and /o/. As argued in §2.2.5, /e/ and /o/ developed via the fusion of /a+i/ and /a+u/, respectively. These data indicate that phonological fusions which occurred historically are still at work in synchronic morphology. This synchronic data thus might be evidence for validating historical change in phonology.

3.3.3   Suffixes and morphophonemic alternations

Although there are only two suffixes in Arta, suffixes may trigger or undergo some morphophonemic changes. There are two patterns of morphophonemic alternation involved in suffixations. The first pattern is observed in the morpheme boundaries between suffixes (*-an* and *-èn*) and stems to which they attach. If *-an* attaches to a vowel-final stem, a glide /y/ or /w/ is inserted. This is illustrated in (53):

(53)   i. /i/ + /-an/ > /iy̲an/

      ii. /u/ + /-an/ > /uw̲an/

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[14]I do not find any instance in which *maka-* is combined with /i/-initial base, hence no example here.

iii.   /a/ + /-an/ > /a<u>ʔ</u>an/

If *-an* attaches to a stem ending with /i/, a glide /y/ is inserted between them, as seen in *pi:pi + -an > pi:piyan* 'take care, keep something good'. If /-an/ attaches to a stem ending with /u/, /w/ is inserted between them, as in *tabu + -an > tabuwan* 'draw up'. And if it attaches to a stem ending with /a/, glottal stop is inserted as in *mula + -an > mula'an* 'plant'. Since there is no case where the stem ends with /o/, /e/ or /è/, the above list does not include these possibilities.

   -èn /ən/, the patient-transitive suffix, reduces to /n/ when the suffix attaches to vowel-final stem. Thus the following rule is set out:

(54)   Schwa deletion

   If *-èn* /ən/ attaches to a vowel-final stem, the schwa in the suffix must be deleted, being realized as /n/.

For example, if *-èn* attaches to a base *inta* 'to see' and *pa-ta:ku* 'to gather something', the derived form becomes *inta-<u>n</u>* 'see' and *pa-ta:ku-<u>n</u>* 'gather something'.

   The second pattern of morphophonemic alternations is base alternations caused by suffixation: the deletion of /ə/ and vowel lengthening. Schwa deletion occurs if *-an* or *-èn* attaches to a base which ends with a syllable with /ə/. It occurs unless the deletion violates the eligible syllable structure in Arta, that is, the syllable must consist of one or two mora(s). Consider the following examples:

(55)   a.   *gè<u>pè</u>t* + *-an* > *gè<u>pt</u>-an* 'tie'

      li<u>nè</u>s + -èn > *li<u>ns</u>-èn* 'touch on'

      lè<u>gè</u>d + -èn > *lè<u>gd</u>-èn* 'wait for someone'

   b.   *sale:gè<u>d</u>* + *-an* > *sale:gè<u>d</u>-an* 'pass by'

In the examples given in (55a), where the final syllables of each word contain /ə/, the suffixation of *-an/-èn* causes the deletion of the vowels. Compare the example of (55b), in which the derived form is *sale:gèd-an* with no schwa deletion. This is again explained by the fact that a expected form *sale:gdan* would bear a superheavy syllable /le:g/, and thus violate the eligible syllable structure in Arta.

Vowel lengthening is observed for a potentially long vowel but which is compressed in CVC structure, realized as a short vowel, the phenomenon discussed in §2.1.3. I noted that these vowels are unique in that they are realized as short vowels in closed syllables, but as long vowels in open syllables. The suffixation is a case in point: *-èn* and *-an* contribute to the realization of the vowel as long by a resyllabification from CVC to CVː.C:

(56) *no:not* 'mind' + *-èn* (PATIENT-TRANSITIVE) > 'think'

    i *-an* suffix: /noː.<u>not</u>/ + /ən/

    ii coda-to-onset movement of /t/: /noː.<u>no</u>.tən/

    iii lengthening: /noː.<u>noː</u>.tən/

This illustrates the process whereby a compressed vowel becomes long by suffixation. (i) If a base has a potentially long vowel in the final syllable, here *no:<u>not</u>*, and takes a vowel-initial suffix (*-èn/-an*), (ii) the constituents of the last two syllables are re-organized: the consonant /t/ shifts its function from the syllable coda to the onset of another syllable, changing the closed syllable into an open syllable. (iii) This allows the reduced/compressed vowel in question to be realized as a long vowel. /o/, and /e/ are always potentially long vowels, and /a/, /i/ and /u/ may be lengthened in some cases, but /ə/ does not become long:

(57) a. /o/

      no:<u>not</u> 'think' > *no:<u>no:</u>t-èn* 'think'

      pok<u>pok</u> 'tap' > *pok<u>po:</u>k-an* 'tap'

      ta<u>dyor</u> 'to sit': *pa-ta<u>dyo:</u>r-an* (CAUS-stand-LV) 'stand something up'

   b. /e/

      da<u>get</u> 'sew' > *da<u>ge:</u>t-èn* 'saw'

   c. /a/

      <u>say</u> 'ride' > *<u>sa:y</u>-an* 'ride on'

      la<u>yat</u> 'wide' > *pa-la<u>ya:</u>t-èn* (CAUS-wide-GN.TR) 'widen '

   d. /u/

      a<u>dup</u> 'help' > *a<u>du:</u>p-an* 'help'

   e. /i/

      <u>tim</u> 'to drink something' > *<u>ti:</u>m-an* 'drink something'

The same kind of vowel lengthening may occur when a word takes an enclitic form. If a noun has a compressed vowel in the final syllable and takes an enclitic *=i* meaning specificity, the vowel is lengthened as listed in (58):

(58)   *don* 'leaf' > *do:n=i*

      lattong 'outside' > *latto:ng=i*

      hapon 'Japan' > *hapo:n=i*

      dut 'firewood' > *du:t=i*

This synchronic fact reflects a diachronic change whereby two vowels were fused into a single short vowel within a closed syllable under the pressure of the principle on eligible syllable structure.

3.3.4   Enclitics and morphophonemic alternations

Allomorphs of enclitics

There are a large number of enclitics observed in the language, as already given in Table 3.1. Although allomorphs or morphological fusions with base words are said to be more characteristic of affixes than clitics (Zwicky and Pullum 1983, Haspelmath and Sims 2010), we argue in §3.1.2 that many items which behave like clitics in syntactic respects do trigger and/or undergo phonologically-conditioned allomorphy. I already mentioned above that an enclitic *=i* triggers host word allomorphy in the same way as verbal suffixes *-an* and *-èn.* Other types of allomorphy attested in enclitics are those seen in *=pa* 'just', *=i* 'a certain', *=di* 'already, now', and person forms (the allomorphy relevant to the person forms will be discussed in §5.2.1).

    The first two items *=pa* 'just' and *=i* 'a certain' alternate with *=p* and *=y*, conditioned by the syllable structure they follow. The former are used if the preceding syllable has two moras (that is, a closed syllable CVC or an open syllable with a long vowel CV:), whereas the latter are used if the preceding syllable has one mora (that is CV with a short vowel). This is exemplified below:

(59)   =pa (after a bimoraic syllable) vs. =p (after a monomoraic syllable)

a. *Mampe:ma:<u>yun</u>* =pa =tèn.

rest =just =1SG.ABS

I am just going to take a rest.

b. *Iwa-<u>ku</u>* =p =ti.

put-1SG.GEN =just =here

I am just going to put it here.

(60) =i (after a bimoraic syllable) vs. =y (after a monomoraic syllable)

a. *ma<u>nu:</u>* =i b. *wag<u>èt</u>* =i

bird =SPC water =SPC

a (particular) bird (particular) water

c. *gin<u>tu</u>* =y

gold =SPC

a (particular) gold

Another enclitic *=di* has two allomorphs *=d/=de:*, with these three forms alternating under the following conditions: if the clitic is followed by *=tèn*, *=taw* or *=tid* (first singular, second singular, and third plural absolutive person forms, respectively), it must be realized as *=de:*. In other cases, if the clitic is preceded by a bimoraic syllable: CVC or CV:, *=di* must be used, whereas if it is preceded by a 1 mora syllable: CV, *=d* must be used. The latter two conditions are identical with the two items seen above. Compare the following manifestations of the clitic:

(61) *Nalupuy* =de: <u>=tèn</u>.   (62) *Nappa<u>ti</u>* =d.

tired =POST =1SG.ABS died =POST

I got tired. (S/he) died.

(63) a. *A<u>wan</u>* =di b. *Att<u>i:</u>* =di

NEG =POST exist =SPC

It disappeared. It appeared.

Nevertheless, with the exception of the three items above, Arta differs from many other Northern Luzon languages in that few formatives have a reduced or compressed form when they appear immediately after a vowel-final word. We find a large number of Northern Luzon languages in which function words are reduced as =C after a vowel. There are many Central Cordilleran languages such as Guinaang Bontok, Northern Kankanaey, Balangao, Batad Ifugao and Guinaang Kalinga, where nominal markers and/or common noun specifiers have reduced allomorphs when preceded by a vowel-final word (Reid 2006). As for person forms, some langauges have such alternations. For example, in Ilokano (Northern Luzon), first singular and second singular genitive person forms *=ko* and *=mo* have forms *=k* and *=m* after vowels (Rubino 2000)[15]:

(64)   Ilokano genitive person forms (Rubino 2000: 245–6)

   balay=ko 'my house', *balay=mo* 'your house'

   mata=k 'my eye(s)' *mata=m* 'your eye(s)'

This does not hold true in Arta. Such an alternation is not seen in noun phrase markers (or articles), person forms, or the ligature *a* used to introduce an adnominal modifier.

3.4   Conclusion

In this chapter, morphological structure in Arta was examined in great detail. First, in order to delimit the morphological study here, free word, clitic, and affix are differentiated based on several diagnostic tests. Morphological processes were examined concerning reduplication, infixation, prefixation, and suffixation; except for suffixes, each morphological process has lexicalized (fossilized) and grammatical types. Finally, the phonological alternations caused by combination of morphemes are described.

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[15]Note that these allomorphs appear after *-an* and *-en* suffixes, with the nasal /n/ of the suffixes substituted by /k/ and /m/, respectively.

Chapter 4

Introduction to Arta morphosyntax

From this chapter, the morphosyntax of the Arta language is explored. As a prelude to the grammatical description, it will be necessary to outline the general characteristics of the grammar, as well as defining some important notions and terminologies. In the following four sections, the morphological typology (§4.1), word order (§4.2), and the definitions of word classes (§4.3) and case marking system (§4.4) are discussed in order.

4.1 Morphological typology

Traditional linguistic typology started from the classification of languages in terms of their morphological characters, each labelled such as agglutinating, fusional, inflectional, polysynthetic, analytic, and so forth. However, this classic typology arguably lumped together the following two parameters: (i) the scale of synthesis, i.e. morpheme-per-word, and (ii) the scale of fusion measured by feature/function-per-morpheme. The first parameter concerns how many morphemes may be realized in a word; in *analytic* languages, only a smallish number of morphemes can be combined to form a word, but in *synthetic* and *polysynthetic* languages, a large number of morphemes are combined together to constitute a single word. The second parameter measures how segmentable each morpheme is within a word, less segmentable or more fused in case of *fusional* (or *inflectional*) languages, and more segmentable in case of *agglutinating* languages (see Dixon 2010a, Shibatani 1989). First, Arta is not considered to be a synthetic nor polysynthetic language with respect to the morpheme-per-word

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parameter because:

1. The case, number, and definiteness of NP are signaled by independent words (i.e. nominal markers), and specificity by adnominal enclitics, not by the inflection of nouns.

    e.g. ***tidi** arta=**y*** (ABS.PL.DEF person=*spc*) 'the people (that I know)'

2. Person forms are encoded by enclitics or independent forms.

    e.g. *ara:ra:pa=**ku*** (friend=1SG.GEN) 'my friend(s)'

3. Adjectives do not inflect for the number or case of nouns that they modify.

    e.g. ***bu:ru** a bunbun* (new LIG house) 'new house'

4. Verbs do not inflect for the person or number of arguments (rather these kinds of information are encoded by enclitics or independent forms, as mentioned in (b)).

    e.g. ***Mas**-say=tid ta tarak.* (INTR-ride=3PL.ABS OBL.INDF car) 'They will ride on a car.'

5. Part of aspectual meanings are carried by enclitics (i.e. "phasal" markers, as shown §4.3.2).

    e.g. *Nap-pati=**d*** (PST.INTR-die=POST) 'He **already** died.'

6. Clausal negation, such concepts as 'begin to,' 'continue to', and 'finish,' and other complement-taking concepts such as 'try to' and 'want to' are expressed by particles and verbs plus a complement clause, rather than by verbal affixes.

    e.g. *Kabbat=mu tataw?* (like.want=2SG.GEN know) 'Do you want to know about it?'

7. There is no verbal inflection for subordination or cosubordination (cf. Papuan languages).

Note that verbs may have a complex morphology reflecting voice and causative derivation, as well as tense–aspect inflection, as shown below.

(1) *m⟨in⟩ang-i-pa-taddyor=de:=tid*   *ta*   *bunbun=di.*
     ⟨PST⟩INTR-CM.TR-CAUS-stand=POST=3PL.ABS   OBL.INDF   house=3PL.GEN
     'They had the house built.'

This may exhibit a partial synthesis in verbal morphology in Arta.

With respect to the second parameter, i.e. the scale of fusion, Arta exhibits agglutinating morphology. As is exemplified in the example (1), each morpheme in a word is segmentable, the boundaries being relatively clear. Some cases where morphological fusion is observed is limited to several prefixes and pronominal enclitics:

(2) *mo:litan* < *ma-u**lit-an* (POT-bark-LOC.TR) 'can be peeled'

me:ta < *ma-i**ta* (POT-see) 'can see'

*mak**e:dem* < *mak**a-i**dem* (POT-sleep) 'sleepy'

(3) *awa:**ngu* < *awan =**ku*

*awa:**ng**itam* < *awan =itam*

In sum, the facts shown above suggest that Arta has an agglutinating morphology with low synthesis.

4.2 Word order

In terms of word order typology, Arta is categorized as verb-initial (or more accurately, predicate-initial), where a verb or other types of predicate precede the argument(s) (4a), unless special information structure requires an argument to be placed before the predicate (see (4b)):

(4) a. *Abbi:t-èn=na=d=mandi*   ***ti***   ***Ma:ni***
carry-TR=3SG.GEN=POST=again   SG.ABS.PSN   Mani
'He carries **Mani** again.' (arta0502)

  b. ***Asawa=ku=ti,***   *awan=kurug*   *a*   *med-dingatu.*
spouse=1SG.GEN=SPC   NEG=really   LIG   ADJ-high/tall
'**As for my husband**, he is not really tall.' (arta0502)

The following features concerning word order exhibit typical characteristics of verb-initial languages (Dryer 2007).

1. Nominal markers precede the nouns.

(5)   ...   *ka:man*   ***i***   ***tiyan=na=y.***

        big   SG.ABS.DEF   belly=3SG.GEN=SPC

    '... his belly is big.' (arta0502)

2. A possessor (genitive nominal marker plus noun) is preceded by the possessed noun.

(6)   *Pang-iggam-an=na*   *i*   ***lig   na   arta.***

    PROG-hold-TR=3SG.GEN   SG.ABS.DEF   neck   3SG.GEN   person

    'It is wringing **the neck of a person**.' (arta0110)

3. In a comparative construction, an adjective precedes the standard of comparison (e.g. 'than Tom is').

(7)   *Mer-re:teg*   *ti*   *Ramos*   ***amma   dèn.***

    ADJ-slim   SG.ABS.PSN   Ramos   COND   1SG.OBL

    'Ramos is slimmer **than me**.'

4. Subordinators precede the subordinate clause which they introduce.

(8)   *Konta   aytay,   awan=di   da*   *n-arawat=mi=d*   *i*   *Dios.*

    but   now   NEG=POST   because   PST-get=1PL.GEN=POST   SG.ABS.DEF   God

    'But now there is no bad spirit because we already have God.' (arta0114)

These facts are in line with the typological tendency in word order which predicate-initial languages commonly have. However, it should be noted that there are two typological anomalies in terms of cross-linguistic word-order tendency. First, the order between an adjective and the noun it modifies may vary, as shown below (for more discussion, see §6.1.3):[1]

(9)   a. *[Med-digsèn   a]*   *pu:nèd   aydi: bègbèg.*

      ADJ-strong   LIG   rain   and   wind

      '[strong] rain and wind.' (arta0007)

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[1]In a large number of instances, adjectives precede nouns, and the opposite order involves some communicative or interactional factor (§6.1.3).

b. *Basta*   *in-an-anu:san*   *=mi*   *tèddi* *ay* *[ka:man=i* *a]*

had.to   ⟨PST⟩-RDP-patient-TR =1PL.GEN just filler big=SPC LIG

to:luda.

tent

'We had to be patient with a [big] tent.' (arta0007)

Second, the order between a predicate and manner adverb is not applicable in Arta. In most cases, manner expressions are coded as an adjective or a verb, and constitute part of a complex predicate together with a main verb (see §9.1). Furthermore, the order between a manner predicate and a main verb can vary, as shown in the following pair of examples:

(10) a. *Awa:ng=a*   *meb-bilèg*   *a*   *mad-dima.*

        NEG=2SG.ABS ADJ-fast   LIG INTR-walk

  b. *Awa:ng=a*   *maddima* *a*   *mebbilèg.*

        NEG=2SG.ABS INTR-walk LIG ADJ-fast

        'Do not walk fast.'

In summary, Arta has typical verb-initial characteristics; a nominal marker precedes a head noun in an NP, a head noun precedes a possessor NP, an adjective precedes the standard of comparison in the comparative construction, and a subordinator precedes a subordinate clause. But there are some typological anomalies concerning adjectival and adverbial constructions.

4.3 Word classes

4.3.1 Content words

In many typological and theoretical studies, it has been argued or assumed that noun and verb (and adjectives by some scholars) are the lexical categories universally attested. For example, Schachter mentions that the distinction between noun and verb is one of the few universal part-of-speech distinctions (Schachter and Shopen 2007: 7). Dixon (2010b) claims that adjective is also one of the universally attested lexical categories. However, many Philippine languages, including Arta, pose significant problems to the universalists. In this section,

I address the problem as to how we can identify and differentiate verbs, nouns, and adjectives in Arta in semantic and morphosyntactic viewpoints.

In these languages, supposed "verb" class or action words, supposed "adjective" class or property words, and supposed "noun" class, or object word show striking commonalities for their behavioral potentials in syntax. That is:

Referential function Not only object words, but also property and action words can follow a nominal marker (or determiner) in an unmarked way, to function as an argument of a predicate. (11)

Modifying function Not only property words, but object and action words can be a adjectival modifier with the same construction. (12)

Predicative function Not only action words, but object and property words can be located in the predicate position, with no copula form (actually, Arta has no copula form at all). (13)

Each relation is shown below:

(11)   Referential function

      a. *kabba:t=u*   *[i*   *gilèngan].*
        like=1SG.GEN   SG.ABS.DEF   male
        'I like the man.'

      b. *kabba:t=u*   *[i*   *man-di:ma-dima=ta].*
        want=1SG.GEN   SG.ABS.DEF   INTR-RDP-walk=there
        'I like the one who is walking there.'

      c. *kabba:t=u*   *[i*   *ka:man].*
        want=1SG.GEN   SG.ABS.DEF   big
        'I like the big one.'

(12)   Modifying function

      a. *i*   *[gilèngan* *a]*   *arta*
        SG.ABS.DEF male   LIG   person
        'the male (arta) person'

b. *i   [man-di:ma-dima=ta   a]   arta*

   SG.ABS.DEF   INTR-RDP-walk=there   LIG   person

   'the person who is walking there'

c. *i   [ka:man   a]   arta*

   SG.ABS.DEF   big   LIG   person

   'the big person'

(13)   Predicate function

a. *[Gilèngan]   i   arta=y.*

   male   SG.ABS.DEF   person=SPC

   'The person is male.'

b. *[Man-di:ma-dima]   i   arta=y.*

   INTR-RDP-walk   SG.ABS.DEF   person=SPC

   'The person is walking.'

c. *[Ka:man]   i   arta=y.*

   big   SG.ABS.DEF   person=SPC

   'The person is big.'

However, it seems counter-intuitive that we should abandon the identification of lexical categories at all. Actually, it is possible to identify the grammatical differences between noun, adjective, and verbs at least for prototypical instances. In this section, I will show the notional and distributional differences for identifying the three word classes.

Notional differences between noun, verb and adjective

Let me first compare the semantic difference between the prototypical instances of these word classes that becomes evident when they appear in the *same* position; in the following examples, the prototypical nouns, adjectives, and verbs occur in the predicate position:

(14)   a. *Gilèngan   i   arta=y.*

        male   SG.ABS.DEF   person=SPC

        'The person is male.'

    b. *Kanakannak   i   buka:gan=y.*

       child   SG.ABS.DEF   female=SPC

       'The girl is a child.'

(15)   a. *Ka:man   i   bunbun=mi.*

       big   SG.ABS.DEF   house=1PL.GEN

       'Our house is big.'

    b. *Meggitèl   i   lima=ku=y.*

       itchy   SG.ABS.DEF   arm=1SG.GEN=SPC

       'My arm is itchy.'

(16)   a. *Man-tu:rèk=tèn.*

       INTR-write=1SG.ABS

       'I will write something.'

    b. *D⟨in⟩⟨um⟩iso:no:=tèn.*

       ⟨PST⟩⟨INTR⟩inside=1SG.ABS

       'I came inside.'

First, nouns and adjectives are similar in that they both describe a static relation. When the nouns are used, as in (14), the sentences describe "what ontological category it belongs to", whereas the sentences with adjectives, as in (15), contribute to the foregrounding of one of the various properties inherent in the objects, rather than identifying and predicating the ontological category of the referents.

    With regard to the verbs in (16), the sentences do not describe a static situation. The situations of writing something and moving inside are not static situations or attributes, nor some ontological category that the object belongs to. They rather construe the situation as a dynamic action or process that develops and unfolds along a temporal axis. Note that these semantic differences appear in canonical nouns, adjectives, and verbs; as explored in § 8.1.2, adjectives and verbs form a structural continuum from adjective, via stative verbs and potentive verbs, to dynamic verbs.

    From a purely semantic perspective, prototypical (or most) nouns denote one ontological entity to which the referent belongs, prototypical (or most) adjectives denote one property

that constitute the ontological category of the referent, and prototypical verbs denote a dynamic situation such as process and action.

Distributional differences between noun, verb, and adjective

Are these notional differences reflected in some grammatical behaviors? In what follows we examine five criteria for distinguishing the word classes:

(17)   1. Morphological markedness

2. Tense and aspect inflection

3. Functions of reduplicated forms

4. Co-occurrence with genitive phrases and their meaning

5. Compatibility with the comparative construction

Morphological markedness   Morphological markedness indicates whether the word can or cannot be used without any addition of functional morphemes, and the three word classes differ in their morphological markedness. Nouns can be used without any affixation. Adjectives, in most cases, need the prefix *meC-* (e.g. *mep-pullaw* 'white', *mes-subèg* 'angry', *me'-'a:nus* 'friendly'). Verbs must take one of the verbalizing affixes as in *bisag-èn* 'break something', *mam-ba:sa* 'read'.

Tense and aspect inflection   With regard to this second criterion, dynamic verbs inflect for tense and aspect (non-past, past, and progressive), adjectives and nouns have no tense-aspect inflection. When adjectives and nouns appear in the predicate position, the temporal information is either pragmatically inferred or conveyed lexically with adverbial phrases.

(18)   a. ***Map-pati***   *i*   *agani:.*
          INTR-die   SG.ABS.DEF   non-Arta
          'The person will die.'

     b. ***Nap-pati***   *i*   *agani:.*
          PST.INTR-die   SG.ABS.DEF   non-Arta
          'The person died.'

(19) a. *Me'-'a:nus* *i* *agani:.*

ADJ-kind   SG.ABS.DEF   non-Arta

'The person is kind.'

b. *Me'-'a:nus* *i* *agani:* *ta dutul.*

ADJ-kind   SG.ABS.DEF   person   before

'The person was kind before.'

(20) a. *Barangay Captain* *i* *agani:.*

Head of barangay   SG.ABS.DEF   non-Arta

'The person is head of the barangay.'

b. *Barangay Captain* *i* *agani:* *ta dutul.*

Head of barangay   SG.ABS.DEF   non-Arta   before

'The person was head of the barangay before.'

Functions of reduplicated forms   Arta employs reduplicated forms in various ways. Reduplicated forms convey quite different meanings depending on the word classes. In the case of nouns, reduplicated forms indicate that the amount or size of the referent is different from that of prototypical instances; that is, they are used when the amount or size referents are either quite large or small. In human nouns, it designates the plurality of the referents.

(21) a. ***lappul*** 'dog' vs. ***lallappul*** '(small/big) dog'

b. ***ana:*** 'child' vs. ***a:na:*** 'children'

With respect to adjectives, reduplication signals that the degree of the scalar value is significant, meaning 'very, quite (big)', or 'too (big)'.

(22) a. ***mes****-subèg* 'angry' vs. ***meses****-subèg* 'very angry'

b. ***mel****-lawa* 'wide' vs. ***melel****-lawa* 'very wide, too wide'

c. *Ø-marakèt* 'bad' vs. ***memem****-marakèt* 'very bad, too bad'

With respect to verbs, reduplication signals aspectual meanings such as repetition and duration of the event.

(23) a. ***mang****-gèpèt* 'be tied with' vs. ***mang-gèpè****-gèpèt* 'many are tied with'

   b. **tok***to:kan* 'hit' vs. **toktok***to:kan* 'hit repeatedly'

   c. *gèlgèl-èn* 'cut' vs. **ga:***gèlgèl-èn* 'do cutting'

Co-occurrence with genitive phrases and their meaning   No adjective can co-occur with a genitive argument, whereas some nouns and some verbs can or must co-occur with a genitive argument. If a noun takes a genitive nominal, the genitive nominal indicates a possessor (e.g. 'our house') or a reference-point (e.g. 'my father'). If a verb (more precisely a transitive verb) takes a genitive nominal, it functions as the agent of the event.

Compatibility with the comparative construction   If instances of a given class can enter into comparative construction, it is the adjective class. The comparative construction has the pattern of [ADJ target *konta/amma* object.of.comparison]:

(24)   a. **Ka:man**   *i*   *kande:ro=y*   *konta*   *didi*   *a:duwan=i*

         big   SG.ABS.DEF   pot=SPC   but   PL.GEN/OBL.DEF   other=SPC

         'The pot is bigger than the others.'

   b. **Med-dingatu**   *ti*   *Ruben*   *amma*   *dèn.*

         ADJ-high   SG.ABS.PSN   Ruben   if   1SG.OBL

         'Ruben is taller than I.'

A comparative construction is incompatible with nouns or verbs.

   Nouns, adjectives and verbs then are identified by the following characteristics:

(25) **Noun**

   1. No obligatory morphological affixation

   2. No tense-aspect inflection in the predicate position

   3. Reduplicated forms responsible for the quantity or size of the referents

   4. Some nouns allowed/required to take a genitive nominal that indicates a possessor or reference-point

   5. Incompatible with the comparative construction

(26) **Adjective**

1. Morphological affixation almost obligatory

2. No tense-aspect inflection in the predicate position

3. Reduplicated forms responsible for a higher degree of scalar notions

4. No adjective allowed to take a genitive nominal

5. Compatible with the comparative construction

(27) **Verb** (dynamic verbs)

1. Morphological affixation obligatory

2. Tense-aspect inflection obligatory

3. Reduplicated forms responsible for aspectual meanings

4. Transitive verbs required to take a genitive nominal that indicates the agent of the event.

5. Incompatible with the comparative construction

As mentioned above, in the case of verbs, these behavioral potentials and structural coding are only applicable to prototypical verbs, i.e. dynamic verbs. There are other subclasses of verbs: potentive verbs and stative verbs, which are more like adjectives. Verbs and adjectives thus form a continuum from most prototypical to less prototypical to adjectives. In other words, verbs and adjectives exhibit a "category squish" (Ross 1972). The gradient nature of these categories will extensively be dealt with in § 8.1.2.

4.3.2 Function words

Function words (including independent words and enclitics) are subcategorized as shown in Table 4.1. There are three major categories: nominal-related category, clause-related category, and multi-functional. The nominal-related category is the set of functional words primarily serving within the noun phrase, or substitutable with the whole noun phrase. The clause-related category is the set of function words that are relevant to the clausal level, including those that function within the clause ("intra-clausal level"), and those that function across clauses ("Inter-clausal level").

Table 4.1: List of function words
Nominal-related category
– Person form
– Demonstrative
– Interrogative pronoun
– Nominal (Noun phrase) marker
– Specificity marker
– Quantifier (Numeral, Evaluational, Relative)
Clause-related category
(Intra-clausal level)
– Negators
– Phasals
– Epistemic modals
(Inter-clausal level)
– Subordinate conjunction
– Coordinate conjunction
Multi-functional
– Ligature

The third category exists for a single versatile word, the ligature *a*. A ligature is a multi-functional grammatical morpheme that appears in a noun-modifying construction (e.g. *ka:man a bunbun* (big LIG house) 'a big house'), in a predicate-modifying construction (e.g. *mebbilèg a maddima* (fast LIG walk) 'walk fast'), and in a complement clause construction (e.g. *Isugnu:d=u a mangay=ta.* (allow=1SG.GEN LIG go=there) 'I will allow him/her to go there'). The ligature is a functionally overarching nominal-related category, and occurs in both intra-clausal, and inter-clausal clause-related categories. Let me examine the other classes of function words.

Person form A person form is a deictic form referring to the speaker 'I' (the first person), the addressee 'thou' (second person), anaphorically indexed individuals 'he/she/it' (the third person), and their combinations. In Arta, however, morphologically there are arguably four person categories: first 'I', second 'thou', first+second 'I and thou', and third 'he/she/it', and each person has both singular and plural forms. The forms have topical, absolutive, genitive, and oblique case forms. Person forms will be described in §5.2.

Demonstrative A demonstrative is a grammatical category that has referring functions with reference to relative distance from the deictic center (speaker). The system has a three-

way distinction: proximal, medial, and distal, according to the physical and epistemic distances (or proximity) from the speaker; they are differentiated according to whether the referent is manipulable or within the speaker's reach (physical distance), and whether the referent is visible or non-visible (epistemic distance). Demonstratives will be examined in §5.3.

Interrogative pronoun   Interrogative pronouns are used to designate the focus of the question such as *tatin* 'who', *a:nu* 'what', *tanakan* 'when'. They also function as indefinite pronouns (e.g. 'anyone', 'anything'). They will be described in §10.3.

Nominal marker   A nominal marker corresponds to what is variously called "determiner", "case marker", "nominal specifier", among others (see Reid 2002 for the survey of different terminologies for nominal markers in Philippine languages). The primary function of the form is to introduce the noun phrase, as in **ti** *Delia* 'Delia', and nominal markers are paradigmatically opposed according to their definiteness (indefinite vs. definite), number (singular vs. plural), and noun class (common noun vs. personal proper noun). The nominal marker is dealt with in §5.4.

Specificity marker   Arta has yet another category to index the specificity of the referent (consider the two different interpretations of *I want a car*: 'I want {a particular car I know / any car}). There are three markers (*=i/=ti/=tidi*), appearing adjacent to the first lexical element in an NP, as in *tidi lappul=**i*** (PL.ABS.DEF dog=SPC) 'the dogs (that I know)', and *tidi mep-pullaw=**i** a lappul* (PL.ABS.DEF ADJ-white=SPC LIG dog) 'the white dogs (that I know)'. Specificity markers are described in §5.5.

Quantifier   A quantifier serves to designate the quantity of the referent. Arta has three subclasses of quantifiers: numeral, relative, and evaluational. A numeral, is a quantifier which designates a numerical value for the referent, such as *si:pang* 'one', *tallip* 'two', *ta'lu* 'three', *appat* 'four', and so forth. Second, a relative quantifier is one that designates the relative amount of the referent(s) with reference to the definite entity in the discourse, as in *attanan* 'all (of them)', and *a:duwan* 'some (of them)'. The third type of quantifier, evalua-

tional, is the one used to *evaluate* the actual quantity of the referent with reference to the speaker's expectation, as in *killèk* 'a few', and *me"a:du* 'many, much'. Quantifiers will be dealt with in §6.3.

Negator   There are two negators in Arta, *awan* and *bangat*. The first form *awan* is used in the relational (or propositional) negation 'not p' and existential negation 'there is no'. The other form *bangat* serves to express the meaning 'not p (but q)', which might be called *correctional negation*. Negation will be examined in §9.5.

Phasal marker   In Arta, as in many Philippine languages, there are a set of particles to frame the event in the larger configuration of the situation, as in *=tep* 'still, yet, remain', *=pa* 'just, for a while, a little', and *=di* 'already, just soon, before long'. These enclitics serve to construe the same situation as a different phase of the larger context, as in *awan ta baggat* 'we do not have rice' > *Awan=**tep** ta baggat* '(we did not have rice before and) 'we do not have rice yet.', *Awan=**pa** ta baggat* '(we had rice before but) we do not have rice just for a while (and we will get rice soon).', and *awan=**di** ta baggat* (we had rice before but) 'we already lack rice'. These phasal enclitics will be described in §9.3.

Epistemic modals   In Arta, epistemic modality is encoded by either independent words or enclitics. Most of the independent words are arguably borrowings (e.g. *talaga* 'sure', *baka* 'perhaps'), but the enclitics are not (e.g. *=mina* (hypothetical), *=wada* 'perhaps'). Epistemic modals will be examined in §9.4.

Subordinate conjunction   Adverbial clauses are introduced by various subordinators. From their syntactic distribution, they are subgrouped into subordinate conjunctions (*take:ta* 'in order to, so that', *da* 'because', and *ènsi:na* 'which is why'), subordinators of preposition-origin (*ta* 'when (past)', and *unadda* 'after'), and those of adverb-origin (*amma* 'if', *maski* 'even if/though', *gindat, ki:gad* 'up to, until'). Subordinate clause constructions will be described in §10.2.

Coordinate conjunction   Coordinators are largely encoded by zero, but in some cases, they are marked explicitly with coordinate conjunctions. Coordination of NPs is encoded by

aydi:. Some clausal coordinations are marked by *sakay* 'and then', or *konta* 'but.' Coordination will be dealt with §10.4.

4.4   Case marking system

There has been a long controversy over the case marking system in Philippine languages. Early studies on Philippine languages address grammatical relations in terms of familiar notions such as nominative/accusative case, and active/passive voice (Bloomfield 1917), but after the seminal studies by Schachter (1976, 1977), more neutral analyses with respect to case-marking system became popular under the rubric of "focus system" where they considered the case marking system as neither nominative-accusative or ergative-absolutive (see also Shibatani 1988, 1989).

A growing number of recent studies, however, consider Philippine languages as having ergative systems. These studies include a typological survey of Philippine languages (Reid and Liao 2002), a typological study of Formosan and Philippine languages based on basic linguistic theory (Liao 2004), a historical study of Proto-Austronesian (Starosta et al. 1982), Ilokano (Rubino 1997, 2000), Kapampangan (Mithun 1994), Tagalog (Payne 1982, Blake 1988, Aldridge 2012), with some disagreement (Foley 1998, 2007, Himmelmann 2005) among others. In line with the ergative analysis shown above, it is argued here that Arta is considered to clearly exhibit an ergative-absolutive alignment. Before arguing for the analysis, however, it is necessary to show the explicit procedure for identifying a case marking system, to avoid confusion over the notion of "ergativity" or "accusativity". I first assume the following two points for identifying a case marking system:

(28)   Two assumptions

   1. Case marking is a prototype phenomenon, defined as formal commonality and difference between the markings of S (the single core argument of an intransitive clause), A (a transitive subject), and O (a transitive object) shown at least in *prototypical* transitive and intransitive clauses.

   2.   i.   A prototypical transitive clause includes an agent and an undergoer, describing a change-of state event, with a perfective aspect and realis mood (Hopper

and Thompson 1980, Næss 2007).

ii. A prototypical intransitive clause includes an event involving a single partic-
ipant, the semantic role of which is either an agent (e.g. 'The man swam in
the river.') or an undergoer (e.g. 'The child got sick.') (Van Valin and LaPolla
1997, Van Valin 2005).

Based on these two assumptions, the following procedure is applied to Arta:

(29) 1. Extract prototypical transitive and intransitive clauses.

2. Observe the formal commonality and/or difference in the pronominal and nomi-
nal markers of S, A, and O.
– If A and S arguments share the same formal markings but are formally differ-
entiated from O, the system is a nominative-accusative case marking system; if O
and S arguments share the same formal markings but are formally different from
A, the system is an ergative-absolutive system.

3. Observe the coding patterns of other semantic types of event (e.g. perception
type such as 'look at' and 'listen to', and contact type such as 'hit' and 'kick'), and
examine the consistency or variability of the case marking pattern[2].

Examine the case marking system in Arta. First, the following pairs of examples are
intransitive clauses with full NPs, with an event including an agent in (34a) and an undergoer
in (30b), respectively:

(30) Intransitive clauses with full NP

a. *T⟨in⟩⟨um⟩adyor=di*   ***i/tidi***   *babakat=i.*
   ⟨PST⟩⟨INTR⟩stand=POST   **SG/PL**   old.woman=SPC
   'The old woman/women stood up.'

b. *Manga:-bisin=di*   ***i/tidi***   *babakat=i*
   INTR-hungry=POST   **SG/PL**   old.woman=SPC
   'The old woman/women is/are hungry.'

---

[2]See Silverstein (1987, 1993), Dixon (1994) for various types of the case marking splits.

The following example shows a prototypical transitive clause with full NPs, describing a change-of-state event, including an agent and undergoer (or patient), with past tense ⟨in⟩.

(31)   a.   *B⟨in⟩isag=di*   **ni/didi**   *babakat=i*   **i/tidi**   *bo:te.*

⟨PST⟩break=POST   **SG/PL**   old.woman=SPC   **SG/PL**   bottle

'The old woman/women broke the bottle(s).'

Second, the undergoer argument (O) takes the same NP marking *i/tidi* with intransitive S shown above, regardless of whether the S is an agent or undergoer; on the other hand, the transitive agent argument (A) takes a different set of markings *ni/didi*.

The same distribution appears with person forms, here third singular and plural forms. In prototypical transitive and intransitive clauses, the undergoer argument (O) takes the same pronominal forms with intransitive S shown above, whereas the transitive agent argument (A) takes a different set of markings:

(32)   Intransitive clauses with pronominal forms

a.   *T⟨in⟩⟨um⟩adyor=di=Ø/=de:=**tid***

⟨PST⟩⟨INTR⟩stand=POST=**3SG**/=POST=**3PL**

'She or He/They stood up.'

b.   *Manga:-bisin=di=Ø/=de:=**tid***

INTR-hungry=POST=**3SG**/=POST=**3PL**

'She or He/They is/are hungry.'

(33)   Transitive clause with pronominal forms

B⟨in⟩isag   =**na/di**=d   =**Ø/=tid**.

⟨PST⟩break   =**3SG/3PL**=POST   =**3SG/3PL**

'She or He/They broke the bottle/bottles.'

This indicates that nominal marking in prototypical intransitive and transitive clauses exhibit ergative–absolutive alignment; S and O are labelled as *absolutive*, and A as *ergative*, as shown in the pair of intransitive and transitive clauses in (34):

(34)   Intransitive clauses with full NP

a. *T⟨in⟩⟨um⟩adyor=di*   ***i/tidi***   *babakat=i.*

⟨PST⟩⟨INTR⟩stand=POST   **ABS**   old.woman=SPC

'The old woman/women stood up.'

b. *B⟨in⟩isag=di*   ***ni/didi***   *babakat=i*   ***i/tidi***   *bo:te.*

⟨PST⟩break=POST   **ERG**   old.woman=SPC   **ABS**   bottle

'The old woman/women broke the bottle(s).'

As has been discussed in Philippine and Austronesian linguistics, the most problematic case in many Philippine languages would be the clause type where an agent is marked by *i/tidi* series of forms, as in (35):

(35) a. *Mambugay*   *=**tid***   *ta*   *laman.*

hunt   =**3PL**   INDF   wild.pig

'They go hunting wild pigs.'

b. *Mamangan*   *=**tid***   *ta*   *mabaw*   *aydi:*   *yakkan.*

eat   =**3PL**   INDF   rice   and   viand

'They will eat rice and viand.'

If it were a transitive construction, we would reconsider the ergative analysis because the O argument is marked differently from S and A. If it is a true transitive construction, the case marking system in Arta would have nominative–accusative alignment.

The supposed transitive clause can, however, be identified as an *extended intransitive clause.* Dixon (1994, 2010b) and Dixon and Aikhenvald (2000) recognize the difference between valence and (morphosyntactic) transitivity, and differentiate monovalent intransitive clause, bivalent intransitive clause (under the label of "extended intransitive"), bivalent transitive clause, and trivalent transitive clause ("extended transitive clause). The forth type of argument is labelled as "E (standing for 'extension to core'), which is summarized in Table 7.1:

Although the literature does not provide explicit criteria for distinguishing SVE from AVO, there are at least two pieces of evidence to favor the categorization of the construction as an extended intransitive clause. First, Liao (2004) provides an exlipicit morphological definition for distinguishing AVO and SVE. "If a language has two (or more) dyadic clause patterns

Table 4.2: Valence and transitivity (based on Dixon and Aikhenvald 2000)

Names	valency	transitivity	abbreviation
intransitive	monovalent	intransitive	SV
extended intransitive	bivalent	intransitive	SVE
transitive	bivalent	transitive clause	AVO
extended transitive	trivalent	transitive	AVOE

but only one of them is transitive, the verb of the dyadic clause pattern that has the same verbal morphology as the verb in the major monadic intransitive clause pattern is considered to be intransitive. (ibid.: 39, emphasis in the original)"[3] In Arta, the verbal affix used in the construction occurs more widely in monovalent intransitive clause. See the following examples:

(36) a. ***Mang**-addub*   *i*   *du:t=i.*

      INTR-burn   SG.ABS.DEF   fire=SPC

      'The fire is borning.'

    b. ***Mang**-ka:rawèg=tep*   *ta*   *lattong*

      INTR-play=still   INDF   outside

      'S/He will still play outside.'

The same prefix *maN-*, as is used in (35), appears in the verbs to form monovalent intransitive clauses. Thus this pattern can be regarded as an extended intransitive construction.

    The second piece of evidence to favor the intransitive analysis of supposed "transitive" clause can be found in the distribution of nominal markers. The singular set of nominal markers to mark the patient in the construction is identical with those marking peripheral or adjunct NPs. Consider the following examples:

(37) a. *P⟨in⟩abay-an=mi=tèddi*   *gindat*   *[**ta**   damadmèng].*

      ⟨PST⟩neglect-TR=1PL.GEN=just   up.to   INDF   morning

      'We just let it go away up to the next morning.' (arta0007)

    b. *Pa:ng-alap-an=mi*   *ta*   *arigi=na*   *a*   *ayu*   *[**ta**   talun].*

      PRG-get-TR=1PL.GEN   DET   post=3SG.GEN   LIG   wood   DET   mountain

---

[3]Here "major monadic intransitive clause pattern" means that those "can appear in most verb classes rather than just a limited number of verb classes (ibid.)' This particular wording is used to avoid including the rare case in which some transitive affixes may also occur in a monovalent intransitive clause pattern.

'We get the wood post in the mountain.' (arta0001)

In (37a), a temporal phrase is expressed in the peripheral NP, introduced by *ta*, and in (37b), the locative phrase is introduced by *ta* as well. The marker is the same form as is observed in (35). Table 4.3 shows the distribution of indefinite and definite singular NP marking, which illustrates that *na* and *ni* are exclusively used for a transitive A, whereas *ti* and *ta* are used for introducing E arguments and peripheral NPs.

Table 4.3: Nominal markers and Argument Structure

Construction	A	S	O	E	adjunct
intransitive		*Ø N, i N*			*ta N, ti N*
extended intransitive		*Ø N, i N*		*ta N, ti N*	*ta N, ti N*
transitive	*na N, ni N*		*Ø N, i N*		*ta N, ti N*
extended transitive	*na N, ni N*		*Ø N, i N*	*ta N, ti N*	*ta N, ti N*

Left: indefinite vs. right: definite.

These two pieces of evidence, i.e., the use of an intransitive verbal affix, and the distribution of the nominal markers, indicate that the supposed transitive construction is a type of extended intransitive clause. We can thus conclude that the case marking system in Arta is the ergative-absolutive type. In the following discussion, I provide a grammatical description based on the assumption that Arta is an ergative language, but instead of *absolutive* (ABS) and *ergative* (ERG), I will use the labels *absolutive* (ABS) and *genitive* (GEN) because the ergative form also serves as a genitive (semantically the possessor of an NP), and from a diachronic viewpoint, it has been discussed that the ergative case has its origin in the genitive case in Proto-Austronesian (Starosta et al. 1982), (or Proto-Nuclear Austronesian in the more recent hypothesis (Ross 2009)).

4.5 Conclusion

In this chapter, I outlined some basic aspects of Arta grammar, which include morphological typology, word order, word classes, and the case-marking system. In §4.1 I observed that Arta has an agglutinating morphology, but the degree of synthesis is low in that the concepts that would otherwise be encoded in inflections, such as person, number, definiteness, negation, and so forth, are expressed by independent words or enclitics in Arta. In §4.2, it is shown

that Arta is a predicate-initial language, with some typological anomalies in adjectival and adverbial modification. In §4.3, in spite of the apparent fluid nature of word classes in Arta, it was shown that noun, verb, and adjective classes can be identified based on several semantic and morphosyntactic criteria; functional words were also introduced, which are classified into the three categories: nominal-related, and clause-related categories, as well as a multi-functional word ligature. Finally, in §4.4, based on the prototype analysis, it was argued that Arta is clearly an ergative language, and based on the distribution of the verbal affix and the nominal marker, the supposed transitive clause was shown to be an extended intransitive clause.

Chapter 5

Noun phrase

5.1   Nouns

In Arta, nouns exhibit no inflection. Semantic information including number, case, and definiteness is carried by nominal markers (see §5.4). In this section, some common types of derivational morphology is examined in 5.1.2; then the augmentative forms and syntactic behavior are described based on the semantic type they belong to.

5.1.1   Semantic subclasses of nouns

First let me show various types of noun classified in (1–4). Although the classification of nouns on semantic basis may contain some arbitrariness, the following classification would facilitate an understanding of the range of concepts which nouns may encode. In (1–4), noun is classified into concrete vs. abstract nouns; concrete nouns are subgrouped into human, animate, and inanimate nouns, whereas abstract nouns are classified into abstract notions, event nouns, and property nouns (cf. Sweet 1891–98, Ikehara et al. 1999):

(1)   Concrete nouns I: human nouns

    a.   PROPER NAMES

        i.   Family names: *Pantalion, Olanyu, Gumabon, Ramos, Bueno*

        ii.   First names: *Arsenyo, Delia, Meryjoy, Lando, Sesar*

        iii.   Nicknames: *Senyo (< Arsenyo), Joy (< Meryjoy)*

b. RELATIONAL HUMAN NOUNS

    i. Kinship terms (vocative): *amèng* 'father', *inèng* 'mother'

    ii. Kinship terms (descriptive): *ama* 'father', *ina* 'mother'

    iii. Kinship terms (vocative/descriptive):

        apu 'grandparent, grandchild' *wadi* 'younger sibling', *kakka* 'elder sibling', *ana:* '(one's) child', *lelle:* 'uncle', *bebbe:* 'aunt', *asawa* 'husband/wife', *alal-layan* 'parent', *aturangan* 'one's child's husband/wife', or one's husband/wife's parent', *dinangmuwang* 'late parent', *mina:ka* 'late older sibling', *minawwadi* 'late younger sibling', *minaddili* 'late uncle'

    iv. Non-kinship terms: *ara:ra:pa* 'friend', *top* 'companion', *karu:ba* 'neighbor'

c. NON-RELATIONAL HUMAN NOUNS

    arta '(Arta) person', *agani:* '(non-Negrito) person', *buka:gan* 'female', *gilèngan* 'male', *kanakannak* 'kid, child', *ulitaw* 'male teenager', *madit* 'female teenager', *babakat* 'elder female', *dupu:* 'elder male', *bunu:gan* 'faith healer'

(2) Concrete nouns II: Animate nouns (animals and plants)

a. ANIMALS

    laman 'wild pig', *bidut* 'deer', *burog* 'monkey', *lappul* 'dog', *kusay* 'cat', *bubuy* '(domesticated) pig', *manu:* 'bird', *ku:rèk* 'chicken' (cf. *pi:yèk* 'chick'), *iraw* 'snake', *tattak* 'house lizard', *tukak* 'frog', *dèlèg* 'kind of mudfish', *igit* 'eel', *kutun* 'ant', *bungor* 'mosquito'

b. PLANTS

    ayu 'tree', *kawayan* 'bamboo', *lanut* 'vine', *kadèt* 'weed', *bidi:yu* 'pandan, screw palm', *bagat* 'banana', *pagay* 'rice plant', *galiyang* 'kind of taro', *dala:yap* 'kind of citras', *biraw* 'silver grass', *nangka* 'jackfruit'

(3) Concrete nouns III: Inanimate nouns

a. ARTIFACTS

    bisuruk 'bolo', *bu:lu* 'knife', *bisay* 'bow', *pangal* 'arrow', *abbit* 'cloth for carrying babies', *lugun* 'container', *talin* 'coverless basket', *suklu:ban* 'covered basket', *pina:nas* 'bracelet', *bi:lèg* 'necklace', *tarak* 'car', *bunbun* 'house'

b. BODY-PART AND OTHER PART-WHOLE RELATION

mata 'eye', *adung* 'nose', *sapang* 'back (of person)', *buli* 'buttock', *susu* 'breast', *aligusgus* 'fingerprint', *barasu* 'arm', *tiyèd* 'leg', *pusu* 'heart', *alad* 'wing', *tubèl* '(plant's) spine', *gèda* 'trunk (of tree)', *bunga* 'fruit'

c. NATURAL OBJECT, ENVIRONMENT

karagatan 'stone', *digit* 'sea', *mo:nayan* 'big river (referring to Cagayan river)', *talun, bukid* 'mountain', *tapa* 'soil, earth', *bitun* 'star', *bulan* 'moon', *langit* 'blue sky', *bulala:yaw* 'rainbow', *bègbèg* 'wind'

d. NON-INDIVIDUATED TERMS (material, mass)

wagèt 'water', *tabug* 'mud', *landuk* 'iron', *di:ru* 'soup', *asin* 'salt', *niyèt* 'honey', *god* 'betel leaf', *tèbbi* 'areca nut', *nusu* 'lime powder'

(4) Abstract nouns

I Event nouns

pakkanèg 'anxiety, worry', *su:li* 'coming back', *digdig* 'arrival', *ararru* 'cough' *pakkansion* 'singing'

II Property nouns

digat 'difficulty', *bilèg* 'speed', *buyu* 'bad-smelling', *pullaw* 'white', *dukuldukul* 'roughness, unevenness', *dagnin* 'coldness', *damut* 'stinginess'

III SPATIAL RELATION (topological terms)

dingatu 'upward', *dibbi* 'under, beneath', *lattong* 'outside', *diso:no:* 'inside', *degdeg* 'edge', *ba'it* 'between', *lipat* 'opposite side', *biyèn* 'nearby', *adu:yu* 'distant', *ka:wanan* 'right', *katigid* 'left', *diddya* 'upstream', *dilod* 'downstream', *dibiliw* 'north', *abaga:tan* 'south'

IV Other abstract notions

bu:hay 'life', *innaman* 'taste', *bilang* 'number', *tanga* 'noon', *dagun* 'year' *lawas* 'week', *bulan* 'month' (also 'moon').

From a cross-linguistic viewpoint, the nouns listed above exhibit several interesting characteristics. First, in some kinship terms, as shown in (1b-iii), the referent in actual use is inherently ambiguous between 'husband' or 'wife' (in the case of *asawa*), 'grandparent' or

'grandchild' (in the case of *apu*), and 'one's child's husband/wife', or 'one's husband/wife's parent' (in the case of *aturangan*). The ambiguity of actual referents may easily be resolved by adding the genitive possessor as in *asawa=ku* (husband/wife=1SG.GEN) 'my husband/wife' if the addressee can access information on the possessor's sex. in the case of *apu* or *aturangan*, however, the addressee has to identify the referent by pragmatic context and their own knowledge. Even if a speaker does not have his/her own grandchild, or the grandparents are already dead, he may be talking about his future grandchild, or his late grandparent.

The second characteristics of nouns observed in Arta is the fact that spatial (topological) relations such as 'up(ward)', 'under', 'between' are consistently coded by nouns, as shown in (4). The spatial relation between the object and a particular location, which would be coded by various prepositions in English (OBJECT *on/in/above/under/along/across* LOCATION), is coded by spatial nouns and other grammatical devices:

(5) | *Ta* | ***dibbi*** | *na* | *tabla* | *i* | *wagèt=i.* |
|---|---|---|---|---|---|
| OBL.INDF | under(N) | GEN.INDF | board | SG.ABS.DEF | water=SPC |

'Under the board is the (cup of) water.'

(6) | *awan=tèn* | *n-um-angay* | *ta* | ***diso:no:*** | *na* | *bunbun=ya.* |
|---|---|---|---|---|---|
| NEG=1SG.ABS | PST-AV-go | OBL.INDF | inside | GEN.INDF | house=DEM.DIST |

'I do not go into the house.'

In the above examples, the two spatial relations [UNDER] and [IN] are coded by nouns *dibbi* and *diso:no:*, respectively (the relation [IN] is translated as 'into' because of the specific combination with the motion verb 'go/move'). In order to express the spatial relation between two objects, the construction <oblique + noun + genitive> is used, as sporadically seen in English (e.g. *on the {top / middle / bottom} of*).

If the location from which the object is spatially anchored is contextually evident, or included lexically in the spatial noun, the location is not necessarily mentioned in the actual expressions. In the following example, the reference point is culturally and/or contextually evident, thus not being explicitly mentioned:

(7) A: | *Adi:ni:* | *e:nan=mu?* | 'Where are you going to go? |
|---|---|---|
| where | go=2SG.GEN | |

B: *Ayta*   ***dilod****.*   'Downstream.'

there   downstream

(8) *S⟨in⟩⟨um⟩u:li*   *ta*   *abang,*   *in-iggam-an*   *ni*   *Noe*   *sakay*

⟨PST⟩⟨INTR⟩back   OBL.INDF   ark   PST-get-LOC.TR   SG.GEN.DEF   Noah   then

n-i-so:li=na   *ta*   ***diso:no:****.*

PST-CM.TR-back=3SG.GEN   OBL.INDF   inside

'(The bird) came back to **the ark**, (so) Noah got it and brought it inside **(of the ark)**.'

(from the translation of "Noah's ark' (Genesis chapters 6–9, the Old Testament, Bible))

Finally, in Arta, attributive expressions with property concepts often appear as a noun, as listed in (4-II) , without any adjective derivations. Consider the following examples. They may literally mean 'poverty', 'unevenness', 'coldness', and 'cruelness', the actual meanings of the sentence is more like adjectives 'poor', 'uneven, rough', 'cold', and 'cruel':

(9) *Ensi:na*   *mam-bakslide=tid*   *amma*   *d⟨um⟩igdig*   *i*

so.that   AV-backslide=3PL.ABS   if   ⟨INTR⟩arrive   SG.ABS.DEF

digat*=di*   *aydi*   *pa:ngariw=di=did.*

poverty=3PL.GEN   criticism=3PL.GEN=3PL.OBL

'(lit.)... so that they will backslide if **poverty** and criticism have come to them.'

"Sower" (Matthew 13 , the New Testament, Bible)

(10) *Awan*   *ta*   ***dukuldukul****=na.*

NEG   OBL.INDF   unevenness=3SG.GEN

'It is not **rough/uneven**.' (lit. Its **unevenness** does not exist.)

(11) *Meded-dagnin*   *aytay*   *konta*   *ta dutul a langit,*   *awan*   *ta*

ADJ.RDP-coldness   now   but   last year   NEG   OBL.INDF

dègnin*=na.*

coldness=3SG.GEN

'It is colder this year than it was last year.' (lit. Very cool now but its **coldness** does not exist last year.) (arta0003)

(12) *Konta=d=tay*   *awan=de:ta*   ***subèg****=na.*

but=POST=now   NEG=POST.OBL.INDF   cruelness=3SG.GEN

'But now he is not **cruel**.' (lit. But now his **cruelness** does not exist.) (arta0100)

Although the above data might be interpreted literally, such as '(the extent of) their poverty', '(the extent of) its evenness', '(the extent of) its coldness', and '(the extent of) his cruelness', the following property nouns can hardly be interpreted literally as 'kindness', and 'strength'. Compere the pairs of translations, one of which does not make sense:

(13) *A:yi:* *[tigala:ku=ku*   *ni*   ***a:nus]***   *a:yi:.*
      this   vender=1SG.GEN   SG.GEN.DEF   kindness   this
      'This is my kind vender.' (lit. ??This is my vender of kindness.)

(14) *Na-rugi*   *ta*   *alas dus*   *[i*   ***digsèn***   *na*   *bagio].*
      POT-begin   OBL.INDF   2 o'clock   SG.ABS.DEF   strength   GEN.INDF   typhoon
      'The strong typhoon began at 2:00.' (lit. ??The strength of a typhoon began at 2:00.)
      (arta0007)

The can also be expressed by the adjective plus noun construction:

(15) *A:yi:* *[me'-'a:nus*   *a*   *tigala:ku=ku]*   *a:yi:.*
      this   ADJ-kindness   LIG   vender=1SG.GEN   this
      'This is my kind vender.'

(16) *Na-rugi*   *ta*   *alas dus*   *[i*   *med-digsèn*   *a*   *bagio].*
      POT-begin   OBL.INDF   2 o'clock   SG.ABS.DEF   ADJ-strength   LIG   typhoon
      'The strong typhoon began at 2:00.'

This suggests that the property nouns are used quite pervasively to the extent that they are used even in contexts which would otherwise be coded by corresponding adjectives.

5.1.2 Morphology

There are two cases in which a noun is morphologically complex. The first case is seen in reduplicated forms which designate augmented or non-prototypical meaning of the referents (this is already described in §3.2.1, 4.3.1). In another case, nouns may have morphological complexities by derivation. I will list a few of the most common derivations here.

Derivations from adjectives

Abstract nouns may be derived by taking *ka-*. Compare the following roots, adjective forms, and abstract nouns:

(17) a. *digsèn* 'strengness'

      med-*digsèn* (adj.) 'strong'

      ka-*digsèn* 'strength'

    b. *dingatu* 'above, top'

      med-*dingatu* (adj.) 'high, tall'

      ka-*dingatu* 'hight'

    c. *a:du* 'a large number/amount'

      me'-'*a:du* (adj.) 'many, much'

      kak-*a:du*, **ke'**-'*a:du* 'quantity'

    d. *illa:yug* 'long' (adj.)

      kella:yug (< **ka**-*illa:yug*) 'length'

Derivations from verbs

Various nouns can be derived from verbs by adding the affix *paC-* (*pang-* before vowels). If intransitive verbs are nominalized, the derived nouns often refer to the action/event itself (event nominalization), whereas, if transitive verbs are nominalized, the derived nouns seem to refer to the object corresponding the O argument of the verb (argument nominalization).[1] See the following examples:

(18) Intransitive verb:

    maN- > *paC-*, *manga:-* > *panga:-*

    a. **mang**-*gimit* 'do'

      > **pag**-*gimit* 'doing'

    b. **man**-*daget* 'sew'

      > **pad**-*daget* 'sewing'

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[1]See Shibatani (2014) for "event nominalization" and "argument nominalization".

    c. ***man****-takaw* 'steal'

        > ***pat****-takaw* 'stealing'

    d. ***manga:****-to:lay* 'live'

        > ***panga:****-to:lay* 'life'

(19)   Transitive verb: *-èn > paC- -èn*

    a. *gimt-**èn*** 'do something'

        > ***pag****-gimt-**èn*** 'something to do'

    b. *dima:n-**èn*** 'walk/move somewhere'

        > ***pad****-di:ma:d-**èn*** 'walking place'

    c. *lagip-**èn*** 'speak/talk about something'

        > ***pal****-lagip-**èn*** 'story'

(20)   Transitive verb: *-an > paC- -an*

    a. *tuttud-**an*** 'sit somewhere'

        > ***pat****-tuttud-**an*** 'chair'

    b. *mula-**an*** 'plant somewhere'

        > ***pam****-mula-**an*** 'planting place'

    c. *nanguy-**an*** 'swim somewhere'

        > ***pan****-nanguy-**an*** 'swimming place'

(21)   Transitive verb: *i- > paC-*

    a. ***i****-kurusu*

        > ***pak****-kurusu* 'diarrhea'

    b. ***i****-lutu* 'cook something'

        > ***pal****-lutu* 'what is cooked, food'

In some cases, derived nouns do not have *paC-*, as follows:

(22)   a. *an-èn* 'food' (lit. what is eaten)

    b. *ra:tang-èn* 'what is bought, goods'

    c. *gilèng-an* 'male' (lit. those who have a penis)

       (cf. *gilèng* 'penis')

    d. *buka:g-an* 'female' (lit. those who have a sweet potato[2])

       (cf. *bukag* 'the shape of sweet potato')

    e. *gili:ng-an* 'mill, grinder'

    f. *tubèltubèl-an* 'a plant with a lot of spines'

       (cf. *tubèl* 'spine')

    g. *pulugplug-an* 'hairy thing (such as a kind of dog with long hair)'

       (cf. *pulug* 'hair')

    h. *a:du-an* 'others' (lit. the place where there are many of them)

       (cf. *a:du* 'a large quantity')

    i. *daddim-an* 'road, path' (cf. *dima* 'walk, move')

Another prefix *paN-* is used to form derived nouns to indicate instruments:

(23)   a. ***pang**-gèlgèl* 'something to cut with, knife'

     b. ***pan**-daget* 'something to sew with, needle, thread'

     c. ***pam**-pu:gal* 'something to wipe with, cloth'

     d. ***pa:ng**-alap* 'something to get with, bow, arrow, trap'

     e. ***pa:ng**-asin* 'something to put to make food salty'

5.1.3 Possessive forms

Some grammatical phenomena correlate with the semantic type that the head noun falls into, one of which is the possibility of taking a possessive NP. In some languages such as Japanese, various kinds of nouns can take a possessive form; even proper names are allowed to take a possessor form, as in *watasi=no yamada-kun* (1SG=GEN proper.name) '(lit.) my dear Yamada', *wareware=no chikyuu* (1PL=GEN earth) '(lit.) our earth'. This does not hold in Arta, however. In the language, the possibility of taking possessive forms (genitive person forms, or genitive nominal marker plus another noun) is largely determined by the semantic type of the head noun. Some semantic types require the possessive construction, some allow, but others do not co-occur with the possessives.

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[2]This seems to have come from a metaphor in which a woman's external genitalia (or vulva) is euphemistically described as sweet potato. They also often use the word *kamo:te* to refer to one's vulva.

First, nouns belonging to the following semantic types in (24) take a possessive form almost obligatorily. Here "almost obligatorily" means the possessor should be explicitly mentioned even if the information is contextually self-evident or socially-shared knowledge. The semantic types with this tendency include (1b) RELATIONAL HUMAN NOUNS, except when they are used for vocative expressions; (3b) BODY-PART AND OTHER PART-WHOLE RELATION, except when they are used for generic expressions; and (4) ABSTRACT NOUNS, most especially EVENT NOUNS and PROPERTY NOUNS.

(24)   Almost obligatory (preferred):

    a.   RELATIONAL HUMAN NOUNS

    b.   BODY-PART AND OTHER PART-WHOLE RELATION

    c.   ABSTRACT NOUNS: EVENT NOUNS, PROPERTY NOUNS

(25)   1   *Amma*   *mam-murab*   *tidi*   ***ama=mi**=ti,*

      if   AV-hunt   PL.ABS.DEF   father=1PL.GEN=DEM.DIST

      'If **our late fathers** go hunting,'

   2   ***alallayan=mi***

      parent=1PL.GEN

      '(that is,) **our parents**,'

   3   *ngay=tid*   *mang-ali* *tidi*   ***ina=mi***   *ta*   *giwat*

      go=3PL.ABS AV-dig   PL.ABS.DEF mother=1PL.GEN OBL.INDF kind.of.taro

      aydi *ilus,*   *...*

      and   kind.of.yam

      '**Our mothers** go digging taro and yam, ...' (arta0002)

(26)   *pap-pokpok=na*   ***lima=na=y***   *ta*   *lame:sa.*

     PRG-tap=3SG.GEN   hand=3SG.GEN=SPC OBL.INDF table

     'He is tapping **his hand** on the table.'

(27)   (= (11); see also other examples in (9–15))

     Meded-dagnin   *aytay*   *konta*   *ta dutul a langit,*   *awan*   *ta*

     ADJ.RDP-coldness   now   but   last year   NEG   OBL.INDF

dagnin=na.

coldness=3SG.GEN

'It is colder this year than it was last year.' (lit. Very cool now but **its coldness** does not exist last year.)

However, if these nouns are used as an addressing term (or vocative) as in (28), or generic as in (29a, 29b), they can appear without a possessive form:

(28) Vocative use

pako:m-an=mu=tèn,   **bebbe:.**

forgive-LOC.TR=2SG.GEN=1SG.ABS   aunt

'Forgive me, **auntie**.'

(29) Generic use

a. *Tatin   i   **ama**   a   pa:ng-atèd   ta   ulag   ta*

  who   SG.ABS.DEF father LIG PRG.AV-give OBL.INDF snake OBL.INDF

  ana:=na.

  child=3SG.GEN

  'Who, if he is a father, gives his child a snake? (when the child asks for a fish)'

  '(lit.) Who is **the father** who give his child a snake?' (Luke 11 "Jesus' Teaching on Prayer", Bible)

b. *Pagi:nèk-èn=na*   *uru*   *i*   *dègès* *na*   **ulu.**

  stop-GN.TR=3SG.GEN medicine SG.ABS.DEF pain 3SG.GEN head

  'The medicine will stop the pain of **the head**.'

Nouns that belong to some semantic types do not require a possessive NP, but may co-occur with it. This includes the following classes:

(30) a. ARTIFACTS

      SPATIAL RELATION

      (NON-INDIVIDUATED TERMS, OTHER ABSTRACT NOTIONS (depends on each lexical item and construal))

The following pairs of examples show that occurrences of the nouns both with and without possessive forms are possible:

(31) ARTIFACTS

    a. ***Bisuru:k=u*=ti!***

       bolo=1SG.GEN=DEM.DIST

       '(Oh!) **My bolo** (was left in the house)!'

    b. *Pal-lamo:ng=ami*   *ti*   *kadèt=i*   *ta*   ***bisuruk=i.***

       PRG-mow=1PL.ABS   SG.OBL.DEF   weed=SPC   OBL.INDF bolo=SPC

       'We are weeding with **a bolo**.'

(32) SPATIAL RELATION

    a. *Mangay*   *t⟨in⟩⟨um⟩uttud*   *ta*   ***degdeg***   ***na***   ***wangar.***

       go   ⟨PST⟩⟨INTR⟩sit OBL.INDF edge   GEN.INDF stream

       '(lit.) He will go and sit down on **an along of a stream**.'

    b. *N-⟨um⟩atti:=ami*   *ta*   *bi:yèn*   *na*   *wagèt* *ta*

       PST-⟨INTR⟩exist=1PL.ABS OBL.INDF nearby GEN.INDF river   OBL.INDF

       degdeg.

       edge

       'We have lived near and **on an along of** a river.'

(33) NON-INDIVIDUATED TERMS

    a. *Saya*   *pa:ng-asin=mi*   *uman=de:na*   *ti*   ***asin=na.***

       that   PRG-used.as.salt=1PL.GEN like=DEM.MED SG.OBL.DEF salt=3SG.GEN

       'We were using that as if that is **its(=food's) salt**.' (arta0002)

    b. *Awan=tep* *ta*   ***asin.***

       NEG=still   OBL.INDF salt

       'We did not have **salt** yet.' (arta0002)

Finally, some classes of nouns hardly co-occur with possessive forms, including the classes of (1a) PROPER NAMES, (1c) NON-RELATIONAL HUMAN NOUNS, and (3c) NATURAL OB-JECTS AND ENVIRONMENT

(34) a. Dispreferred

      PROPER NAMES

      NON-RELATIONAL HUMAN NOUNS

      ANIMALS, PLANTS

      NATURAL OBJECT AND ENVIRONMENT

In Arta, the possessive construction can be applied to relational human nouns such as 'parent, grandchild', but it is almost impossible in the case of non-relational human nouns such as *arta* '(Arta) person', *agani:* '(non-Negrito) person', *buka:gan* 'female', *gilangèn* 'male', *kanakannak* 'kid, child,' *ulitaw* 'male teenager', *madit* 'female teenager', *babakat* 'elder female', and *dupu:* 'elder male', as shown in (1c). My own corpus, which contains elicitation and discourse data, reveals that 174 out of 176 instances of non-relational human nouns do not take possessive forms,[3] the two instances taking a possessive phrase with unknown reason.[4] Interestingly, there are two lexical items both referring to 'child': *ana:* and *kanakannak*, which differ as to whether it is a kinship term 'someone's child', involving the ego from which the referent is determined, or it is an age-group term referring to younger people than teenagers. Contrastive examples are shown below:

(35) *S⟨um⟩a:y=am*   *ta*   *abang,* *taw,*   *ti*

      ⟨INTR⟩ride=2PL.ABS OBL.INDF ark   2SG.ABS SG.ABS.PSN

      asawa=mu,   *aytidi*   *a:na:=mu=y,*

      wife/husband=2SG.GEN PL.ABS.DEF children (kinship)=2SG.GEN=SPC

      ayde:=tidi   *assawa=di.*

      and=PL.ABS.DEF husband/wife=3PL.GEN

      'You ride into the ark. You, your wife, your children, and their husband and wife.' (Noah's ark, Bible)

(36) *mang-ka:rawèg* *tidi*   *kakka:nak=i.*

      AV-play   PL.ABS.DEF children (age-group)=SPC

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[3]Detailed numbers of non-possessed vs. possessed forms for each lexical item are shown: *arta* '(Arta) person': 46 vs. 0, *agani:* '(non-Negrito) person': 44 vs. 0, *buka:gan* 'female': 15 vs. 0, *gilangèn* 'male': 19 vs. 0, *kanakannak* 'kid, child,' (including *kakka:nak* 'kids, children'): 36 vs. 1, *ulitaw* 'male teenager': 3 vs. 0, *madit* 'female teenager': 2 vs. 0, *babakat* 'elder female': 5 vs. 0, and *dupu:* 'elder male': 6 vs. 1.

[4]It may be explained from the fact that the data in question is a translation from Ilokano, which does not have such a rigid rule on possessive forms.

'The children are playing.'

In (35), *a:na:*, the augmented form of *ana:*, is used, because in this context these referents cannot be small children in that they have their husband or wife. In such a context, *kanakannak/kakka:nak*, as in (36), is not used, because *kanakannak/kakka:nak* designate younger people than teenagers.

In this section, it was shown that a wide range of concepts are encoded by nouns, which were classified according to the semantic class they belong to. They exhibit different behaviors depending on the semantic classes. In the remainder of this chapter, I will focus on four kinds of functional word relevant to nominals: person form, demonstrative, nominal marker, and specificity marker.

5.2   Person forms

This section attempts to describe the system of person forms from morphophonemics to syntax. First, let me define "person form" and related concepts I will use in this section. Person form is used here as the most general term subsuming what is traditionally called *(personal) pronoun, bound person form,* and *agreement marker,* to apply to *three* persons: first, second, and third persons. It may be necessary to clarify how *person form* conceptually differ from *pronoun* and *agreement marker.* Previous descriptive literature has been struggling to identify the nature of various bound person forms, from what might be called an *Eurocentric* perspective: whether a given form is a pronoun (or pronominal form) or agreement marker. Various person forms are identified as agreement markers in spite of the fact that the forms do not require a coreferential nominal to "concord."[5] As mentioned in Haspelmath (2013), however, the obligatory co-occurrence of bound person forms with a coreferential nominal is cross-linguistically unusual (ibid: 3), thus the analogy with the verbal concord with the NP observed in well-known European languages such as English (*make–makes*) and French

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[5] A similar situation is observed in Austronesian linguistics. In the context of historical reconstruction of person forms, the term "pronoun" is preferred rather than more neutral "person form" even when the forms are prosodically dependent and thus behave differently from a noun or nominal. "Agreement marker" has also been used for what should be referred to as "person affix" or "affixal person forms" (Reid 2001, Liao 2005); they use the idea "agreement" without examining how obligatorily the coreferential nominals co-occur with the supposed agreement markers (e.g. **He/The man** *play-s baseball.*).

(*fais–fait–faisons–faites–font*), seems to be non-applicable in many cases of the world's languages. He proposes somewhat different framework and classification in order to capture the nature of various bound person forms *sui generis*. A classification of person forms proposed by Haspelmath (2013) is summarized in Table 5.1:

Table 5.1: Summary of the subclasses of person forms (Haspelmath 2013)

	Person form			
Prosodic feature	bound person form			free person form (pronoun)
Co-occurence with conominal	**gramm-index** (agreement marker) conominal obligatory	**cross-index** (cross-referencing) conominal optional	**pro-index** conominal impossible	—

First, person forms are divided into **free person form** (or pronoun) and **bound person form** based on a prosodic feature: whether it is prosodically independent or dependent.[6] Second, the latter class is divided into three subclasses according to whether the index co-occur with a nominal that has the same role and reference (ibid.: 7). Haspelmath names the nominal as *co-nominal.* **Gramm-index** is a bound person form that co-occur *obligatorily* with a conominal, which corresponds to the traditional term 'agreement marker' (e.g. **The man/He/*Ø play-s baseball.**); **cross-index** is similar to what is commonly called *cross-referencing*, defined as a bound person form with an *optional* conominal; finally, **pro-index** is defined as a bound person form which *cannot* co-occur with a conominal. In what follows, I will use 'free/independent person form' and 'bound person form' rather than 'pronoun' or 'agreement marker' to avoid unnecessary confusions.

Person forms and their morphophonemics

The paradigm of person forms is given in Table 5.2.

In the top row it is shown that there are four different types of syntagmatic slot within a clause or sentence according to which the same person must be encoded differently. *Topical forms* are independent, free person forms, which may appear in an isolating intonation or can constitute a whole utterance. Syntactically they are not dependent on the verbs and

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[6]In this classification, he does not distinguish "clitic" and "affix"

1+2(1+2SG)	tita	-ita	=ta	dita	andita
1+2(1+2PL)	titam	-itam	=tam	ditam	anditam
3SG	siya	Ø	=na	dya	andina
3PL	tidi	=tid	=di	did	andidi

Table 5.2: Person forms in Arta

person	topical	absolutive	genitive	oblique
1SG	*tèn*	*=tèn*	*=ku*	*dèn*
1PL	*tami*	*=ami*	*=mi*	*dami*
2SG	*taw*	*=a, =taw*	*=mu*	*daw*
2PL	*tam*	*=am*	*=muyu*	*dam*
1+2SG	*tita*	*=ita*	*=ta*	*dita*
1+2PL	*titam*	*=itam*	*=tam*	*ditam*
3SG	*siya*	Ø	*=na*	*dya*
3PL	*tidi*	*=tid*	*=di*	*did*

person	topical	absolutive-A	absolutive-B	genitive	dative
1SG	*tèn*	*=tèn*	—	*=ku*	*dèn*
1PL	*tami*	*=ami*	—	*=mi*	*dami*
2SG	*taw*	*=a*	*=taw*	*=mu*	*daw*
1+2SG	*tita*	*=ita*	—	*=ta*	*dita*
1+2PL	*titam*	*=itam*	—	*=tam*	*ditam*
3SG	*siya*	—	—	*=na*	*dya*
3PL	*tidi*	*=tid*	—	*=di*	*did*

do not function as a core argument, and pragmatically their referents are of high topicality or contrasted with another referent. *Absolutive* case forms are bound person forms which function either as an intransitive subject (S) or a transitive object (O). *Genitive* case forms are another set of bound person forms serving either as a transitive subject (A) or a possessor within an NP. *Oblique* case person forms are free person forms (or pronouns), which function as an extended core argument regardless of whether it is a intransitive or transitive clause, and as an adjunct.

The leftmost column shows that there are eight distinct semantic categories that are paradigmatically contrastive. Each category is labelled with two semantic features: person (first, second, first-second, and third) and number (singular and plural). First person corresponds to the speaker, the one who speaks the utterance, and second person corresponds to the addressee to whom the speaker addresses the utterance, and who is expected to be an interpreter of the utterance. First-second person is a set of the two speech act participants: speaker and addressee, and any non-speech-act-participant is coded by third person.

The semantics of the person forms is shown in Figure 5.1. First person singular forms (1SG) are used to refer to the speaker and second person singular forms (2SG), the addressee. First person plural forms (1PL) refer to the speaker and non-addressee(s), and second person plural forms (2PL), to the addressee and at least one non-speaker.[7] First-second singular forms (1+2SG) are used when the referents consist exclusively of the speaker and addressee, and first-second plural forms (1+2PL) are used when the referents consist of

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[7] The second person plural forms may refer to more than one addressee, which is not shown in the figure. Consider *Mamanga:ng=**am**=di!* (eat=2PL.ABS=POST) 'Eat! (speaking to the whole family)'.

speaker–addressee and at least one non-speech act participant.[8] Third singular and plural forms are used when the referent(s) do not include either the speaker or the addressee.
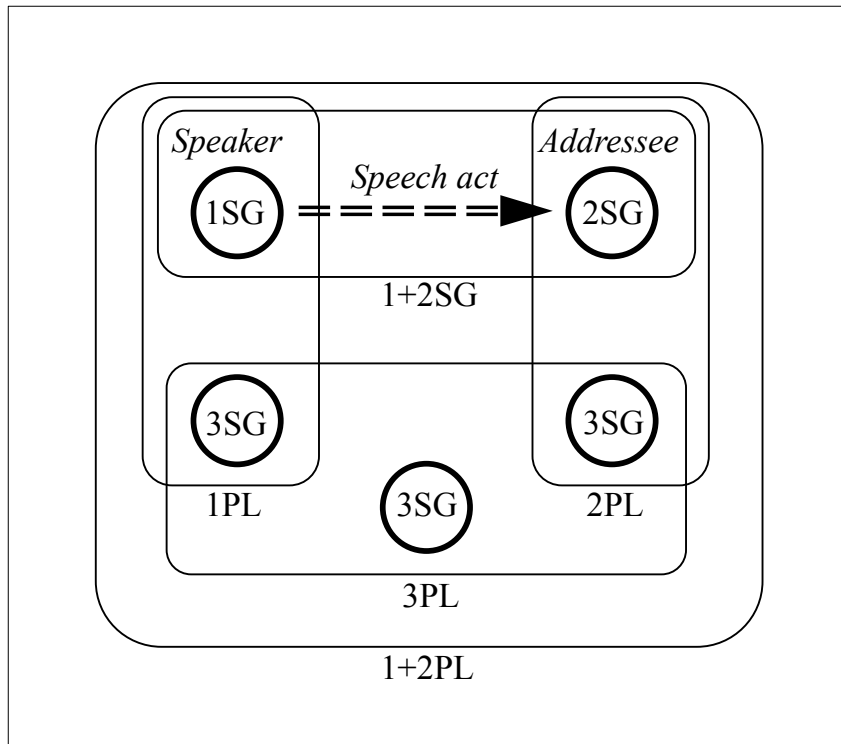
Figure 5.1: Semantic contrast of eight person forms

It might seem to be strange to establish "first-second" person, but it has some advantages both descriptively and methodologically.[9] It is advantageous because the actual morphological forms are isomorphic to the categories. If we see the first-second singular and plural forms in the two rows of the table, we can find that the absence and presence of /m/ are isomorphic to the formal difference between 1+2SG and 1+2PL. Furthermore, to employ alternative labels, 1st plural inclusive vs. exclusive, does not fit the fact in the language in at least three respects. First in Arta, as well as many other Philippine languages, there are two distinct inclusive forms (in my label, first-second singular and plural), thus an ad-hoc "dual" category has to be employed for the first-second singular. Second, it cannot capture the form-meaning pairings between the absence/presence of /m/ and plurality. Finally, there is

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[8]Again the first-second plural forms may be used to refer to the speaker and more than one addressee, as in *Mamanga:ng=**itam**=di.* (eat=1+2PL.ABS=POST) 'Let's eat.'

[9]Conklin (1962) already provided the same analysis for the person form of Hanunoo.

no rigid evidence for labeling inclusive forms as "first" person because they also refer to the second person. Instead of the unsuitable problematic labels, I will use "first-second" person for the categories.

5.2.1   Morphophonemics of person forms

Let us turn to the morphophonemics of bound person forms. Morphophonemic alternations may occur in the boundaries between host words and bound person forms (or enclitics). The bound person forms which trigger or undergo morphophonemic alternations fall into two groups according to the kinds of morphophonemic alternation. First, the person forms beginning with /m/ trigger the assimilation of word-final /n/ to /m/. This is the case for three genitive person forms, *=mi, =mu* and *=muyu*, which, if the host word ends with /n/, changes /n/ to /m/, as exemplified in (37):

(37)   a.   *=mi* (1PL.GEN)

        panga:nèn + *=mi* > *panga:nèm=mi* 'our (not your) food'

    b.   *=mu* (2SG.GEN)

        panga:nèn + *=mu* > *panga:nèm=mu* 'your (sg.) food'

    c.   *=muyu* (2PL.GEN)

        panga:nèn + *=muyu* > *panga:nèm=muyu* 'your (pl.) food'

Another group of items exhibits quite complex morphophonemic patterns. Let me first divide absolutive person forms into two sets: absolutive-A and absolutive-B (Table 5.3), and only the first set (absolutive-A) triggers morphophonemic alternations. One genitive person form *=ku* also shows a similar alternation pattern. The absolutive-A set consists of: (i) ***a-initial enclitics***, absolutive bound forms beginning with /a/: *=a* (2SG.ABS), =am (2PL.ABS) and =ami (1PL.ABS), (ii) ***i-initial enclitics***, absolutive bound forms beginning with /i/: *=ita* (1+2SG.ABS) and *=itam* (1+2PL.ABS). Each subgroup exhibits similar alternations but with subtle differences.

If a clitic attaches to a host word which ends in a vowel, in most cases there is no morphophonemic alternation between the host word and clitic. In the case of the combination

2PL	*tam*	*=am*	*=muyu*	*dam*	
1+2SG	*tita*	*=ita*	*=ta*	*dita*	
1+2PL	*titam*	*=itam*	*=tam*	*ditam*	
3SG	*siya*	Ø	*=na*	*dya*	
3PL	*tidi*	*=tid*	*=di*	*did*	

Table 5.3: Person forms in morphological perspective

person	topical	absolutive-A	absolutive-B	genitive	dative
1SG	*tèn*	–	*=tèn*	*=ku*	*dèn*
1PL	*tami*	*=ami*	–	*=mi*	*dami*
2SG	*taw*	*=a*	*=taw*	*=mu*	*daw*
2PL	*tam*	*=am*	–	*=muyu*	*dam*
1+2SG	*tita*	*=ita*	–	*=ta*	*dita*
1+2PL	*titam*	*=itam*	–	*=tam*	*ditam*
3SG	*siya*	–	–	*=na*	*dya*
3PL	*tidi*	–	*=tid*	*=di*	*did*

between /a/-initial enclitics and a host word ending in /a/ or /i/, however, the insertion of /y/ occurs, as in (38) and (39):

(38) a. *me:na* 'go' + *=a* > *me:naya* 'you (sg.) go'

  b. *me:na* 'go' + *=am* > *me:nayam* 'you (pl.) go'

  c. *me:na* 'go' + *=ami* > *me:nayami* 'we (excl.) go'

  cf. *me:na* 'go' + *=ita* > *me:naita* 'you (sg.) and I go'[17]

(39) a. *atti:* 'exist' + *=a* > *atti:ya* 'you (sg.) are (here).'

  b. *atti:* 'exist' + *=am* > *atti:yam* 'you (pl.) are (here).'

  c. *atti:* 'exist' + *=ami* > *atti:yami* 'we (excl.) are (here).'

  cf. *atti:* 'exist' + *=ita* > *atti:ita* 'you (sg.) and I are (here)'

On the other hand, if these clitics attach to a host word which ends with a consonant, the preceding vowel of the consonant must be lengthened. In addition, the enclitic *=ku* undergoes deletion of /k/:

(40) a. *tittuttud* 'be sitting' + *=a* > *tittuttu:da* 'you (sg.) are sitting'

  b. *tittuttud* 'be sitting' + *=am* > *tittuttu:dam* 'you (pl.) are sitting'

  c. *tittuttud* 'be sitting' + *=ami* > *tittuttu:dami* 'we (excl.) are sitting'

  d. *tittuttud* 'be sitting' + *=ita* > *tittuttu:dita* 'you (sg.) and I are sitting'

  e. *tittuttud* 'be sitting' + *=itam* > *tittuttu:dita* 'we are sitting'

  f. *tud* 'knee' + *=ku* > *tu:du* 'my knee'

If a host word ends with /n/, an additional phonological change occurs as well as a vowel lengthening: the velarization of /n/, as shown below. In this phonological environment, *=ku* exhibits the most complex case in that the final vowel in the host word is lengthened, /k/ is deleted, and /n/ becomes /ŋ/, as shown in (42):

(41)   a.   *pa:mangan* 'be eating' + *=a* > *pa:manga:nga* 'you (sg.) are eating'

       b.   *pa:mangan* 'be eating' + *=am* > *pa:manga:ngam* 'you (pl.) are eating'

       c.   *pa:mangan* 'be eating' + *=ami* > *pa:manga:ngami* 'we (excl.) are eating'

       d.   *pa:mangan* 'be eating' + *=ita* > *pa:manga:ngita* 'you (sg.) and I are eating'

       e.   *pa:mangan* 'be eating' + *=itam* > *pa:manga:ngitam* 'we (all) are eating'

(42)   *tyan* 'belly' + *=ku* > *tya:ngu* 'my belly'

As already discussed in §2.2.5, It is not a mere coincidence that most of the absolutive-A enclitics begin with a vowel, and in some environments *=ku* behaves as a vowel-initial clitic *=u*. These absolutive-A enclitics are related to the fact that they lost initial *k. As I discussed in Chapter 2, in Arta *k was lost as seen in such lexical items as *sakay > *say* 'ride on'. In his reconstruction of person forms in Proto-Northern Luzon, Reid (1979) reconstructs *=ka (2SG.ABS), *=kamuyu (2PL.GEN), *=kami (1PL.ABS), *=kita (1+2SG.ABS), and *=kitam (1+2PL.ABS), as shown in Table 5.6. Given the loss of *k, all of the reconstructed forms are identical with the current Arta forms except for *=kamuyu to *=am* (2PL.GEN). Furthermore, the velar nasal would be a result of assimilation of /n/ before /k/. The lengthening of the preceding vowel is also explainable by the loss of *k (see §2.2.5).

5.2.2   Sequential order of bound person forms

In many Philippine languages, if a clause contains two person arguments as in 'I will call you', the sequence of bound person forms may undergo phonological fusion, the two bound person forms becoming unsegmentable. In Arta, however, any combination of two bound person forms do not trigger phonological fusion. A list of the combinations between genitive (transitive A) and absolutive (transitive O) person forms are given in Table 5.4.

In the table, the genitive bound person forms are shown in the leftmost column, and the absolutive in the top row. The general principle is that genitive bound person form is followed

Table 5.4: Combination of two person forms

	1SG.ABS	1PL.ABS	2SG.ABS	2PL.ABS	1+2SG.ABS	1+2PL.ABS	3SG.ABS	3PL.ABS
	B =*tèn*	A =*ami*	A =*a* B =*taw*	A =*am*	A =*ita*	A =*itam*	Ø	B =*tid*
1SG.GEN =*ku*			=*tataw*	=*ku(w)am*			=*ku*	=*tatid*
1PL.GEN =*mi*			=*mi(y)a,* =*mitaw*	=*mi(y)am*			=*mi*	=*mitid*
2SG.GEN =*mu*	=*mutèn*	=*mu(w)a:mi*					=*mu*	=*mutid*
2PL.GEN =*muyu*	=*muyutèn*	=*muyu(w)a:mi*					=*muyu*	=*muyutid*
1+2SG.GEN =*ta*							=*ta*	=*tatid*
1+2PL.GEN =*tam*							=*tam*	=*tamtid*
3SG.GEN =*na*	=*natèn*	=*naya:mi*	=*naya* =*nataw*	=*nayam*	=*naita*	=*naytam*	=*na*	=*natid*
3PL.GEN =*di*	=*ditèn*	=*di(y)a:mi*	=*di(y)a* =*ditaw*	=*di(y)am*	=*dita*	=*di:tam*	=*di*	=*ditid*

by the absolutive. This has no exception; in all cases, the genitive precedes the absolutive. Phonologically, glide insertion appears if there is a vowel sequence between the two person forms, and the vowel /a/ of =*ami* (1PL.ABS) is lengthened if the form is preceded by an vowel-final form.

The expected form of the first singular genitive person form and second singular absolutive person form would be =*ku=a*, or =*ku=taw*, but the actual form is =*ta=taw* as in (43)[10]:

(43) *Adu:p-an=**ta=taw**.*

   help-TR=1SG.GEN:2SG.ABS

   'I will help you.'

This is also the case in =*tatid* (1SG.GEN;3PL.ABS; not =*kutid*). There is an interesting observation by Reid (1979): "[e]vidence from NC and SC languages,[11] as well as from languages outside these groups (even from languages as far south as Timogon Murut in Sabah) shows reflexes of *ta for Genitive 1s when in combination with one of the short Nominative person

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[10]The formative *tataw* is segmentable into =*ta=taw*; for example, the adjunct enclitics =*di* 'just, already' and =*tep* 'still' can be inserted into the boundary, as in =*ta=**d**=taw* and *ta=**tep**=taw*.

[11]NC: Northern Cordilleran, SC: Southern Cordilleran.

forms[12] in a "passive" sentence"(ibid.: 9). Here "passive" seems to be the transitive clause as in (43), thus the formative *=ta* in Arta seems to be a reflex of *ta, retained (or fossilized) in a quite limited context.

When the bound person forms co-occur with "second-position enclitics", i.e. the adjuncts which also appears immediately after the predicate (grammatically serving as phasal markers and epistelic modals), the ordering between the second-position enclitics and person forms is determined according to whether the person form is genitive, absolutive-A, or absolutive-B (see Table 5.3 for the list of the absolutive-A and -B bound forms). The ordering follows the principle below:

(44)   Second-position enclitics follow genitive and absolutive-A person forms, but precede absolutive-B person forms.

Considering the fact that the genitive person markers precede the absolutive-A and -B, the following orderings work as shown in Table 5.5 and the examples illustrated in (45):

Table 5.5: The ordering of second-position enclitics and bound person forms

	Combination	Example
(i)	=GEN=[enclitic]	*=na=**tep*** (3SG.GEN=still)
(ii)	=B-ABS=[enclitic]	*=itam=**tep*** (1+2PL.ABS=still)
(iii)	=[enclitic]=A-ABS	*=**tep**=tid* (=still=tid)
(iv)	=GEN=[enclitic]=A-ABS	*=na=itam=**tep*** (=3SG.GEN=1+2PL.ABS=still)
(v)	=GEN=B-ABS=[enclitic]	*=na=**tep**=tid* (3SG.GEN=still=3PL.ABS)

(45)   a. (i) *Adu:p-an=<u>na</u>=**tep**.*

         help-TR=3SG.GEN=still

       'S/he will still help him/her.'

   b. (iv) *Adu:p-an=<u>na</u>=<u>itam</u>=**tep**.*

          help-TR=3SG.GEN=1+2PL.ABS=still

       'S/he will still help us.'

   c. (v) *Adu:p-an=<u>na</u>=**tep**=<u>tid</u>.*

         help-TR=3SG.GEN=still=3PL.ABS

       'S/he will still help them.'

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[12]"The short nominative person form" is identical with what I call here the absolutive bound person form.

This ordering rule is rigid in that the order between person forms and other second-position enclitics is not affected by, or interact with, the phonological weight of the items, or other morphological/syntactic factors.[13] The following examples demonstrate that even when more than one second-position enclitic occur with the person markers, the order remains the same:

(46)　a.　*Pakkape:=**sika=tep**=taw!*

　　　　PRG-coffee=EXP=still=2SG.ABS

　　　　'(Oh!) You are still drinking coffee!'

　　b.　*Mangi-rugi=**d=mande:**=tid.*

　　　　INTR-begin=POST=again=3PL.ABS

　　　　'They will just begin it again.'

　　c.　*Mangi-rugi=ita=**d=mandi**.*

　　　　INTR-begin=1+2SG.ABS=POST=again

　　　　'Let's begin again.'

Why do two types of absolutive person marker differ significantly in their position? Let me attempt to explain the difference from a diachronic perspective. To identify the historical change of person forms, the reconstructed forms of Proto-Northern Luzon[14], from which Arta is directly inherited, are provided in Table 5.6.

First, the genitive and absolutive-A person markers appear to be inherited forms of the enclitic person markers in Proto-Northern Luzon (PNLZN). As given in Table 5.7 and 5.8, the possible diachronic change is easily identifiable. Most of the absolutive-A forms are explained by the regular sound changes that occurred in Arta (i) the loss of *k, responsible for the absolutive-A forms and *=ku/=u*, and (ii) low-vowel fronting (LVF), responsible for *=da > =di* (3PL.GEN), both of which also occurred in lexical items (see 2.2). An irregular sound change is only observed in *=kamuyu > =am*, which underwent a clipping. Genitive

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[13]Arta seems different from many other Philippine languages in that the ordering is fixed regardless of the prosodic, morphological, and syntactic contexts. In Tagalog, for example, the order may vary according to the phonological weight of the items, as in *pumasok=na=ako* 'I already entered.' and *pumasok=ka=na.* 'You already entered.' (Reid, p.c.) See also Lee (2004) for the interactions of various factors for determining the ordering in Mindanao languages.

[14]In Reid (1979), he labelled the proto-language as "Proto-Cordilleran", but I use "Proto-Northern Luzon, according to his recent publication (Reid 2006, 2013).

Table 5.6: Proto-Northern Luzon person forms (Reid 1979: 15)

	Independent	Absolutive	Genitive
1sg	*siyakən	*=ak	*=ku ∼ *=k, =*ta
1pl	*siʔikami	*=kami	*=mi
2sg	*siʔikaw	*=ka	*=mu ∼ *=m
2pl	*siʔikamuyu	*=kamuyu	*=muyu
1+2sg	*siʔikita	*=kita	*=ta
1+2pl	*siʔikitam	*=kitam	*=tam
3sg	*siya	*Ø	*=na
3pl	*siʔida	*=da	*=da

and absolutive-A person markers thus seem to be the reflexes of the enclitic forms of PNLzn person forms.

Table 5.7: PNLzn proto-forms and their reflexes in Arta: Genitive

	PNLzn		Arta		PNLzn		Arta
1sg	*=ku	>	=*ku/=u*		1pl	*=mi	>	=*mi*
2sg	*=mu	>	=*mu*		2pl	*=muyu	>	=*muyu*
1+2sg	*=ta	>	=*ta*		1+2pl	*=tam	>	=*tam*
3sg	*=na	>	=*na*		3pl	*=da	>	=*di*

Table 5.8: PNLzn proto-forms and their reflexes in Arta: Absolutive-A

	PNLzn		Arta
1pl	*=kami	>	=*ami*
2sg	*=ka	>	=*a*
2pl	*=kamuyu	>	=*am*
1+2sg	*=kita	>	=*ita*
1+2pl	*=kitam	>	=*itam*

Consider the diachronic source of absolutive-B person forms. As shown in Table 5.9, they seems to be inherited from the independent pronouns in PNLzn.

Even a cursory glance at the table suggests that the third singular person form *siya* has an irregular phonological shape, exceptionally retaining initial /s/, rather than /t/. The other items share the similar relationship to the proto-forms; first, the initial *s is reflected as /t/; second, *k and *ʔ are reflected as zero, as seen other lexical items (see 2.2); and finally, the first and second syllables were fused or lost, with the person forms reduced to monosyllabic or bisyllabic forms. Other cases include apocope (the loss of word-final segments) in *siʔikamuyu > *tam*, and low-vowel backing (*a > /u/) in *tidu*.

Table 5.9: PNLᴢɴ proto-forms and their reflexes in Arta: Topical and Absolutive-B

	PNLᴢɴ Independent		Arta Topical	Abs-B		PNLᴢɴ Independent		Arta Topical	Abs-B
1sɢ	*siyakən	>	*tèn*	=*tèn*	1ᴘʟ	*siʔikami	>	*tami*	
2sɢ	*siʔikaw	>	*taw*	=*taw*	2ᴘʟ	*siʔikamuyu	>	*tam*	
1+2sɢ	*siʔikita	>	*tita*		1+2ᴘʟ	*siʔikitam	>	*titam*	
3sɢ	*siya	>	*siya*		3ᴘʟ	*siʔida	>	*tidu*	=*tid*

The radical reduction of the initial segments of each person form involves the regular sound change whereby *k and *ʔwere lost in Arta. By the loss of these intervening consonants, the first two or three syllables have been fused into monosyllable. However, it is interesting that the third vowel of each form is completely retained, whereas the first and second vowels were totally lost. This may relate to the fact that the initial formative *siʔik- is shared by *siʔikami (first plural), *siʔikaw (second singular), *siʔikamuyu (second plural), *siʔikita (first-second singular), and *siʔikitam (first-second plural), and it is similar to siyak- in *siyakən (first singular), and *siʔida (third plural). Therefore, the reduced forms can still bear the same functional load. Furthermore, the reduction may have occurred without destroying the analogical relationship between the absolutive bound forms. If the third vowels of the proto-forms had been affected by the reduction, as in *siʔikami > **te:mi*, the analogical relationship between the independent forms and the absolutive enclitic forms would have been lost (***te:mi* vs. =*ami*). The reflexes of the independent forms retain shared formatives with the absolutive forms as in *tami* − =*ami* (1ᴘʟ), *tam* — =*am* (2ᴘʟ), *tita* — =*ita* (1+2sɢ), *titam* — =*itam* (1+2ᴘʟ).

With regard to *s > /t/, the parallel change attested in the personal nominal marker *si > ti* is worth considering as well (Reid, p.c.). The personal nominal marker *ti* is a nominative nominal marker introducing proper names and kinship terms as in *Atti: ti Delia ayti* (exist sɢ.ᴀʙs Delia here) 'Delia is around here.' In many Northern Luzon languages, independent pronouns consist of an absolutive nominal marker and an bound person form. Thus the change *s > /t/ in the independent pronominal forms ultimately resort to the preceding change in the absolutive nominal marker *si > /ti/, after which the nominal marker was incorporated as a formative that constituts the independent pronouns. The nominal marker *ti* might be a result of the sporadic sound change *s > /t/ which internally occurred in Arta,

or the item might be borrowed from a Northern Luzon language (cf. Southern Alta, Northern Alta, and Casiguran Agta, where the personal nominative nominal marker is *ti*).

Finally, it is an open question why *siya* exceptionally retains *s. A possible factor would be the lower frequency of this person form. The third person argument appearing in a clause may variously coded by such forms as lexical NPs, demonstratives as well as person forms, whereas the first and second person arguments are marked by person forms. Furthermore, in Arta, the preferred strategy for marking anaphoric NPs is employing a distal demonstrative, thus the use of third singular person forms is significantly low. The form directly inherited from PNLzn *siya might have been replaced by another form *siya*, which was probably adopted from a neighboring language (for example, Casiguran Agta is a possible source, in which the third singular independent pronoun is *siya*).

Given these phonological changes, the following chronological order of changes is proposed:

(47)   Stage 0 (PNLzn)

      Genitive and absolutive-A person forms existing as bound forms

  Stage 1 (Pre-Arta)

      Assimilation of /n/ > /ŋ/ before initial-*k* of genitive and absolutive-A person forms.

  Stage 2 (Pre-Arta)

      The loss of *k and *ʔ

      > Development of morphological alternations between the host word and genitive & absolutive-A person forms

      > The radical reduction of independent person forms

  Stage 3 (Pre-Arta)

      Cliticization of three independent pronouns (*taw, tèn* and *tid*)

As discussed, in Proto-Northern Luzon, genitive and absolutive-A person forms were bound forms, but absolutive-B person forms were still independent pronouns. In the next stage (Stage 1), the assimilation of /n/ > /ŋ/ before initial-*k* of genitive and absolutive-A person forms occurred. In Stage 2, by the loss of the two consonants, morphological alternations

were brought about in the boundary between the enclitics and host words. Up to this stage, that is, before independent pronouns were encliticized into the absolutive-Bs, various adverbial adjuncts must have developed as enclitics. In the final stage (Stage 3), three independent pronouns are encliticized before predicates, and the enclitics (absolutive-B) began to follow the adverbial adjuncts. Noted that cliticization seems to have occurred in different substages. Probably the earliest cliticization would be the first person pronoun *tèn*, because the loss of **k* triggered an ambiguity between **=ak* (PNLzn 1SG.ABS) and **=ka* (PNLzn 2SG.ABS), and currently only the second singular enclitic *=a* is attested but the first singular enclitic **=ak* is completely replaced by the independent form *tèn*.

Two different sources of absolutive bound person forms (i.e. absolutive-A from PNLzn bound forms, and absolutive-B from PNLzn independent forms) seem to explain why some person forms (absolutive-A) precede adjunct enclitics, but other person forms (absolutive-B) follow them. It probably comes from different stages of encliticization.

5.2.3 Bound person forms as cross-indexes

As summarized in Table 5.1, Haspelmath (2013) subcategorizes the bound person form into gramm-index (agreement marker), cross-index (cross-referencing), and pro-index according to the possible co-occurrence of conominals. In Arta, the genitive and absolutive bound person forms are considered to be cross-indexes. First, person marking on the verb is largely obligatory, even though the participant(s) of the event is unambiguous because of the rich contextual resources. Consider the following two excerpts from discourses:

(48) 1. *Ay,   tanakan   a   na-pilèy?*
     filler   when   LIG   PSTPOT-crippled
     'Oh, (you mean) when was I crippled?'

  2. *Killèk=tep=**tèn**.   Man=na=**tèn**   ni   Maribel.*
     small=still=1SG.ABS   as.if=3SG.GEN=1SG.ABS   SG.GEN.DEF   Maribel
     'I was still small, like Maribel.'

  3. *Ta   Alissya.*
     OBL.INDF   Alicia
     'in Alicia.'

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4. *T⟨in⟩⟨um⟩uttud=**tèn**=hug*   *ta*   *buntun*   *a*   *tapa.*

   ⟨PST⟩⟨INTR⟩sit=1SG.ABS=as.I.said   OBL.INDF   termite.mound   LIG   soil

   'As I said, I sat down on a termite mound.'

5. *Kilè-killèk*   *a*   *tapa.*   *Nab-bukèl.*

   RDP-small   LIG   soil   INTR-round

   'It is very small and round.'

6. *Tit-tuttud=**tèn***   *ta*   *tanga na langit.*   *P⟨in⟩e:si-an=na,*

   STV-sit.down=1SG.ABS   OBL.INDF   noon   ⟨PST⟩whip-TR=3SG.GEN

   wa   *me:ta*   *ay,*   *buli=ku=y.*

   filler   see   filler   buttocks=1SG.GEN=SPC

   'I was sitting there at noon, and my buttocks were whipped.'

7. *P⟨in⟩a-paditèng=de:=**tèn**.*

   ⟨PST⟩CAUS-desease=POST=1SG.ABS

   'I was made to be sick.'

8. *Tit-tuttud=**tèn***   *ta*   *buntun.*

   STV-sit.down=1SG.ABS   OBL.INDF   termite.mound

   'I was sitting on a termite mound.'

9. *Unaddawa,*   *na-bayag=**tèn**=ta*   *mang-ka:rawèg=**tèn***   *ta*

   after.that   POT-long=1SG.ABS=there   INTR-play=1SG.ABS   OBL.INDF

   buntun=i.

   termite.mound=SPC

   'After that, I was playing there around the termite mound.' (arta0502)

(49) 1. *Ki:gad*   *a*   *awan*   *g⟨um⟩i:nèk*   *i*   *bagyo=y,*

      until   LIG   NEG   ⟨INTR⟩stop   SG.ABS.DEF   typhoon=SPC

      'Until the typhoon stops,'

   2. *mangay=de:=**tid***   *mam-murab*   *da*   *awan*   *ta*   *anèn=mi*

      go=POST=3PL.ABS   INTR-hunt   because   NEG   OBL.INDF   food=1PL.GEN

      a   *mabaw.*

      LIG   staple.food

'They just go hunting because we do not have food.

3. *Mangay=de:=**tid**   mam-murab.*
   go=POST=3PL.ABS   INTR-hunt
   'They go hunting.'

4. *Maka-alap=**tid**   ta   laman   aydi   bidut.*
   POT-get=3PL.ABS   OBL.INDF   wild.pig   and   deer
   'They can get wild pigs and deer.'

5. *Man-du:tung=de:=**tid**   a   mang-wa   ta   laman=i*
   INTR-remove.hair=POST=3PL.ABS   LIG   INTR-do   OBL.INDF   wild.pig=SPC
   'They remove wild pig's hair like that.' (video07)

In (48), the speaker is talking about her own experience of a disease. In spite of the redundancy of the first singular form, the marking obligatorily attaches to the predicates. In (49), third plural person is explicitly marked on the verb, regardless of whether it is informative or redundant. These examples indicate that the person marking on the predicate is largely obligatory.

Although the person marking on predicates is obligatory, bound person forms exhibit a nearly complementary distribution with conominals. It is not ungrammatical to co-occur with a conominal, but it is unusual in the discourse. Consider the following data excerpted from discourse:

(50)   Transitive A (=*na* (3SG.GEN))

   a. *Ta dutul   a   me'-'a:du   da   p⟨in⟩a-pati=Ø=hug   **na***
      before   LIG   ADJ-many   because   ⟨PST⟩CAUS-die=as.I.said   GEN.INDF
      ***dapug**.*
      carabao/tamaraw
      'There were many Arta people before because they were killed by carabaos (or tamaraws)' (arta0108)

   b. *Tidi   ama=ku,   pat-tuttu:ruwan=Ø=tid   **na***
      PL.ABS.DEF   father=1SG.GEN   PRG-learn-TR=3PL.ABS   GEN.INDF

agani:.

non-Arta.people

'My fathers were taught by non-Arta people (how to plant rice). (arta0108)

(51)   Transitive A (=*di* (3PL.GEN))

    a.   *Ay   pangal,   pang-u:sarèn=Ø   **didi**   **ama=mi=ti***

        arrow   PRG-use-TR   PL.GEN/OBL.DEF   father=1PL.GEN=SPC

    ta dutul.

    before

    'The arrows, our fathers were using them before.' (arta0002)

    b.   *Saya   pang-a:n-èn=Ø   **didi**   **kakka:nak=mi**   ta   aytay*

        that   PRG-eat-TR   PL.GEN/OBL.DEF   kids=1PL.GEN   OBL.INDF   now

    a   langit.

    LIG   day

    'That is what our kids are eating nowadays.' (arta0003)

(52)   Intransitive S (=*tid* (3PL.ABS))

    a.   *Mam-pulot=tid.*   *Tip-pulo-pulot=Ø   **tidi**   **gilangan=i.***

        INTR-g-string=3PL.ABS   STV-RDP-g-string   PL.ABS.DEF   male=SPC

    'They wear g-strings. The men wore g-strings.' (arta0114)

    b.   *Nap-pati=d=Ø   **tidi**   **daddu:pu:=ti.***

        INTR-die=POST   PL.ABS.DEF   old.men=SPC

    'The old men are already dead.' (arta0506)

(53)   Transitive O (=*tid* (3PL.ABS))

    a.   *In-adu:p-an=di.   P⟨in⟩idut=di=Ø   **tidi**   **bunga   na***

        PST-help-TR=3PL.GEN   PSTpick.up=3PL.GEN   PL.ABS.DEF   fruit   GEN.INDF

    ayu=y   ...

    tree=SPC

    'They helped. They picked up the fruits of trees.' (arta0005)

    b.   *Tata:w=u   konta   na-lipata:ng=u=Ø   **tidi**   **a:duwan.***

        know=1SG.GEN   but   POT-forget=1SG.GEN   PL.ABS.DEF   other

'I know, but I have forgot some of them. (arta0506)

In (50,51), the A arguments of the transitive clauses appear as full nominals as indicated in boldface, and the verbs do not take any person form: *=na* in (50a,b), and *=di* in (51a,b). In (52,53), the S arguments of the intransitive clauses and the O of the intransitive clauses occur as full nominals, but again no bound person forms are indexed on the predicates. Note that the absolute third singular form is zero, only the plural bound person form *=tid* is illustrated in (52, 53).

It is however possible that conominals co-occur with the person forms in one intonation contour. It is the evidence that bound person forms can be analyzed as cross-indexes. Consider the following examples:

(54)   *Awan=**di***   *tataw*   ***didi***   ***Iloka:no***   *a*   *wa*   *ngadin*   *na*

       NEG=3PL.GEN   know   PL.GEN/OBL.DEF   Ilokano   LIG   filler   name   3SG.GEN

       ulas.

       fire.making.tool

       'Ilokano people do not know the name of 'ulas'.'

(55)   *Punan=**na***   ***ayni***   ***babakat=i**,*   *a*   *ina*   *ni*

       say=3SG.GEN   DEM.GEN.PROX   old.woman=SPC   LIG   mother   SG.GEN.DEF

       buka:gan=i.

       woman=SPC

       'Said the old woman, (who is) the woman's mother.' (arta0106)

(56)   1. A   *Amma*   *mam-murab*   *tidi*   *ama=mi=ti,*

          if   INTR-hunt   PL.ABS.DEF   father=1PL.GEN=SPC

       If our fathers go hunting,

      2. B   *alallayan=mi,*

          parents=1PL.GEN

       'our parents,'

      3. A   *alallayan=mi,*

          parents=1PL.GEN

       'our parents,'

4. A *ngay=**tid**,*   *ngay=**tid***   *mang-ali*   ***tidi***   ***ina=mi***

    go=3PL.ABS   go=3PL.ABS   INTR-dig   PL.ABS.DEF   mother=1PL.GEN

    ta   *giwat*   *aydi:*   *ilus.*

    OBL.INDF   taro   and   yam

    'our mothers went digging taros and yams.' (arta0002)

The conominals are limited to the following NPs: (i) inherently definite nouns such as a proper name as in (54), (ii) nouns with a deictic function as in (55), and (iii) the noun whose referent is inferrable from the discourse as in (56), where 'our mothers' is preceded by a more inclusive concept 'our parents'. The conominal construction is basically employed only when the information status of the referent is relatively old (given). In other words, when the information status of the referent is 'brand-new' (Prince 1981: 235ff), i.e. if the information is assumed to be totally unfamiliar to the hearer, a full nominal does not co-occur with the corresponding bound person form (compare the information status of the nominals in (50a,b) with the ones in (54–56)). The co-occurrence of a conominal and a bound person form is found quite sporadically; rather, it is much more common that full nominals and bound person forms are distributed complementarily. Bound person forms in Arta are thus considered to be cross-index.

5.3   Demonstratives

5.3.1   Morphology and syntax

Demonstratives in Arta have as their basis a three-way formal opposition *i(:), ina, ya(:)* (vowel length is variable). All of the actual forms have one of the three morphemes in them. The set of demonstratives is shown in Table 5.10. As shown in the table, demonstrative forms are classified according to three parameters: number (singular vs. plural), case (topical vs. absolutive vs. genitive/ergative vs. oblique), and distance (proximal, vs. medial, vs. distal). Some forms may have both independent and bound variants (e.g. *a:yi:* and *=i*).

An analysis of the morphological structure of each demonstrative form follows. First, *i*, *ina*, and *ya* can attach to verbs and other kinds of predicate as *=i, =ina,* and *=ya*, serving as

Table 5.10: Demonstratives in Arta

		TOP	ABS	GEN/ERG	OBL
PROXIMAL	SG	*si:yèy*	*a:yi:*	*ni/na a:yi:/ayni*	*ti/ta a:yi:*
			=i	*=ni*	*=ti*
	PL	*satidi:*	*(ay)tidi a:yi:*	*(ay)didi a:yi:*	*(ay)didi a:yi:*
MEDIAL	SG	*sayna*	*a:yina,*	*ni/na ayna*	*ti/ta ayna*
			=ina	*=nina*	*=tina*
	PL	*satidi:na*	*(ay)tidi:na*	*(ay)didi:na*	*(ay)didi:na*
DISTAL	SG	*saya*	*a:ya:,*	*ni/na a:ya:*	*ti/ta a:ya:*
			=ya:		*=ta*
	PL	*satiddya:*	*(ay)tiddya*	*(ay)didi a:ya:*	*(ay)didi a:ya:*

singular absolutive argument indexes. These are the simplest forms within the paradigm.

(57) *Ana:=ku*   {*=i*,   *=ina*,   *=ya*}.

   child=1SG.GEN   =DEM.PROX   DEM.MED   DEM.DIST

   '{This, That, Yon} is my child.'

Each morpheme may take either *n-* or *t-*, deriving genitive and oblique forms. Again these are bound forms. The reason why *niya (distal singular genitive form) is absent is unknown.

(58) *Maribel,   ana:*   {*=ni*,   *=nina*}

   Maribel   child   DEM.PROX   DEM.MED

   'Maribel is a child of {this, that}.'

(59) *I-wa=ku=p*   {*=ti*,   *=tina*,   *=ta*}

   TR-do=1SG.GEN=DIGR   DEM.PROX   DEM.MED   DEM.DIST

   'I just put it {here, there, yonder}.'

The independent forms of singular absolutive forms *a:yi:*, *ayna* (or *a:yina*), and *ayya:* involve the attachment of the topical particle *ay*, although the morphological boundaries may be opaque.

(60) *Lappul=mi*   {*a:yi:*,   *ayna/a:yina*,   *ayya:*}

   dog=1PL.GEN   DEM.PROX   DEM.MED   DEM.DIST

   '{This, That, Yon} is our dog.'

in the case of the genitive(/ergative) and oblique forms, periphrastic forms are observed. All the cases involve a preposed nominal marker (*ni/na* for singular genitive(/ergative) forms, *ti/ta* for singular oblique, and *(ay)didi* for plural genitive(/ergative) and oblique):

(61)   a.   *Ina*   ***ni***   {***ayni/a:yi:,***   ***ayna,***   ***a:ya:***}

        mother   SG.GEN.DEF   DEM.PROX   DEM.MED   DEM.DIST

        '(She is) the mother of {this, that, yon}.' (elicitation)

    b.   *I-wa=ku=p*   ***ti***   {***ayti,***   ***aytina,***   ***ayta***}

        TR-do=1SG.GEN=DIGR   SG.OBL.DEF   DEM.PROX   DEM.MED   DEM.DIST

        'I just put it {here, there, yonder}.' (elicitation)

    c.   *Ina*   ***didi***   {***ayni/a:yi:,***   ***ayna,***   ***a:ya:***}

        mother   PL.GEN   DEM.PROX   DEM.MED   DEM.DIST

        '(She is) the mother of {these, those, yon} ones.' (elicitation)

    d.   *Y-atèd=u*   ***didi***   {***ayni/a:yi:,***   ***ayna,***   ***a:ya:***}

        TR-give=1SG.GEN   PL.OBL   DEM.PROX   DEM.MED   DEM.DIST

        'I will give it to {these, those, yon} ones.' (elicitation)

Topical forms, those appearing in sentence-initial position, are composed of a preposed formative *sa-*. The phoneme /s/ may be relevant to PNLzn *si (absolute nominal marker), but details are unknown. Plural forms are complex; *sa-* is followed by the absolute plural nominal marker *tidi*, before demonstrative morphemes (*i, ina, ya*):

(62)   {***Si:yèy,***   ***Sayna,***   ***Saya***},   *andi=ku*

        DEM.PROX   DEM.MED   DEM.DIST   possessum=1SG.GEN

        '{This, That, Yon} is mine.' (elicitation)

(63)   {***Satidi:,***   ***Satidi:na,***   ***Satiddya:***},   *andi=ku*

        DEM.PROX   DEM.MED   DEM.DIST   possessum=1SG.GEN

        '{These, Those, Yon} are mine.' (elicitation)

    Demonstratives may co-occur with *=te:/=taddi* 'just, only', or *muna* 'similar to, like', as in the following examples.

(64)   a.   *ayta* + *=te:* 'just, only' > *ay**te:**ta*

Ti	ay**te:**ta	a	langit	s⟨in⟩⟨um⟩ay=de:=tid
SG.OBL.DEF	DEM.DIST.just	LIG	day	⟨PST⟩⟨INTR⟩ride=POST=3PL.ABS

ta	abang=i.
OBL.INDF	ark=SPC

'On that very day, they rode onto the ark. (Noah)

b. *si:yèy* + *=te:* 'just, only' > *sa**te:**i:*

Sa**te:**i:	mepep-piya	aydidi:na	atanan.
DEM.PROX.just	ADJ.RDP-good	DEM.MED.OBL	all

'Only this one is better than any others.' (elicitation)

c. *saya* + *=taddi* 'just, only' > *sa**tadde:**ya:*

Sa**tadde:**ya:	gindat=na.
DEM.DIST.only	end=3SG.GEN

'(After telling a story) That is the end (of the story).'

(65) a. *=ti* + *muna* 'similar, like' > ***muna**ti*

***Muna**ti*	ansisit,	a	killèk.
similar=DEM.PROX	ghost	LIG	small

'The ghost is like this, this smallness.'

b. *=ta* + *muna* 'similar, like' > ***muna**ta*

Map-pati=d	i	laman	***muna**ta.*
INTR-die=POST	SG.ABS.DEF	wild.pig	similar.DEM.DIST

'The wild pig dies like that. (with a gesture)'

If the demonstratives co-occur with another noun to form a complex nominal, the demonstrative should precede the noun (except for the enclitic demonstratives), and the ligature *a* may intervene between the two elements:

(66)
Um-ustu=dèn	*[**ayna**	***a***	***barowa:si**].*
INTR-enough=1SG.OBL	DEM.MED	LIG	clothes

'I prefer that dress.' (elicitation)

(67) ***A:yi:***   ***a***   ***kape,***   *awan=kurug*   *a*   *meppasu*

      DEM.PROX   LIG   coffee   NEG=very   LIG   ADJ-hot

      'This coffee is not hot at all.'

(68) *Ta*   ***ayta***   ***a***   ***langit,***   *g⟨in⟩⟨um⟩inan*   *ti*   *Dios*

      OBL.INDF   DEM.DIST.OBL   LIG   day   ⟨PST⟩⟨INTR⟩leave   SG.ABS.PSN   God

      ta   ***ayta***   ***a***   ***bunbun.***

      OBL.INDF   DEM.DIST.OBL   LIG   house

      'On that day, God left that house.'

The co-occurrence of the ligature is optional, however. In the following data, the demonstratives and the nouns are juxtaposed:

(69) *Malala:ki*   ***[ayya***   ***ana:=i***   *a*   *buka:gan].*

      beautiful   DEM.DIST   child=SPC   LIG   female

      'That girl is cute.' (elicitation)

(70) *Konta*   ***a:yi:***   ***di:yu***   *ay*   *kakka:man=ya.*

      but   DEM.PROX   honeybee   filler   RDP.big=DEM.DIST

      'But as for this honeybee, it is very big.'

(71) *Mes-sibèt*   ***[a:yi:***   ***ayu=y]?***

      ADJ-hard   DEM.PROX   wood=SPC

      'Is this wood hard?' (elicitation)

(72) *Pang-a:rabis-èn*   *i*   *rangtay.*   ***Ayti***   ***Pinaripad***

      PRG-cross-TR   SG.ABS.DEF   bridge   DEM.PROX.OBL   Pinaripad

      ayta   ***diddya.***

      DEM.DIST.OBL   upstream

      'We cross the bridge here in Pinaripad, there in the upstream.'

5.3.2   Semantics of demonstratives

The demonstrative system is roughly described as differential degree of proximity of the referent with respect to the deictic center. However, the proximity is not an absolute physical, objective scale of distance from the speaker; rather it is based on the speaker's interactive

engagement towards the surrounding environment both physically and epistemically. The demonstrative system in each language grammaticalizes salient, but unique ways of engaging in, and interpreting the environment. That is, proximity or distance is a subjective scale that crucially involves our embodied interactions with the environment.

In Arta, the most salient parameters relevant to conceptualizing subjective proximity or distance are the physical (or effective) accessibility and epistemic accessibility. The following cognitive model, with physical and epistemic accessibilities, seems to reside in the subjective scale of distance/proximity:

(73) **Physical accessibility** The nearer the referent is, the more likely it is to be physically accessible in that it is manipulable, controllable, or within the speaker's sphere (dominion).

Epistemic accessibility The nearer the referent is, the more likely it is to be recognizable.
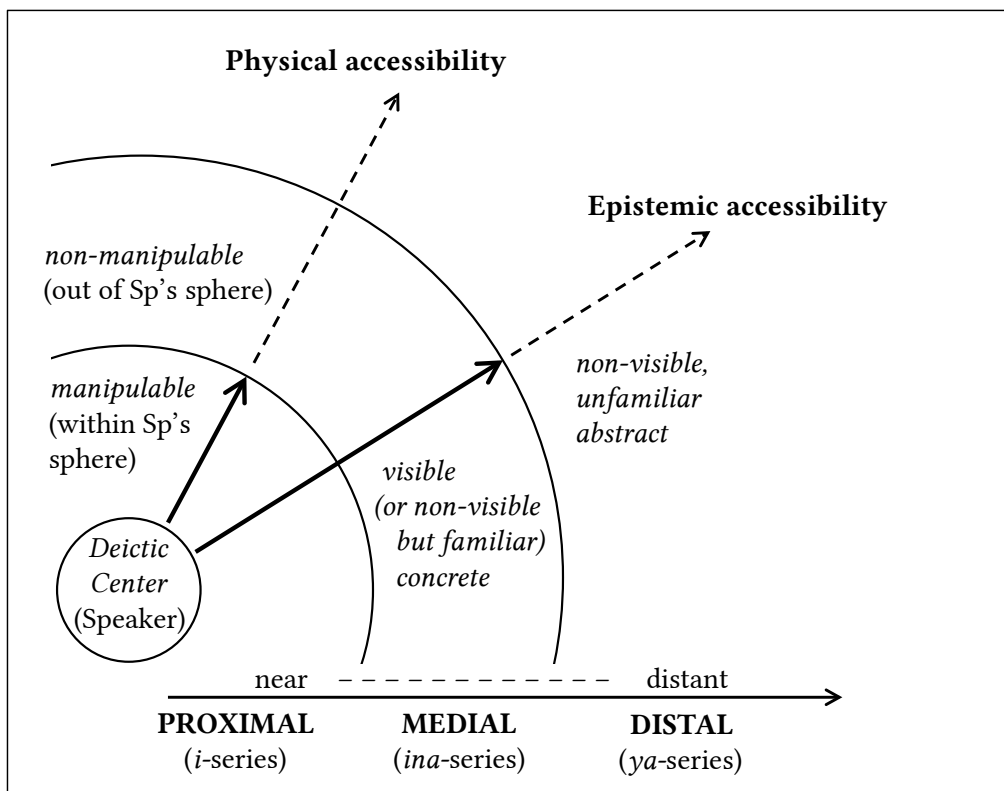
Figure 5.2: Semantics of demonstratives

Epistemic and physical accessibilities are crucially relevant to the semantic oppositions be-

tween the three demonstrative categories. The relation is diagramed in Figure 5.2. Epistemic accessibility is arguably responsible for the differentiation between non-distal (proximal and medial) vs. distal categories. Distal is used when the referent is non-visible, unidentifiable, and unfamiliar, or ontologically an abstract notion, whereas proximal and medial are used when the referent is visible, uniquely identifiable, familiar and a concrete object. On the other hand, physical accessibility seems to be responsible for the differentiation between proximal and medial categories. Proximal demonstratives are used when the referent is within the speaker's sphere or dominion, which may be easily manipulable, or, if the referent is a location (*ayti* 'here'), when the location is identical with, or part of, the speaker's sphere. Medial demonstratives are used when the referent is out of the speaker's sphere or dominion, which may or may not be located within the addressee's dominion.

Proximal

First, a proximal demonstrative is used when the referent is a visible, identifiable concrete object, and within the speaker's sphere (prototypically, within his/her reach). Consider a typical case exemplified in (74):

(74)   *Ana:=te:*   *makan'andi*   *ti*   ***ayti.***
       child=only   INTR-possessum   SG.OBL.DEF   DEM.PROX
       '**This** is my child's (bow).' (arta0523)

Figure 5.3: 'This is my child's (bow)' (arta0523)

In this setting he is holding a bow (referent) with his left hand, and pointing to it by hitting it with the arrow he is holding with his right hand (Figure 5.3). He recognizes what he is

holding and he is manipulating it (thus satisfying both epistemic and physical accessibilities). This is a prototypical example.

Note that whether or not the referent is physically accessible to the speaker is determined absolutely, but depends on the relative accessibility to the speaker and the addressee. If the referent is construed as being more accessible to the speaker than to the addressee, proximal demonstratives are employed, as shown below. Medial demonstratives are used if the referent is construed as being more accessible to the addressee. Consider the following example, in which the speaker is introducing his young grandchild to the linguist (Figure 5.4).

(75) *Apu=ku* **a:yi:.**
grandchild=1SG.GEN DEM.PROX
'This is my grandchild.' (arta0506)

Figure 5.4: 'This is my grandchild.' (arta0506)

Although the man on whose lap the baby is sitting has greater physical controllability over the baby than the speaker has, it is irrelevant to the current use of demonstratives; rather it involves the relative accessibility (or in this case controllability) between the speaker and the addressee. Since the addressee is sitting distant from the baby, the speaker reasonably construes himself as having greater controllability over the baby, hence the use of the proximal demonstrative *a:yi:.*

The speaker's own body (part) may also be referred to with proximal demonstratives, as in:

(76) *Med-dègès   ti   attanan   na   a:yi:.*

      ADJ-pain   SG.OBL.DEF   all   GEN.INDF   DEM.PROX

      '(lit.) All of this is painful.' ('I feel pain around here') (arta0003)

Figure 5.5: 'I feel pain around here.' (arta0003)

Medial

The medial set of demonstratives are used if it is visible, or directly recognizable (i.e. epistemically accessible), but if the referent is non-manipulable, or outside of the speaker's sphere (i.e. physically inaccessible). The medial demonstratives are used roughly in two different contexts, depending on the alignment of the addressee within the deictic frame.

The first case is that the referent is located within the addressee's sphere, rather than the speaker's sphere (cf. proximal demonstratives). In (77), the medial is used when the book (the referent) is held by the addressee:

(77) Y. : *Na-bira: ta   ayta   Mani:la.*

         PST.POT-find   OBL.INDF   DEM.DIST   Manila

         'I found it in Manila.'

     K. : **Ayna***?*

         DEM.MED

         'That one?'

     Y. : *A:yi:.*

         DEM.PROX

'(Yes,) this one.' (arta0523)

Figure 5.6: 'I found it in Manila.' > 'That one?' (arta0523)

In (78), *=tina* 'there' is used when the referent is the box (the referent), which is owned by the addressee, located near her. As shown in the movie clips, her ownership of the box is displayed in putting things into the box:

(78)   *I-wa=m=pa=**tina**.*

TR-do=2SG.GEN=just=DEM.MED

'Put it into that (box).' (arta0506)

Figure 5.7: The speaker says 'Put it into that (box).' and the addressee puts it into the box (arta0506)

In both of the cases (77,78), the referents are more accessible to the addressee than the speaker.

Medial demonstratives are also used in another deictic frame, when the referent is physically distant both from the speaker and the addressee. Given that the referent is visible,

medial demonstratives are used even when the referent is 10–20m distant from the speaker
(and addressee). In the case of (79), the speaker is pointing out the referent located far dis-
tant, around 15m distant from the speaker and addressee, although the video clip does not
explicitly capture the actual distance (Figure 5.8).

(79) *Man*   *ni*   **aynina**   *ni*   *mula*   *ni*   *Mam.*
      similar   SG.GEN.DEF   DEM.MED   SG.GEN.DEF   plant   SG.GEN.DEF   Ma'am
      'It is like **that one** the Ma'am planted.' (arta0110)

Figure 5.8: 'It is like that one the Ma'am planted.' (arta0110)

When the medial set is used, it implies that it is epistemically accessible, i.e. being vis-
ible and thus clearly identifiable, but it is physically inaccessible, being located out of the
speaker's dominion.

Distal

Distal demonstratives are employed if the referent is out of the speaker ' s sphere, not ma-
nipulable, and crucially if it is neither visible nor familiar to the speaker. The prime example
is found in (80):

(80) 1. A *Tatin=**ya**?*   (Figure 5.9; the first clip)
             who=DEM.DIST
          'Who is that?'

      2. Y *Ti*   *Ruben.*
             SG.ABS.PSN   Ruben

'(He is) Ruben.'

3. A (Try to look at him.) (Figure 5.9; the second clip) (arta0003)

Figure 5.9: (80) 'Who is that?' > Try to look at him (arta0003)

Tatin=ya? is uttered after the speaker noticed that there is someone outside of the house, asking the addressee who the person is. The referent (Ruben) is not visible to the speaker as is clearly observed in the second clip, where the speaker bends forward to look at the referent. This indicates that non-visibility, unrecognizability, is relevant to the use of distal demonstratives.

In other cases in which distal demonstratives are used, the referents are only indirectly recognized most likely because they are ontologically abstract, rather than concrete objects. These referents may be kind-level concepts (generic concepts), or the concrete objects that are indirectly recognized via linguistic or non-linguistic signs. The anaphoric use of demonstratives is thus exclusively found in distal demonstratives.

(81) *Na-talingu   na   ma'lèm,   pare:hu   **a:ya:**.*

PST.POT-injury   GEN.INDF   blood   same   DEM.DIST

'in the case of the injury with bleeding, (the treatment is) the same in that case.'
(arta0520)

(82) *Mang-atti: ta   talun   a:ya:,   mekkasing.*

INTR-exist   OBL.INDF   mountain   DEM.DIST   kind.of.grass

'That, the grass, grows in the mountain.' (arta0520)

(83) *(Amma)   Inta-n   na   hapon=i   asuk=i.   **Saya***

if   see-TR   GEN.INDF   Japanese=SPC   smoke=SPC   DEM.DIST

angin=di.

go=3PL.GEN

'If Japanese see the smoke of the fire, that is where they go.' (arta0002)

The above examples include the anaphoric use of distal demonstratives. In (81), *a:ya:* refers to a situation presented with the expression *nataligu na ma'lèm* 'injury with bleeding'; in (82), the distal demonstrative is coreferential with the following expression *mekkasing* 'a kind of grass used as a medicine', where a cataphoric relation is found. In (83), the place referred to by *saya* 'that' is identical with the location from which the smoke rises.

This use of distal demonstratives, with low epistemic accessibility, becomes clearer if compared with the use of proximal and medial demonstratives to refer to non-visible entities. As shown in Figure 5.2, proximal and medial demonstratives can be used not only when the referent is literally *visible*, but also if the referent is *familiar* to the speaker, that is, if it is already recognized independently of the linguistic contexts.

(84) 1. Y. :   *Atti: ana:=na   ta   Ma:sug?*

exist   child=3SG.GEN   OBL.INDF   Masug

'Are his children living in Masug (a neighboring community of Agta)?'

2. D. :   *Awan=de:=tid=**tina**.*

NEG=POST=3PL.ABS=DEM.MED

'They are no longer living there.' (arta0520)

(85) 1. D. : *Tidi*   *daddu:pu:=ti,*   *make:ta.*

               PL.ABS.DEF   old.men=SPC   POT.see

         'The elder men can see (spirits, ghosts).'

    2. Y. : *Ti*   *Arsenyo?*   *Awan?*

               SG.ABS.PSN   Arsenyo   NEG

         'Arsenyo can? He cannot?'

    3. D. : *Awan*   *make:ta*   **ayna***.*

               NEG   POT.see   DEM.MED

         'That (person) cannot see (spirits, ghosts).' (arta0502)

(86) *Nar-rapu*   *ti*   **ayti***   Casiguran.*

    PST.INTR-come.from   SG.OBL.DEF   DEM.PROX   Casiguran

    'He came from Casiguran (the place name of the neighbouring province).'

For example, (84) might be seen as identical with (83) in that they are used anaphorically, referring to places expressed in the preceding contexts. However, they are different in that the location in (84) is already familiar; it is identifiable independently of the linguistic context. On the other hand, the location in (83) is the referent established in the discourse, not being anchored in the real world. And in the case of the non-visible use of proximal and medial demonstratives, their referents may be more concrete than those of distal demonstratives. The referents of distal demonstratives may be ontologically abstract as in the manner or means of curing in (81), and the kind-level concept in (82). Such abstract concepts are not referred to by proximal or medial demonstratives.

In conclusion, the demonstrative system in Arta crucially involves epistemic accessibility and physical accessibility. Epistemic accessibility is relevant to the differentiation between non-distal (proximal and medial) vs. distal demonstratives. Distal is used when the referent is non-visible, and unfamiliar, or ontologically an abstract notion, whereas proximal and medial are used when the referent is visible, or identifiable independently of the linguistic contexts. Physical accessibility is relevant to the differentiation between proximal and medial demonstratives. Proximal demonstratives are used when the referent is within the speaker's sphere and is manipulable, whereas medial demonstratives are used when the

referent is out of the speaker's sphere or dominion.

5.4   Nominal markers

In Philippine languages and some other Austronesian languages such as Formosan languages in Taiwan, forms that are variously called "particle", "introducing particle", "phrase introducer", "nominal marker", "function marker", "case marker", "determiner", "article", "specifier" appearing before the lexical heads of most noun phrases. See Reid 2002: 296–301 for a survey of the terminological variations and their critical considerations, some of which are listed here. Before examining the details, I first outline various functions of the particles and explicate the motivations for calling them "nominal marker."

The nominal marker in Arta appears in the initial position of nominals; an example is given below:

(87)   *Lagip-èn*   *[**ni**   ama=ku=y].*

      speak-TR   SG.GEN.DEF   father=1SG.GEN=SPC

      'My father told it (to me).' (arta0002)

In this case, the monosyllabic morpheme *ni* precedes the lexical item *ama(=ku=y)* 'my father'. The monosyllabic morpheme signals that the whole phrase introduced by the form constitutes a referential phrase, or NP (functional head of the nominal). It also signals that the phrase is genitive case (case marking), personal proper name (noun classification), definite (pragmatic status of the NP), and, in some cases, it nominalize the whole phrase regardless of whether the lexical head is a verb or an adjective (see the examples in §4.3.1). This is summarized below:[15]

  A.   **Phonology–morphology**

      It is a monosyllabic or bisyllabic morpheme

  B.   **Syntactic distribution**

      It precedes the primary information bearing unit (lexical head)

---

[15]"Primary information-bering unit" (or PIBU) is the term for defining a lexical head, as discussed in Croft (2001: 258–271).

C. **Syntactic, semantic, and pragmatic functions**

1. It constitutes a referential phrase, or NP (functional head of the nominal)

2. It signals a grammatical relation to the predicate (case marking)

3. It signals a semantic classification of the noun (common vs. personal)

4. It signals a pragmatic status along the current flow of information (definite vs. indefinite)

5. It nominalizes the whole phrase regardless of whether the lexical head is a verb or adjective.

Various names seem to reside in their multifunctionality. "Particle" focuses on the phonological weight of the morpheme (A), "introducing particle, phrase introducer" more on syntactic distribution (B) and on the functional headhood (C-1), "nominal marker" on the functional headhood (C-1), "function marker", "case marker" on the case marking function (C-2), and "determiner" "article", and "specifier" on the pragmatic aspect of the definite–indefinite contrast (C-4). "Noun class marker" would be used if the function of the noun classification is foregrounded (C-3), and "nominalizer" would be employed if the function of the nominalization is foregrounded. After all, it is impossible to find a perfect label to subsume all the aspects and exclude any misleading connotations.

The primary function may however be to form a *referential unit* as a *noun phrase* (or nominal), which is applied in any actual instance. Other functions such as case marking, noun classification, definiteness, nominalization, would be seen a natural consequence by their identifications as a noun phrase. With respect to case marking and noun classification, significant neutralizations are also attested (see Table 5.11 below). I will refer to this set of forms as "noun phrase marker" or "nominal marker" to imply that the primary function of the forms is to construct a referential unit as a noun phrase or nominal.

The paradigm of nominal markers in Arta is set out in Table 5.11. The nominal marker system in Arta distinguishes at most three cases: absolutive (ABS), genitive (GEN) and oblique (OBL), definiteness (indefinite vs. definite), number (singular vs. plural), and two classes of nominals (common noun vs. personal noun). These distinctions are not uncommon in Philippine languages. As indicated, some of the oppositions are neutralized. Genitive and

		TOP	BASIC	GEN	OBL
PROXIMAL	SG	*si:yèy*	*a:yi:* =i	*(DET) ayni* =ni	*(DET) ayti*
	PL	*satidi:*			
MEDIAL	SG	*sayna*	*a:yina,* =tina	*aynina* =nina	*(DET) aytina* =tina
	PL	*satidi:na*	*tidi:na*		
DISTAL	SG	*saya*	*a:ya:,* =ya	*(DET) a:ya:*	*(DET) ayta* =ta
	PL	*satiddya:*	*(ay)tiddya*		

oblique cases are neutralized for definite singular personal forms and definite plural forms. Indefinite forms have no formal distinction for number and nominal classes (common vs. personal); definite plural forms have no common vs. personal distinction.

Table 5.11: Nominal markers in Arta

			ABSOLUTIVE	GENITIVE	OBLIQUE
INDEFINITE			Ø	*na*	*ta*
DEFINITE	SINGULAR	(COMMON)	*i*	*ni*	*ti*
		(PERSONAL)	*ti*	*ni*	*ni*
	PLURAL		*tidi*	*didi*	*didi*

In this section, three semantic distinctions will be examined: common vs. personal, singular vs. plural, and definite vs. indefinite contrasts. The case distinction was mentioned in the discussion of the case marking system in Arta (§4.4), and will be further discussed in relation to the argument structures in Arta (§7.1).

5.4.1 Common vs. personal contrast

In Arta, as in many Philippine languages, what we may call the *personal* nominal marker is used if the nominal is either a human proper name or a kinship term with a possessor. Semantically, it is used if the noun (+ possessor) itself can conjure up a particular unique individual with no reference to the definiteness marker and/or deictic strategies.

(88) Nominal markers (PERSONAL): proper names

a. *Ti'-e:dèm* [ti Delia] ta bunbun.
STV-sleep SG.ABS.PSN Delia OBL.INDF house
'Delia is sleeping in the house.'

b. *N-inta=ku* [ti Yukinori] n-um-une: ta ayu.
PST-see=1SG.GEN SG.ABS.PSN Yukinori PST-INTR-climb OBL.INDF tree
'I saw Yukinori climbing the tree.' (arta0005)

c. *Malala:ki* i mata **ni** **Delia**.
beautiful SG.ABS.DEF eye SG.GEN.DEF Delia
'Delia's eyes are beautiful.'

(89) Nominal markers (PERSONAL): kinship terms

    a. *S⟨um⟩a:y=am*   *ta*   *abang; taw,*   *[ti*

        ⟨INTR⟩ride=2PL.ABS   OBL.INDF   ark   2SG.ABS   SG.ABS.PSN

        asawa=mu],   *aytidi*   *a:na:=mu=y,*   *ayde:=tidi*

        spouse=2SG.GEN   PL.ABS.DEF   children=2SG.GEN=SPC   and=PL.ABS.DEF

        assawa=di:.

        spouse=3PL.GEN

        'Ride on the ark; you, your wife, your children, and the spouses of them.' (Noah)

    b. *Dayyèw-èn=mu*   *[ti*   *ama=mu]*   *aydi*   *[ti*

        respect-TR=2SG.GEN   SG.ABS.PSN   father=2SG.GEN   and   SG.ABS.PSN

        ina=mu].

        mother=2SG.GEN

        'Be respectful for your father and mother.'

This contrast between common and personal is neutralized in the case of the definite plural set of nominal markers:

(90) Plural nominal marker *tidi*

    a. (Kinship N)

        Amma   *mam-murab*   *[tidi*   *ama=mi=ti],*   ...

        if   INTR-hunt   PL.ABS.DEF   father=1PL.GEN=SPC

        'If our fathers go hunting, ...' (arta0100)

    b. (Common N)

        Pal-lègèd   *[tidi*   *agani:]*

        PRG.INTR-wait   PL.ABS.DEF   non-Arta

        'The people are waiting (for you).' (arta0100)

No contrast between personal vs. common is attested in the case of the indefinite set of nominal markers since the semantic value of the marker is incompatible with indefiniteness; the condition that the noun can conjured up a particular unique individual implies that the NP with a personal nominal marker has always a definite reference.

5.4.2   Singular vs. plural contrast

Definite nominal markers have a singular–plural opposition. Consider the following contrast:

(91)   a.   *Pam-ma'lèm*   {*i*   /   *tidi*}   *buka:gan=i.*

INTR-blood   SG.ABS.DEF   PL.ABS.DEF   female=SPC

'The woman/women is/are having the menses.'

b.   *Um-bèr*   {*i*   /   *tidi*}   *manu:=i*   *ayti*   *Dipintin=i.*

INTR-fly   SG.ABS.DEF   PL.ABS.DEF   bird=SPC   here   Dipintin=SPC

'The bird/birds will fly to Dipintin.'

c.   *D⟨in⟩⟨um⟩tun*   {*i*   /   *tidi*}   *bukèl*   *ta*   *mepeppiya*

⟨PST⟩⟨INTR⟩fall   SG.ABS.DEF   PL.ABS.DEF   seed   OBL.INDF   ADJ-good

a   *tapa*

LIG   soil

'The seed/seeds fell onto a good (i.e. fertile) soil.' (Matthew 13, Sower)

This number contrast is attested in the definite set of nominal markers, whereas there is no number contrast in the case of the indefinite set of nominal markers. Indefinite nominal markers have neutral forms with respect to number, which can designate single individuals and more than one (multiple) individuals. Pragmatic inference from a larger context may make possible a single interpretation; in other cases, the interpretation may remain ambiguous.

(92)   a.   *Gami:t-èn=mu*   **kadut=i.**

use-TR=2SG.GEN   knife=SPC

'You should use a knife.' ($\doteq$ a single knife)

b.   *Gapu*   *ta*   *me'-'a:du*   **agani:**   *na-ta:ku*   *ti*

because   OBL.INDF   ADJ-many   non-Arta   PST.POT-gather   SG.OBL.DEF

bi:yèn=na=y   *...*

near=3SG.GEN=SPC

'Because there are many people gathering around him, ...' (Matthew 13, Sower)

($\doteq$ multiple people)

c. *Nap-pati*   *a*   *p⟨in⟩al-palattug-an*   **na**   **hapon**   *aydi:ti*   *ayta.*

PST.INTR-die   LIG   ⟨PST⟩RDP-shoot-TR   GEN.INDF   Japanese   before   there

'He was killed by being shot by Japanese there in those days (interpreted ambiguously)

5.4.3   Definite vs. indefinite contrast

Whether a given nominal marker is definite or indefinite is invariably applied, with no irregular neutralization, as indicated in the table. A prime example is shown below:

(93)   a. *S⟨in⟩a:-sa:ngor=tid*   **[na**   *dapug].*

⟨PST⟩RDP-horn=3PL.ABS   GEN.INDF   water.buffalo

'They were attacked by **water buffalo(s)** with their horns.' (arta0108)

b. *S⟨in⟩a:-sa:ngor=tid*   **[ni**   *dapug=i].*

⟨PST⟩RDP-horn=3PL.ABS   SG.GEN.DEF   water.buffalo

'They were attached by **the water buffalo(s)** with their horns.'

The first sentence implies that the attackers on the people are water buffalos, but no particular water buffalo(s) is identified. The second sentence implies that the context (or co-text) and/or extralinguistic context makes it possible to identify a particular water buffalo. In particular, the following three patterns are observed that contribute to the identifiability of the reference.

Direct anaphora (discourse-based identifiability)

(94)   *Amma*   *tidi*   *maka:lap=tid*   *[ta*   *laman],*

if   PL.ABS.DEF   POT.get=3PL.ABS   OBL.INDF   wild.pig

'Even if they can get **a wild pig**,'

awan=di   *du:tung-an*   *awan=di*   *iwa*   *ta*   *dut.*

NEG=3PL.GEN   remove.hair-TR   NEG=3PL.GEN   put   OBL.INDF   fire

'They do not clean the hair and cook it.'

... man-tungpa=tid   *a*   *iwa=di=d*   *[i*   ***laman=i].***

INTR-make.fire=3PL.ABS   LIG   put=3PL.GEN=POST   SG.ABS.DEF   wild.pig=SPC

'... they make a fire and roast **the wild pig**.' (arta0100)

Associative anaphora (discourse–knowledge-based identifiability)

(95) a. *Na-ru:gi*   *ta*   *alas dus*   *i*   *digsèn*   *na*

          PST.POT-begin   OBL.INDF   2.o'clock   SG.ABS.DEF   strong   GEN.INDF

          bagio.

          typhoon

          'The strong typhoon began at 2:00.'

      b. *Meded-digsèn*   *[i*   *pu:nèd],*   *med-digèn*   *[i*   *bègbèg].*

          ADJ.RDP-strong   SG.ABS.DEF   rain   ADJ-strong   SG.ABS.DEF   wind

          '**The rain** was very strong, and **the wind** was strong.' (arta0005)

Identifiable unique referent (knowledge-based identifiability)

(96) *Gindat=tay*   *awan=tep*   *maka-derettyo*   *[i*   *Sama:na].*

      up.to=now   NEG=ANT   POT-straight   SG.ABS.DEF   Samana.bus

      'Until now **the Samana bus** cannot go straight.' (arta0005)

In (94), the definite description is made possible because the speaker and the hearer have already conjured up a unique referent by the preceding reference to the same object with *ta laman.* The identity of the referent is primarily established in the on-going discourse. In (95), both discourse and knowledge play a significant role in identifying the referent. In spite of the lack of a direct coreferential relation, the reference to rain and wind is crucially understandable or identifiable with reference to the previous mention of 'the typhoon'; the rain and wind occurred during the typhoon, thus the typhoon, on the one hand, and the rain and wind, on the other, have a semantic part-whole relation (see also Du Bois 1980: 215–216). In (96), no contextual trigger is available in the previous discourse, but the speaker employs the common knowledge that the speaker considers to be shared in the community. The Samana bus is the one that connects the neighboring towns and passes through the community, thus constituting a kind of common knowledge among the members of the community.

5.5   Specificity markers

Nominal markers are attested in most Philippine languages, but post-nominal enclitics with similar functions are found in some languages such as Ivatan, Kagayanen Manobo, Isinay,

Casiguran Agta, and various other Negrito languages (Reid 2002: 299, Reid 2006: 10). Let me exemplify the enclitics with the same sentence as cited above:

(97) *Lagip-èn   ni   ama=ku=y.*
      speak-TR   SG.GEN.DEF father=1SG.GEN=SPC
      'My father told it (to me).' (arta0100)

=*y* (an allomorph of =*i*) signals that the referent is specific, known to the speaker, and a concrete entity. As opposed to nominal markers, this form is optional; if the information is redundant, it does not appear. Syntactically, the form should occur immediately after the initial lexical element, regardless of whether it is a noun, an adjective, or a verb. See the following examples.

(98) a. *Kali:g-èn=mu   i   med-dèttun=i   a   karagatan.*
          carry-TR=2SG.GEN   SG.ABS.DEF ADJ-heavy=SPC   LIG   stone

      b. *Kali:g-èn=mu   i   karagatan=i   a   med-dèttun.*
          carry-TR=2SG.GEN   SG.ABS.DEF stone=SPC   LIG   ADJ-heavy
          'Carry the heavy stones.'

In spite of the alternate ordering of the noun and adjective within the noun phrase, the enclitic =*i* appears invariably adjacent to the first lexical element.

There are three forms that are paradigmatically opposed, whose semantic values are rather tentative; further analysis should be conducted:

(99) a. =*i* (specific to the speaker, concrete entity)

      b. =*ti* (specific to the speaker, concrete entity, epistemically distal)

      c. =*tidi* (specific to the speaker, concrete entity, plural)

The three forms share a common semantic function. They signal the specificity (identifiability of the referent on the speaker's part, as is well-known by the two readings: *I want a car* 'I want a particular car known to the speaker' vs. 'I want any car'). Thus I call it "specificity marker".

=*i* is used to refer to a concrete object specific to the speaker, as in (100–104).

(100)   *Ti:m-a:ng=u*   *i*   *wagèt=i.*

       drink-TR=1SG.GEN   SG.ABS.DEF   water=SPC

       'I will drink the water (referring to the object placed in front of the speaker).'

(101)   *Ti*   *dibbi*   *ni*   *tabla*   *i*   *wagèt=i.*

       SG.OBL.DEF below   SG.GEN.DEF board   SG.ABS.DEF water=SPC

       'There is (a cup of) water under the table. (referring to the object placed near the speaker)'

(102)   *Med-dègès*   *tya:ng=u=y,*   *pati*   *ay*   *ulu=ku=y.*

       ADJ-pain   stomach=1SG.GEN=SPC   even   GAP   head=1SG.GEN=SPC

       'I feel pain in my stomach, and also my head.'

(103)   *Basta*   *in-an-'anu:s-an=mi=tèddi*   *ay*   *ka:man=i*   *a*   *to:luda.*

       just   PST-RDP-patient-TR=1PL.GEN=just   GAP   big=SPC   LIG   tent

       'We were patient enough in a big tent.' (arta0007)

(104)   *Tan=di*   *ta*   *ka:man=i*   *a*   *wagèt.*

       see=3PL.GEN   OBL.INDF   big=SPC   LIG   water

       'They saw a wide river.' (arta0100)

As in (100–102), the occurrence of *=i* is almost obligatory when the referent is located near the speaker. This is reminiscent of the proximal demonstrative *=i*, which is probably the diachronic source of the specificity marker *=i*. Unlike the demonstrative, however, the physical distance is not a necessary condition for the occurrence of *=i*. As shown in (103, 104), referents located far from the speech event can be marked by the specificity marker if they can be uniquely identified by the speaker.

    Another specificity marker *=ti* likewise signals that the referent is a concrete object specific to the speaker. As opposed to *=i*, however, *=ti* indicates "present-absent", implying that the referent is not present near the speaker because the referent is already dead or does not exist as in (105a, 105b), or because it is currently placed in some other place as in (106a, 106b).

(105)   a. *Saya*   *ma-alap* *tidi*   *ama=mi=ti*   *a*   *laman.*

          DEM.DIST   POT-get   PL.ABS.DEF father=1PL.GEN=SPC   LIG   wild.pig

          'Those wild pigs are what our past fathers hunted.' (arta0002)

b. *Saya   panga:n-èn=mi=ti   ayta.*

DEM.DIST   PROG.eat-TR=1PL.GEN=SPC   there

'That is what we ate before there.' (arta0002)

(106)   a. *Pab-bamba:l=ami   didi   agi=mi=ti   a*

PRG-wash.laundry=1PL.ABS   PL.GEN/OBL.DEF   clothes=1PL.GEN=SPC   LIG

m⟨in⟩a-basè-basèssèg.

⟨PST⟩POT-RDP-wet

'We were washing our wet clothes.' (arta0007)

b. *Akkadi:.   Bisuru:k=u=ti.*

oh.no   hatchet=1SG.GEN=SPC

'Oh not, my hatchet!' (meaning 'I left my hatchet.') (fieldnote)

However, the use of *=ti* in the context of the past reference is not obligatory; if the information of "present-absent" is already self-evident from the context, the NP may co-occur with *=i*, instead. In fact, the excerpt in (87) with *=i* is a non-initial reference of the speaker's late father.

Specificity marker *=tidi* indicates that the referent is a concrete object specific to the speaker, with a special focus on its plurality.

(107)   *S⟨in⟩⟨um⟩ay=tid   ta   abang   a   asawa=na,*

⟨PST⟩⟨INTR⟩ride=3PL.ABS   OBL.INDF   ark   LIG   spouse=3SG.GEN

ayde:=tidi   a:na:=na=y,   ayde:=tidi   asawa   ni

and=PL.ABS.DEF   child=3SG.GEN=SPC   and=PL.ABS.DEF   spouse   SG.GEN.DEF

a:na:=na=tidi.

child=3SG.GEN=SPC

'They rode on the ark, including his wife, his children, his children's spouses.' (Noah, Bible)

(108)   *Saya   n-um-angay=de:=tidi   Pilipi:no=y   aydi   Arta=tidi.*

DEM.DIST   PST-INTR-go=POST=PL.ABS.DEF   Filipino=SPC   and   Arta=SPC

'Filipinos and Negritos went out there.' (arta0100)

Here specific plural referents are indicated by *=i*, as in *Pilipi:no=y* 'Filipinos' in (108); thus the use of *=tidi* is not obligatory. It is used when the speaker intends to foreground the plurality of the referents.

5.6   Conclusion

In this chapter, nouns and some functional categories occurring in nominals, i.e. person form, demonstrative, nominal marker, and specificity marker, were examined. In §5.1, it was shown that nouns encode a large number of concepts such as spatial relation, property and so forth which would otherwise be encoded by adjectives or prepositions in other languages. I also classified nouns according to the semantic type, and it was argued that the semantic type of nouns is responsible for the compatibility with the possessive construction. In §5.2, person forms were examined from semantic, morphological, diachronic viewpoints. Bound person forms in Arta are arguably identifiable as "cross-index" rather than pronoun or agreement marker; semantically person forms have an eight-way opposition: first person, second person, first-second person, and third person, each having the singular vs. plural opposition. Absolutive bound forms show a split in their sequence with other enclitics; I argued that this apparent split is best explained by the different diachronic sources from which the current absolutive bound forms evolved. In §5.3, demonstratives were examined; after a brief description of their morphosyntactic behavior, a detailed analysis was provided of the semantic opposition between the proximal, medial, and distal series of demonstratives. Proximal and the other two series differ in physical accessibility; distal and the first two series differ in epistemic accessibility. In §5.4, nominal markers were described, in which I identified various functions relevant to the nominal markers, and discussed the motivation for the term "nominal marker". Further each semantic opposition was examined: personal vs. common, singular vs. plural, and definite vs. indefinite. Finally, in §5.5, specificity markers were briefly described. It was found that there are three specificity markers and the primary function shared by them is identifiability on the speaker's part (i.e. specificity), and the uses of the specificity markers were illustrated.

Chapter 6

Adjective and related constructions

Chapter 5 described some important elements that constitute nominals: noun, person form, demonstrative, nominal marker, and specificity marker. This chapter concerns additional elements that expand the nominals. To add various kinds of modifier to a nominal, a versatile constructional template is employed, where two elements are linked by an intervening formative *a* (LIGATURE[1]):

(1) [element$_a$] *a* [element$_b$]

When this construction is used within a NP, it functions to expand the nominal; when it is used within a predicate, it expands the predicate, serving as an adverbial modification (§9.1; see also §10.1 for another usage to introduce a complement clause). Within a noun phrase, this construction is used in various ways; in this chapter, the following three grammatical devices will be discussed.

(2) 1. Adjective modification [qualifying function]

2. Partitive construction [unit-delimiting function]

3. Quantifier construction [qualifying function]

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[1]According to the convention of Austronesian linguistics, I will call it 'ligature', but it is undoubtedly a special type of conjunction. The cognates of the formative are attested in many Philippine languages, which historically had their origin in a demonstrative of Proto-Austronesian (Reid and Liao 2002: 42), or a determiner (Ross 2009: 309, with no proto-language suggested). The function of the formative is similar to an English conjunction *that* in that both can be used in a noun-modifying construction (such as a relative clause), and also as a complementizer. Their historical origin is also the same. Unlike English that, the ligature a is also used for adverbial modification of predicates (see Ch.9).

First, adjective modification is a grammatical device to delimit the potential set of referents (or referential candidates) by the speaker's attribution of a property to the referent. Second, a partitive construction is one in which a noun, such as ' bag, cup, cluster, group, and class ', provides a unit which is part of the referent (e.g. *ta:=salub a baggat* (one=sack LIG husked.rice) 'one sack of husked rice'). This strategy is typically applied to uncountable referent(s)—mass, abstract and material entities—but it may also be applied to countable referents if the set is construed as a unit. I use the term partitive construction, rather than classifier to distinguish it from the highly-grammaticalized classifier systems (e.g. Japanese, Chinese, and some Amazonian languages, where classifiers must occur, when another element such as a numeral modifies a head noun). This partitive construction in Arta is optional; it is employed only when the noun itself is ambiguous for understanding the unit to be counted. Finally, a quantifier is a device to indicate the quantity of the referent(s) (e.g. *killèk a baggat* (small LIG husked.rice) 'a small amount of rice'). Quantification is accomplished by three strategies: (i) to use a numerical scale ('one, two, three ...'), (ii) to provide a subjective evaluation by the speaker (cf. 'many, few'), and (iii) to delimit the relative quantity of the target with reference to another discourse referent (cf. 'all of <u>them</u>, some of <u>them</u>, one of <u>them</u>').

6.1 Adjectives

6.1.1 Morphological characteristics

Adjective is an open class, with a large number of items constituting the class. Morphologically, adjectives are formed by either (i) a prefix *meC-*, (ii) bare forms (a small number of items), or (iii) a fossilized prefix *ma-* (seen only in two items):

(3) *maC-*

    a. *mel-layat* 'wide, large'

    b. *meb-bungku* 'delicious'

    c. *me'-'uding* 'black'

    d. *men-niyèt* 'sweet'

    e. *med-dègnin* 'cold'

    f. *meg-gitèl* 'itchy'

    g. *meb-bayag* 'slow, long (time)'

    h. and more ...

(4) bare forms

    a. *illa:yug* 'long'

    b. *apitti* 'short'

    c. *ka:man* 'big'

    d. *killèk* 'little, small'

    e. *siran* 'old'

    f. *killèk* 'young'

    g. *bu:ru* 'new'

    h. *pare:ho/pare:has* 'the same'

    i. *ta:me:ta* 'different from something'

    j. *tanakwan* 'different from before'

(5) *ma-* (two instances)

    a. *malala:ki* 'nice, good'

    b. *marakèt* 'bad, evil'

Reduplication serves to indicate intensification, which indicates that the value of a quality in a certain scale is significantly higher (translated as 'very X' or 'too X'). Each subtype of adjective has its own reduplicative patterns (note that bare forms have three reduplicative patterns, which probably are lexically determined):

(6) *meC- > meCeC-*

    a. **mel**-*layat* > **melel**-*layat* 'very wide, large'

    b. **meb**-*bungku* > **mebeb**-*bungku* 'very delicous'

    c. **me'**-*'a:du* > **me'e'**-*'a:du* 'a great number/amount of'

(7) bare form > CVCV–

    a. *pare:has/pare:ho > **pare**pare:has* 'totally the same'

    b. *tanakuan > **tana**tanakuan* 'quite different'

    c. *killèk > **kilè**killèk* 'very small'

(8)   bare form > CV:-

    a. *bu:ru > **bu:**bu:ru* 'new'

    b. *ta:me:ta > **ta:**ta:me:ta* 'quite different'

(9)   bare form > CVC-

    a. *ka:man > **kak**ka:man* 'very big'

    b. *illa:yug > il**ala:**yug* 'very long'

(10) *ma- > memem-ma-*

    a. *malala:ki > **memem**malala:ki* 'very nice, good'

    b. *marakèt > **memem**marakèt* 'very bad'

At least in Arta, adjectives do not have comparative or superlative derivations; rather such meanings are expressed by constructions. First, comparative meanings are encoded by the following construction:

(11)   *ADJ   NP1(ABS)   konta/amma   NP2(OBL)*

        (Target)   (Standard.of.comparison)

    'NP1 is more ADJ than NP2'

If the standard of comparison is a single object, it has the meaning of English 'more X than'; if it is a set of objects, it has the meaning of English 'most X of'.

(12) a. *Med-dingatu   ti   Ruben   amma   dèn.*

       ADJ-tall   SG.ABS.PSN   Ruben   if   1SG.OBL

       'Ruben is taller than me.'

    b. *Mer-re:rukup   bunbun=mi   amma   didi   a:duwan=i   a*

       ADJ-weak   house=1PL.GEN   if   PL.GEN/OBL.DEF   other=SPC   LIG

       bunbun.

       house

       'Our house is weaker than the other houses.'

c. *Med-dayèg=a   aytay   konta   aydi:ti.*
ADJ-fat=2SG.ABS   now   but   before
'You are fatter than before.'

Second, superlative meanings are encoded by the following construction:

(13) *ADJ   NP1(ABS)   NP2(OBL)*
        (Target)   (Set.of.comparison/place)
    'NP1 is most ADJ of/in'

(14) a. *Med-dibbi   a:yi: a   ayu   aydidi   appat=i.*
        ADJ-short   DEM.PROX   LIG   tree   PL.GEN/OBL.DEF   four=SPC
        'This tree is shortest of the four.'

   b. *Kak-ka:man   i   bunbun=i   ayti   i:li.*
        RDP-big   SG.ABS.DEF   house=SPC   here   town
        'The house/building is biggest in this town.'

In both constructions, comparative and superlative meanings are encoded not by the adjective itself (cf. *tall-er, tall-est, more difficult, most difficult* in English). These meanings emerge constructionally, i.e. by co-occurrence with a standard of comparison, a comparative set, or a place.

6.1.2   Lexical semantics of adjectives

In this section, the lexical semantics of adjectives is examined. The first step is to capture the productivity (or the size) of the adjective class from a semantic viewpoint. By applying Dixon (2010b)'s classification of adjectives, it is shown that the adjective class in Arta covers a wide range of semantic types. The second step is to attempt to provide a semantic definition of adjectives particularly in contrast with stative verbs. Finally, I describe some non-prototypical derivations of adjectives from object or action roots, as seen in *tadèm* 'blade' > *met-tadèm* 'sharp,' in which we explore how various meanings of adjectives are created by combining the adjective prefix *meC-* with these object or action roots.

Semantic types covered by adjectives

Languages differ in the extent to which various semantic types are covered by the adjective class. Dixon (2004, 2010b) proposes the following eleven semantic types, and argues that there are four core semantic types (DIMENSION, AGE, VALUE and COLOR), which are typically associated with the adjective classes of most languages regardless of whether it is large or small, whereas other semantic types (most especially: DIFFICULTY, SIMILARITY, QUALIFICATION, QUANTIFICATION, POSITION, and CARDINAL NUMBER) may often be encoded by other word classes in many languages.

(15)   Semantic types associated with adjective classes Dixon (2004: 3–5)

   a. DIMENSION—'big,' 'small,' 'long,' 'tall,' etc.

   b. AGE—'new,' 'young,' 'old,' etc.

   c. VALUE—'good,' 'bad,' 'lovely,' 'atrocious,' 'perfect,' etc.

   d. COLOR—'black,' 'white,' 'red,' etc.

   e. PHYSICAL PROPERTY—'hard,' 'soft,' 'heavy,' 'wet,' 'rough,' 'strong,' 'clean,' 'hot,' 'sour,' etc.

   f. HUMAN PROPENSITY—'jealous,' 'happy,' 'kind,' 'clever,' 'generous,' 'cruel,' 'proud,' 'ashamed,' 'eager,' etc.

   g. SPEED—'fast,' 'quick,' 'slow,' etc.

   h. DIFFICULTY—'easy,' 'difficult,' 'tough,' 'hard,' 'simple,' etc.

   i. SIMILARITY—'like,' 'unlike,' 'similar,' 'different(/strange),' 'other,' etc.

   j. QUALIFICATION—'definite,' 'true,' 'probable,' 'possible,' 'likely,' 'usual,' 'normal,' etc.

   k. QUANTIFICATION—'all(/whole),' 'many,' 'some,' 'few,' 'only,' 'enough,' etc.

   l. POSITION—'high,' 'low,' 'near,' 'far, distant,' 'right,' 'left(/strange),' 'northern,' etc.

   m. CARDINAL NUMBER—and 'first,' 'last'

If this semantic type analysis is applied to Arta, the following classification can be provided:

(16) a. DIMENSION:

   illa:yug 'long,' *apitti* 'short,' *ka:man* 'big,' *killèk* 'little, small,' *meg-gipit* 'small/ narrow (space/river),' *mel-layat* 'large (space), wide (river),' *mel-lawa* 'large (space),' *mel-lègpis* 'thin,' *meb-bagèl* 'thick (wood),'

   b. AGE:

   siran 'old,' *killèk* 'young,' *bu:ru* 'new'

   c. VALUE:

   malala:ki 'good, beautiful, nice,' *marakèt* ' bad,' *bangat* 'incorrect,' *meb-bungku* 'delicious,' *meb-buyu* 'bad-smelling,' *meg-girèk* 'dirty, a mess'

   d. COLOR:

   me'-'uding 'black, dark,' *mep-pullaw* 'white, bright,' *mes-sulu* 'red, orange'

   e. PHYSICAL PROPERTY:

   me'-'apsut 'bitter,' *me'-'asin* 'salty,' *mel-la:sèm* 'sour,' *men-ni(:)yèt* 'sweet,' cf. *meddègès* 'spicy' < 'painful' *me'-'asuk* 'smoky,' *me'-'innan* 'clear, transparent,' *meb-buyu:* 'bad smelling,' *med-dègnin* 'cold,' *mel-lèmna* 'cool,' *med-dèttun* 'heavy,' *med-digsèn* 'heavy, strong,' *mek-kètug* 'hard,' *mel-la:gin* 'light,' *mel-lèptit* 'soft' *mel-lamèk* 'soft, tender' *mel-li:nis* 'clean,' *mer-ru:gèt* 'smooth,' *mep-pasu* 'hot,' *mes-salub* 'good-smelling,'

   f. HUMAN PROPENSITY:

   me'-'a:nus 'kind, friendly,' *me'-'anting* 'afraid,' *med-dègès* 'painful, spicy' < *dègès* 'pain,' *meg-gitèl* 'itchy,' *mel-luyang* 'sad,' *mep-piya* 'glad,' *mer-re:rokop* 'weak,' *mes-sibèt* 'powerful, strong,' *mes-subèg* 'angry'

   g. SPEED:

   meb-bayag 'slow, long (time),' *meb-bilèg* 'fast,' *me'-'imayas* 'slow (in action)'

   h. DIFFICULTY:

   med-digat 'difficult,' *mel-laka* 'easy'

   i. SIMILARITY:

   pare:ho/pare:has 'the same' (cf. Sp. *parejo* 'equal'), *ta:me:ta* 'different,' *tanakwan* 'different'

  j. POSITION:

      me'-'adu:yu 'far/distant,' *meb-biyèn* 'near'

In Arta, the adjective class appears to cover a wide range of semantic types. Most especially, the prefix *meC-* is widely applicable to form adjectives.

The semantic types listed in Dixon but not coded by the adjective classes are QUALIFI- CATION —'definite,' 'true,' 'probable,' 'possible,' 'likely,' 'usual,' 'normal,' etc. and CARDINAL NUMBER. The notion of qualification (or epistemic modality) is likely to be expressed by adverbs such as *baka* and *=wada* 'perhaps.' In Arta, words expressing cardinal numbers have some unique characteristics both morphologically and syntactically. Although it may be possible to say that they belong to the adjective class, they are at least not typical adjectives. Numerals will be examined in §6.4.

Schematic meaning of adjectives

What is the general meaning encoded by an adjective, and how different is it from the meaning of some kinds of verbs? Adjectives express not only the relatively stable or permanent property of an entity (e.g. *Mellayat uma=mi* 'Our field is large'), but also the temporary state of an entity (e.g. *mel-luyang* 's/he is sad'). Temporary states can also be expressed by potentive verbs as in *Na-lupuy* 'S/he is tired.' I will now consider the difference between the two grammatical categories. To observe semantic difference encoded by the two word classes, compare the following two pairs of actual utterances:

(17) Potentive verbs

   a. *Mina-pasu=d?* (⟨PST⟩POT-hot=just/already) '(The bag I put under the sun) has become hot?'

   b. *Na-lupuy=de:=tèn* (POT-tired=just/already=1SG.ABS) 'I've gotten tired.'

(18) Adjectives

   a. *Mep-pasu* (ADJ-hot). 'The rice is hot.'

   b. *Mel-lupuy=tep* (ADJ-tired=still) '(Wait for a while.) I am still tired.'

In spite of the fact that the roots *lupuy* 'tired' and *pasu* 'hot' typically describe a temporary state, the use of different affixes result in conveying different construals of the state. If poten-

tive verbs are used as in (17), the current state of 'being tired' or 'being hot' is construed as a result of some preceding changes ('get tired', 'becoming hot'), as is translated by the present perfect in English. On the other hand, if adjectives are used as in (18), these sentences describe a temporary state, but are not oriented to the preceding change. In (18a) the state is described as it is, without relating to the process of 'becoming hot (cooking process?)'; in (18b), *=tep* 'still' is used, which indicates that the current situation is not construed as a result or consequence of the preceding event.

In my corpus, another pair of adjective and stative verbs is found. In spite of the same root *bisa* 'wet', the use of two different prefixes convey different images to fit the situation to be described, in a way that is parallel to that illustrated above:

(19)   a.   *Awan=tep*   *na-bilag*   *baruwa:si=mu=y,*   ***mebeb-bisa=tep***
           NEG=still   POT-dry   clothes=2SG.GEN=SPC   ADJ.RDP-wet=still
           'Your clothes are not dry yet. They are still wet.'

       b.   ***Mina-bisa***   *i*   *tapa.*
           POT.PST-wet   SG.ABS.DEF   soil
           'The soil has become wet (after being rained on).'

Considering these contrastive minimal pairs, the difference between stative verbs and adjectives appears to be that stative verbs always express the current state in relation to the preceding change which caused it, whereas adjectives focus on the state by itself without relating it to the process which may have caused it.

Semantics of non-prototypical adjectives

A large number of adjectives are formed by the combination of *meC-* plus property roots as in *lawa* 'width' > *mellawa* 'wide', *digsèn* 'strength' > *meddigsèn* 'strong'. In some cases, however, *meC-* may be combined with other types of root, to yield meanings which would not be expressed with basic property roots. First, if the adjective prefix is attached to a root encoding an action, the adjective expresses the habitual meaning of the action:

(20)   *Meng-ngangngal*   *i*   *Agta.*
       ADJ-chew   SG.ABS.DEF   Agta

'Agta people always chew (betel nuts).'

cf.   *mang-ngangngal* 'to chew'

In the above example, the adjective prefix is attached to a root referring to an action. In such a case, the composite meaning becomes a habitual action, here 'always chew' or 'be always chewing'.

The adjective prefix may be attached to a root referring to a concrete object, which would normally appear as a noun. The meaning of the composite structure as an adjective may be classified into three patterns with a little overlap between them. The most common pattern is the meaning of 'full of, covered with', as follows:

(21)   a.   *mebbitun* '(the sky) starry'

         cf. *bitun* 'star'

     b.   *mekkadèt* 'weedy'

         cf. *kadèt* 'weed'

     c.   *mettabug* 'covered with mud, muddy'

         cf. *tabug* 'mud'

     d.   *me"asuk* '(the place is) covered with smoke, filled with smoke'

         cf. *asuk* 'smoke'

     e.   *merrignèt* 'dirty'

         cf. *rignèt* 'dirt'

(22)   *Mek-kadèt=di   daddima:n=i.*
       ADJ-weed=already   pathway=SPC
       'The pathway is already weedy.'

In these cases, the adjectives mean that the entity designated by a root spatially fills or covers the whole space being described. For example, in (22), the sentence expressed that the pathway is covered with weeds.

In the following cases, the situations to be described is not spatially covered or filled with some entity designated by the root. Rather, the entity lingers for a certain period of time on something/someone to the extent that the something/someone described is characterized in terms of the object/entity:

(23) a. *mebbègbèg* '(Today it is) windy'

cf. *bègbèg* 'wind'

b. *mellagip* '(Someone is) talkative'

cf. *lagip* 'voice'

c. *mettanug* '(something is) noisy'

cf. *tanug* 'sound'

Note that, unlike periphrastic expressions *a lot of/ full of/ covered with*, the use of adjectives seem to have more connotation of the speaker's attitude or affectional state toward the situation; in (21a) *mebbitun* 'starry' has a positive ('X is beautiful') or admirative attitude toward the sky which the speaker is looking at, and all the other instances seem to have negative connotations: *mekkadèt* 'weedy (you thus should not go into the area)', *mettabug* 'muddy (enough to have difficulty in walking there)', *me"asuk* 'smoky (so that the eyes are painful')', *mebbègbèg* 'it is windy (i.e. nasty weather).'

Finally, the following instances have an idiosyncratic extension of meaning. These adjectives do not mean 'covered with blades' or 'the inside lingers for a long time'. When the nouns *tadèm* 'blade', and *diso:no:* 'inside' are used as adjectives, one salient semantic property residing in the root noun is foregrounded by the adjective derivation:

(24) a. *mettadèm* 'sharp'

< *tadèm* 'blade'

b. *meddiso:no:* 'deep, have a large space inside'

< *diso:no:* 'inside (space)'

In case of *mettadèm* 'sharp,' the adjective derivation involves the foregrounding of one of the most salient properties of 'blade', that is, its SHARPNESS among other properties such as its HARDNESS and THINNESS. *Diso:no:* 'inside' seems to be relevant to the other contrastive concept *lattong* 'outside'. They are not graded concepts, and whether it is inside or outside is categorically determined. However, by the adjective derivation, the concept "inside" is re-conceptualized as a gradable concept. And such scales as "deepness" and "having a large space inside" are foregrounded.

6.1.3   Noun-modifying construction

This section examines the syntactic construction that contains an adjective, i.e. a noun-modifying construction (or adnominal constructiona). As often discussed in the literature, in many Philippine languages, various kinds of word class behave like an adjective within noun-modifying construction (see Reid and Liao 2002: 36ff). This section thus does not limit our focus on "adjective" modification. It deals with "noun-modifying constructions" in general, encompassing the cases that would otherwise be categorized as relative clauses cross-linguistically. After the general principle on the construction is illustrated, it is observed that there are two possible orderings between the relational expressions (i.e. adjectives, verbs) and non-relational expressions (i.e. nouns). Then it is argued that in natural conversations, relational expressions are more likely to precede non-relational ones, than vise versa. The other ordering does appear in conversations, but it is limited to utterances where the speaker concludes that the addressee finds the identification of the referent difficult, with additional information necessary.

First, as seen other Philippine languages, the following principle is at work in the adnominal modification in Arta (but see §7.2.3 for an important exception to the principle):

(25)   The head noun always corresponds to the gap in the relative clause, and is always an absolutive NP within the relative clause.

The following example illustrates how it works; the gap in the relative clause a *ina-alap=di* is identified as *laman=i* 'a wild pig' which is the head noun being modified. The gap functions as the absolutive argument within the relative clause:

(26)   *i*   *laman=i*   *[a*   *in-alap=di*   *Ø*   *]*
       SG.ABS.DEF   wild.pig=SPC   LIG   PST-get=3PL.GEN   **ABS**
       'the wild pig that they hunted'

The principle says that the head noun never corresponds to either an ergative or oblique case in the relative clause. As shown in (27a), the referent of the head noun is identical with that of the implicit ergative argument (glossed as GEN because the case is also used as a possessor). To avoid the disharmonic (ungrammatical) relation between the head noun and the relative

clause, various verbalizing affixes are used to change the alignment of each case. In (27b), the transitive infix ⟨in⟩ (the past tense form of *-èn*) is replaced with an intransitivizing prefix *naN-* (the past tense form of *maN-*), to allocate the agent with the absolutive case (see Ch.8 for extensive discussion on the various verbalizing affixes and their functions).

(27) a. **tidi*   *arta=y*   *a*   *in-alap*   *i*   *laman=i*

         PL.ABS.DEF   person=SPC   LIG   PST.**TR**-get   SG.ABS.DEF   wild.pig=SPC

         'the people who got the wild pig'

    b. *tidi*   *arta=y*   *a*   *nang-alap*   *ti*   *laman=i*

         PL.ABS.DEF   person=SPC   LIG   PST.**INTR**-get   SG.OBL.DEF   wild.pig=SPC

         'the people who got the wild pig'

This principle concerns the syntactic relationship within the complex nominal (i.e. between the head noun and the modifying element), but not the relation between the whole complex NP and the main clause. NPs with a noun-modifying element can be any argument within the main clause.

In many Philippine languages, it is not unusual for there to be two alternating constituent orders between the head noun and the modifying element, that is, head-initial and head-final (see, for example, Schachter and Otanes 1972: 121 for Tagalog). See the following pairs of examples, where the adjective *meddèttun* and the intransitive verb *mangèbèbbèr* follow the nouns *karagatan* and *diyu* in (28a, 29a), respectively, but precede these nouns in (28b, 29b):

(28) a. *[med-dèttun]*   *a*   *[karagatan]*

         ADJ-heavy   LIG   stone

    b. *[karagatan]*   *a*   *[med-dèttun]*

         stone   LIG   ADJ-heavy

         'heavy stone'

(29) a. *[mang-èbèb-bèr]*   *a*   *[diyu]*

         INTR-RDP-fly   LIG   honeybee

    b. *[diyu]*   *a*   *[mang-èbèb-bèr]*

         honeybee   LIG   INTR-RDP-fly

         'flying honeybees' or 'honeybees which are flying'

However, the flexible ordering between nouns and adjectives (or verbs) does not imply that the nominal head can be placed in either nominal-initial or nominal-final position, because there is a quite flexible relationship between the word classes and syntactic slots within the clause structure (see also 4.3.1). First, the predicate can be occupied by unmarked nouns and adjectives as well as verbs without inserting any copulative element:

(30)   a. ***Gilèngan***   *i*   *arta=y.*

            male/man   SG.ABS.DEF   person=SPC

            'The person **is male**.'

    b. ***Man-di:madima***   *i*   *arta=y.*

            INTR-RDP-walk   SG.ABS.DEF   person=SPC

            'The person **is walking**.'

    c. ***Ka:man***   *i*   *arta=y.*

            big   SG.ABS.DEF   person=SPC

            'The person **is big**.'

Second, the arguments can be occupied by unmarked verbs and adjectives, as well as nouns without undergoing any nominalizing derivation:

(31)   a. *Kabba:t=u*   *i*   ***gilèngan=i.***

            like=1SG.GEN   SG.ABS.DEF   male/man=SPC

            'I like **the man**.'

    b. *Kabba:t=u*   *i*   ***man-di:ma-dima=y***   *ta*   *ayta.*

            like=1SG.GEN   SG.ABS.DEF   INTR-RDP-walk=SPCOBL.INDF   there

            'I like **the one who is walking there**.'

    c. *Kabba:t=u*   *i*   ***ka:man=i.***

            like=1SG.GEN   SG.ABS.DEF   big=SPC

            'I like **the big one**.'

Finally, noun-modifying elements can be unmarked verbs and nouns, as well as adjectives:

(32)   a. *i*   *arta=y*   ***a***   ***gilèngan***

            SG.ABS.DEF   person=SPC   LIG   male/man

            'the **male** (arta) person'

b. *i*   *arta=y*   ***a***   ***mandi:madima=ta***

    SG.ABS.DEF   person=SPC   LIG   INTR-RDP-walk=there

    'the person **who is walking there**'

c. *i*   *arta=y*   ***a***   ***ka:man***

    SG.ABS.DEF   person=SPC   LIG   big

    'the **big** person'

These facts indicate that in the Philippine languages, there is no direct connection between the word classes and syntactico-pragmatic functions such as predicating, referring, and modifying roles[2], which in turn suggests that it is quite insufficient to determine the definition of the syntactic head and dependent of the construction solely based on the word class of each of the elements: the nominal head may be an adjective or verb, whereas the dependent may be a noun or verb. For the sake of convenience, I will continue to discuss the phenomenon under the label of "noun-modifying constructions", but will suspend the rigid definition of the syntactic head (the modified element) and the dependent (the modifying element) of the construction.

More directly relevant to the current discussion is probably the strong preference of the relative word order between the noun and other word classes. In spite of the fact that every word class can occupy the initial and second slot, and that both of the orderings are perfectly "grammatical" in the elicitations, a careful look at the use of noun-modifying constructions in natural discourse provides a different view on the two alternative orderings:

(33)   Preferred noun-modification structure:

     Place the expression encoding a relational concept first, the one encoding a non-relational or less relational concept second, that is,

     a.   if a verb and a noun co-occur, place the verb before the noun,

     b.   if an adjective and a noun co-occur, place the adjective first before the noun,

     c.   if two nouns co-occur, place the more relational noun first before the non-relational or less relational noun.

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[2]The wording "syntactico-pragmatic" is based on the idea of Croft (1991, 2001), who addresses the pragmatic definition of 'predication', 'reference', and 'modification' inspired by Searle (1969)'s discussion of propositional act.

In the following examples from actual discourse data, the relational concepts are followed by the non-relational concepts, not vice versa. Noun-modifying constructions with verbs are exemplified in (34)–(36), and with adjectives in (37)–(39), each of which shows that the verbs or adjectives are followed by the nouns:

(34) *Me"a:du=ay,*   *[g⟨in⟩pègpètan=di]*   *a*   *[gilèngan].*
      ADJ-many=of.course,   ⟨PST⟩tie=3PL.GEN   LIG   male
      'There are many. those males [who were tied together by them (= Sindalu)] (arta0502).'

(35) *O:ni.   saya   [mepep-piya]   a   [gimtèn=mi]   a   [tanggu:yub].*
      yes   that.is ADJ.RDP-good   LIG   made=1PL.GEN   LIG   fire.blower
      'Yes, that is the [good] blower [we made].' (arta0501)

(36) *Awan   [ta   ma-ating=mu   a]   'pong'.*
      there.is.no   OBL.INDF   POT-hear=2SG.GEN   LIG
      'There is no 'pong' [which you can hear].' (arta0002)

(37) (Conversation)

      A: *ayde:tidi   ippèt=i.*
          and.PL.ABS.DEF   yam=SPC
          'and yams (Dioscorea sp.)'

      B: *[Kakillèk[a   [ippèt],*
          small   LIG   yam
          '[small] yams.' (arta0002)

(38) *[Med-digsèn]   a   [pu:nèd   aydi: bègbèg].*
      ADJ-strong   LIG   rain   and   wind
      '[strong] rain and wind.' (arta0007)

(39) *Basta   in-an-anu:san   =mi   tèddi   ay   [ka:man=i]   a*
      had.to   ⟨PST⟩-RDP-patient-TR   =1PL.GEN   just   filler   big=SPC   LIG
      [to:luda].
      tent
      'We had to be patient with a [big] tent.' (arta0007)

The following examples illustrate the preferred order of two nouns, indicating that more relational concepts precede less relational concepts:

(40) *Si:ye: wadi   na=y   [ankel]   a   [Ombes] a:yi:,   si:ye:*
      this   younger.sibling GEN.INDF=SPC uncle   LIG   Ombes   this,   this

      ina=mi   ti   Marin.
      mother=1PL.GEN   SG.OBL.DEF   Marin.

      'This is the younger sibling of uncle Ombes, this is the mother of Marin.' (arta0506)

(41) *I-bud   =mu   didi   [top   =mu   =y]   a*
      TR-say   =2SG.GEN   PL.GEN/OBL.DEF companion   =2SG.GEN   =SPC   LIG

      [Bugkalot],   i-bu:d   =u   tamman   didi   [to:p
      Bugkalot   TR-say   =1SG.GEN   again   PL.GEN/OBL.DEF companion

      =u   =y]   a   [Arta].
      =1SG.GEN   =SPC   LIG   Arta

      'You tell it to your companions of Bugkalot; I will tell it to my companions of Arta.' (arta0100)

(42) *[yakkan=mi]   a   [laman].*
      viand=1PL.GEN   LIG   wild.pig

      'our viand(,) which is wild pig.' (arta0002)

(43) *Pa:ng-alap-èn   =mi   i   [arigi=na]   a   [ayu]   ta*
      PRG-get-TR   =1PL.GEN   SG.ABS.DEF post=3SG.GEN   LIG   wood   OBL.INDF

      talun.
      mountain

      'We are getting wood for post in the forest.' (arta0001)

The nouns whose meaning is a kinship relation, social relation, the function of the object, and the attribute occur —in most cases with the genitive forms—, followed by the nouns representing more absolute, non-relational concepts such as a proper name (40), the names of the ethnic groups (41), and particular natural categories as in (42) and (43). This distinction is similar to the differentiation between role-denoting nouns and object-denoting nouns (Kow et al. 2006, Kow and Isahara 2005), and between relational nouns and entity nouns (Gentner

and Kurtz 2005).

It should be noted that the word order preference in noun-modifying structures is at-tested across the word classes regardless of whether it is a verb, an adjective or even a noun. Thus this preference cannot be generalized syntactically (e.g. "nouns tend to be preceded by adjectives"). Rather, it would be better to be understood in semantic terms, as "relational concepts tend to be followed by non-relational or less relational concepts."

There are two pieces of evidence supporting the preference in the choice of the two alternative orders. First, the preference of the orderings is robust to the extent that the choice of order is insensitive to the pragmatic focus or other information-structural factors.[3] Consider the following examples cited in the conversation:

(44)   =(36)

> *Awan*   *[ta*   *ma-ating=mu]*   *a*   *['pong'].*
> there.is.no   OBL.INDF   POT-hear=2SG.GEN   LIG   (onomatopoeia)
>
> 'There is no 'bang' [which you can hear], (as opposed to guns).' (arta0002)

(45)   = (37)

> A: *ayde:tidi*   *ippèt=i.*
>   and.PL.ABS.DEF   yam=SPC
>   'and yams (Dioscorea sp.)'
>
> B: *[Kakillèk]*   *a*   *[ippèt],*
>   small   LIG   yam
>   '[small] yams.' (arta0002)

The first utterance appeared in the context that as opposed to guns, the traditional tools such as bow and arrows were quite silent in shooting animals. In this example, the final ele-ment *pong* functions as a pragmatic focus in this sentence/utterance. In the second example,

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[3]Arta may differ from other Philippine languages such as Tagalog in this regard. Schachter (1987) suggests that the alternative word orderings in this construction in Tagalog are pragmatically conditioned: "[a]lthough a demonstrative and the noun it modifies may occur in either order, the alternative orderings are generally not in free variation, but are, rather, conditioned by discourse factors. The constituent that comes second typically represents the more salient information and may, for example, be contrastive." (ibid.: 944, cited from Him-melmann 2007: 14). In Arta, the relational–non-relational ordering is much preferred regardless of pragmatic focus.

where the same constructional variant is chosen, the information structure seems quite different. The information *ippèt* 'kind of yam' is already provided by speaker A, then speaker B comments on the particular size of the yams. Even though the information status of the *ippèt* is given/old in the second utterance, the same constructional variant (relational–non-relational) is used.

Second, the preference is robust to the extent that the preferred option is employed even when the ordering contains a long first element, and would bring about structural ambiguity as to the choice of the antecedent.[4] See example (46):

(46) *saya*   *[ma-alap*   *didi*   *ama=mi=ti]*   *a*   *[laman].*

      that   POT-get   PL.GEN/OBL.DEF   father=1PL.GEN=SPC   LIG   wild.pig

      '(lit.) That is the wild pigs which our fathers can get.'

      (That is what our fathers can get, that is, wild pigs.) (arta0002)

cf. *saya*   *ma-alap*   *didi*   *[ama=mi=ti]*   *a*   *[laman].*

     that   POT-get   PL.GEN/OBL.DEF   father=1PL.GEN=SPC   LIG   wild.pig

     'That is what our father, who is a wild pig, can get.'

The example is structurally ambiguous as to whether the noun-modifying structure begins with the verb *ma:lap*, or the nominal *ama=mi=ti*. The opposite order (47) is not used, which could otherwise avoid the structural ambiguity:

(47) *Saya*   *[laman]*   *a*   *[ma-alap*   *didi*   *ama=mi=ti].*

      that   wild.pig   LIG   POT-get   PL.GEN/OBL.DEF   father=1PL.GEN=SPC

The preference of the noun-modifying construction in Arta overrides this kind of structural ambiguity, as well as the pragmatic focus.

Although this is a strong preference, it is not a rigid rule, and in fact, there are a few cases where the opposite word order is attested. A different ordering is seen in the following examples:

(48) *Manaka:ng=ami=d*   *a*   *mangi-yakkan*   *ti*   *[ba:lu=tidi*

      cook=1PL.ABS=POST   LIG   INTR-viand   SG.OBL.DEF   yam=SPC

---

[4] Schachter and Otanes (1972: 123) reports that it is dispreferred in Tagalog.

ayde:=tidi   ilus=i],   a   [aliy-an   didi   ina=mi=ti]

and=PL.ABS.DEF yam=SPC   LIG dig-TR   PL.GEN/OBL.DEF mother=our=SPC

'We cook the viand with yams, which our mothers dig.' (arta0002)

(49) *Punan=na   ayni   [babakat=i],   a   [ina   ni   buka:gan=i].*

say=3SG.GEN   this   old.woman=SPC LIG mother SG.GEN.DEF female=SPC

'Said an old woman, the mother of the woman.' (arta0106)

(50) *[Pagay],   mina-dippas   de:ti,   ta   kadigsèn   na   bègbèg,*

rice,   POT.PST-fall.down   because.of strength of   wind,

ayde:yi [ka:huy],   a   [ni-mulamula=mi].

and   potato   LIG PST.TR-plant.RDP=1PL.GEN.

'As for the rice, it was blown down because of the strength of the wind, and those

potatoes that we planted.' (arta0007)

(51) *Amma   munati   [kaka:man   na   aba],   a   [gimt-èn   =di],*

if   like.this bigness   of   mat   LIG make-TR   =3PL.GEN

saliy-an   =di   =te: ta   ta:salub   a   baggat.

exchange-TR   =3PL.GEN   =only OBL.INDF one.sack LIG rice

'Even in case of this big mat which we made, they exchange it with only one sack of

rice.' (arta0108)

Perhaps the most significant difference between the preferred and non-preferred patterns

of ordering is that the non-preferred type of construction variant has a pause between the

two elements; as represented by the comma (,) above. In fact, most of the examples with

the non-preferred construction variant have a pause before the ligature *a*, constituting two

different intonation contours before and after the pause. In other words, the construction is

syntactically a single unit referring to a single entity, but phonetically, the packaging of the

whole sequence as an NP is suspended for some reason, before finalizing the NP.

My tentative hypothesis is that the non-preferred ordering in a noun-modifying con-

struction exists complementarily to manage the referring problem that may occur on an

addressee's part in interaction. If the speaker becomes aware of the addressee having diffi-

culty identifying the referential target, s/he is required to provide further information on it,

and stop finalizing the turn or progressing to the next step of sequence (English definiteness is reconsidered in terms of "a joint activity" between the participants of the conversation; see Clark 1986, 1996). The particular constructional variant, which would otherwise be dispreferred in a normal context, seems to be employed complementarily as a strategy to manage the referential problem during the conversation.

In summery, the following relation seems to hold between the two different linguistic resources and the distinctive functions in terms of social cognition and interaction. First, the preferred template (the relational concept precedes non-/less relational concept) is selected if the speaker provides information based on the preliminary assumption on his/her knowledge. On the other hand, the non-preferred template (non-less relational concept preceding the relational concept) is selected as an ad-hoc strategy on the spot, i.e. when a speaker becomes aware that s/he has provided insufficient information for the addressee to access the intended referent, and the speaker uses it to help him/her to identify the referential target.

6.2 Partitive construction

A partitive construction is a grammatical device to delimit the referent(s) as a unit to enable the referent(s) to be quantified. This construction consists of four elements: partitive noun, ligature, head noun, and, since the construction is primarily used for quantification, a quantifier, as formalized with an example in (52):

(52) ([quantifier] LIG) [partitive N] LIG [head noun]

   (*tallip*   *a*)   *salub*   *a*   *baggat*

   two   suck   husked.rice

   '(two) sacks of (husked) rice'

I have not conducted an extensive examination of the varieties of the construction, but at least the following subcategories are recognized:

(53) Containers

   a. *ta:=**salub** a baggat* (one=suck LIG husked.rice) 'sack of (husked) rice'

   b. *tallip a **ba:so** a wagèt* (two LIG cup LIG water) 'two cups of water'

    c. *tallip a **timba** a wagèt* (two LIG bucket LIG water) 'two buckets of water'

(54)   Groups, clusters (e.g. *sar'ay, sapad* 'cluster, bunch', *pa:ris* 'pair', and *gapèt* 'bundle')

    a. *si:pang   a   **sar'ay**   a   bunga=na.*

       one   LIG   cluster   LIG   fruit=3SG.GEN

       'a cluster/bunch of fruits' si:pang a sapad (a bagat)

    b. *si:pang   a   **pa:ris**   a   awan   mel-li:nis.*

       one   LIG   pair   LIG   NEG   ADJ-clean

       'One pair of unclean (animal)' (Bible translation, Genesis: Noah's ark)

    c. *si:pang   a   **gapèt**   a   tanglag*

       one   LIG   bundle   LIG   lemon.grass

       'One bundle of lemon grass'

(55)   Taxonomic categorization

    a. *Mangi-bu:lu:ng=a   ta   pitu   a   pa:ris   ta   attanan*

       INTR-bring=2SG.ABS   OBL.INDF   seven   LIG   pair   OBL.INDF   all

       *a   **kla:se**   a   mang-èbèb-bèr.*

       LIG   class   LIG   INTR-RDP-fly

       'You should bring in seven pairs of every kind of birds.' (Noah, Bible)

    b. *I-bu:lun=mu   i   pasassawan   a   attanan   a   **kla:se***

       TR-bring=2SG.GEN   SG.ABS.DEF   couple   LIG   all   LIG   class

       a   animal

       LIG   animal

       'You should bring in the couples of every kind of animal.' (Noah, Bible)

The nouns used for partitive construction are to be examined in future research.

6.3 Quantifiers

In Arta three types of quantifier are identified, each differentiated by frames of reference and actual meanings. The first type, numeral, is a quantifier which designates a numerical value with reference to the relatively objective numerical scale, such as *si:pang* 'one', *tallip* 'two',

ta'lu 'three', *appat* 'four', and so forth. Second, a relative quantifier is one that designates the relative amount of the referent(s) with reference to the definite entity in discourse, as in *attanan* 'all', and *a:duwan* 'some'. The third type is an evaluational quantifier. The frame of reference in this case is the expected or desirable quantity of the referent in question, and the quantifiers are used to *evaluate* the actual quantity of the referent with reference to the speaker's subjective attitude toward the quantity, as in *killèk a tapa* 'a small amount of soil', which may be used when the amount of soil is less than the speaker expected/desired. This is summarized in Table 6.1:

Table 6.1: Three types of quantifier

	frame of reference	meaning	items
Numeral (absolute quantifier)	numerical scale	a particular value along the scale	*si:pang* 'one', *tallip* 'two' *ta'lu* 'three' …
Evaluational quantifier	expectation by the speaker	evaluation of the quantity vis-à-vis the expectation	*killèk* '(a) few/little' *me"a:du* 'many/much'
Relative quantifier	definite entity in discourse	relative size of the extension vis-à-vis the definite entity	*gissa* 'one (of X)' *a:duwan* 'some (of X)' *attanan* 'all (of X)'

This section examines the evaluational quantifier and the relative quantifier. An extensive discussion on numerals will be provided in the next section dealing with the numeral system.

6.3.1 Evaluational quantifiers

There are two evaluational quantifiers in Arta: *me"a:du* 'many, much' and *killèk* 'a few, a little', each having emphatic forms *me'e"a:du* 'very many, very much, too many, too much, and *kilèkillèk* 'only a few, only a little'. The examples with *me"a:du* are shown in (56–58), and the ones with *killèk* in (59):

(56) *N-i-tuntu:ru=na* **me"a:du** *a lagip a naddyusan.*

PST-TR-learn=3SG.GEN many LIG story LIG holy

'He taught (us) **many** holy stories. (Sower, Bible)

(57) ***Me"a:du***   *a*   *kakka:nak,*   *awan=di*   *tataw*   *i*   *lagip*

     many   LIG   children   NEG=POST   know   SG.ABS.DEF   language

     na   *Arta.*

     GEN.INDF   Arta

     '**Many** children cannot speak Arta.'

(58) *Mang-anting=tid*   *ta*   *hapon*   *da*   ***me"a:du***   *a*   *hapon.*

     INTR-afraid=3PL.ABS   OBL.INDF   Japanese   because   many   LIG   Japanese

     '(During WWII,) they were afraid of Japanese people because there were **many** Japanese

     people (there).' (arta0100)

(59) *Atti*   *ansasi:pang*   *a*   *bukèl*   *a*   *m⟨in⟩e:-sappuar*   *ta*

     exist   each.one   LIG   seed   LIG   ⟨PST⟩POT-fall.down   OBL.INDF

     karagatan   *a*   ***killèk=i***   *a*   *tapa=na.*

     stone   LIG   little=SPC   LIG   soil=3SG.GEN

     'Each seed fell down onto the stony place with **little** soil.' (Sower, Bible)

The evaluational quantifiers differ from numerals in their frame of reference. With numerals, a relatively objective measurement by the numerical scale is involved; with respect to the evaluational quantifiers, the frame of reference is an expectation by the speaker (or conceptualizer, Langacker 2008), thus the same quantity of the referent may be construed as *killèk* or *me"a:du* according to his/her evaluation of the referent in each context.

6.3.2 Relative quantifiers

A relative quantifier (*gissa* 'one', *a:duwan* 'some', and *attanan* 'all') is so called because this type of quantification is inherently *proportional* in the sense that the interpretation of the quantified referent presupposes the maximum amount, as shown in (60):

(60)   {*Gissa /*   *A:duwan /*   *Attanan*}   *a*   *apu=ku,*

      one   some   all   LIG   grand.parent=1SG.GEN

      m⟨in⟩ap-pati=d.

      ⟨PST⟩INTR-die=POST

      '{One/Some/All} of my grandparents is/are dead.'

There are three relative quantifiers in Arta: *gissa* 'one', *a:duwan* 'some', and *attanan* 'all'. First, *gissa* means 'one of X'.

(61)   *Ay*   **gissa=y**   *a*   *apu=ku,*   *m⟨in⟩ap-pati*   *a*

      filler   one=SPC   LIG   grand.parent=1SG.GEN   ⟨PST⟩INTR-die=POST   LIG

      p⟨in⟩alattug-an=di.

      ⟨PST⟩gun-TR=3PL.GEN

      '**One of** my grandparents, he was shot and killed.' (arta0100)

(62)   *...*   *na-pannud*   *ta*   **gissa=y**   *a*   *basket*

         POT-full   OBL.INDF   one=SPCLIG   basket

      '(the fruits) became full in **one of** the baskets' (arta0005, Pear story)

In (61), among the grandparents of the speaker, one of his grandparents is chosen, whereas in (62), one of the two or three baskets is in question. Second, *a:duwan*, 'part of, some of' means a part of the whole set of referents as in (63,64):

(63)   **A:duwan**   *a*   *agani:*   *nang-e:dèm,*   *i*   **a:duwan=i,**

      some   LIG   non-Arta   PST.INTR-sleep   SG.ABS.DEF   some=SPC

      mata-tim=tid

      INTR.RDP-drink=3PL.ABS

      'Some people are sleeping, the others drinking.'

(64)   *Killèk=tep*   *arta.*   *Lègd-èn=tam*   *i*   **a:duwan.**

      few=still   people   wait-TR=1+2PL.GEN   SG.ABS.DEF   some

      'There are still few people, (so) let's wait for the others.'

TThere is no lexical differentiation in terms of the sequential order of the referential act, as seen in English *some* and *others* (in English, *other(s)* may pragmatically presuppose the

referential act preceding the reference in question; consider the non-interchangeability be-
tween *some* and *other* in the translation of example (63).). There are two interpretations of
a:duwan, 'some X, other X', a free choice, as in the first occurrence in (63), and 'the rest of X,
the other X', an exhaustive list, as in the second occurrence in (63) and the instance in (64).
These two interpretations are clearly differentiated with the definiteness marking, here the
presence/absence of *i*.

Finally, *attanan* means 'all of X', as shown in (65,66). The frame of reference '(all of) X' is
shown in the genitive phrase that follows *attanan* in (65), and the preceding NP *bagat* 'rice'
in (66):

(65) *Nangib-bangga=tid*   *m⟨in⟩e:-bubbu*   **attanan**   *ni*   *karga*
      PST.RECP-collide=3PL.ABS   ⟨PST⟩POT-spill   all   SG.GEN.DEF   content

      ni   *baske:ti*   *ni*   *Yukinori.*
      SG.GEN.DEF   basket=SPC   SG.GEN.DEF   Yukinori

      'They collided with each other and all of the content of Yukinori's basket fell down.'
      (arta0005, Pear Story)

(66) *Awan=di*   *ta*   *bagat*   *na-to:-tomba*   **attanan**.
      NEG=POST   OBL.INDF   banana   PSTPOT-RDP-fall   all

      'We have no more banana trees, all of which fell down.' (arta0007)

The quantifier *attanan* has a unique behavior so-called quantifier floating. The quantifier
can follow immediately after a predicate though the referent is identical with the one coded
by the absolutive argument. Consider the following examples, where the quantifiers are not
preceded by the nominal markers; *attanan* is placed outside of the nominals, with the clearest
example including an intervening ergative NP, as shown in (68):

(67) *G⟨in⟩imit=na*   **attanan**   *[tidi*   *kaykay=di].*
      ⟨PST.TR⟩make=3SG.GEN   all   PL.ABS.DEF   broom=3PL.GEN

      'S/he made all of their brooms.'

(68) *G⟨in⟩imit*   **attanan**   *ni*   *Nue*   *[in-i-bi:lin*   *ni*
      ⟨PST.TR⟩make   all   SG.GEN.DEF   Noah   PST-TR-order   SG.GEN.DEF

Ya:wi].

Yahweh

'Noah did all of what Yahweh had commanded (him to do).' (Noah, Bible)

(69) *Pa-latto:ng-an=mu=d* **attanan** *[tidi mang-èbèb-bèr=i]*

CAUS-outside-TR=2SG.GEN=POST all PL.ABS.DEF INTR-RDP-fly=SPC

sakay aytidi animal=i, pa-bay-an=mu a

and.then PL.ABS.DEF animal=SPC CAUS-allow-TR=2SG.GEN LIG

um-a:du=tid.

TR-many=3PL.ABS

'Bring outside all the birds, and the animals so they can propagate.' (Noah, Bible)

(70) *Map-pati* **attanan** *[i atti angès=na ti apaw*

INTR-die all SG.ABS.DEF exist breath=3SG.GEN SG.OBL.DEF surface

ni tapa=y]

SG.GEN.DEF soil=SPC

'every creature that has the breath of life on earth will die' (Noah, Bible)

(71) *L⟨in⟩⟨um⟩attong* **attanan** *[tidi animal=i, ayde:=tidi*

⟨PST⟩⟨INTR⟩outside all PL.ABS.DEF animal=SPC and=PL.ABS.DEF

mang-èbèb-bèr=i].

INTR-RDP-fly=SPC

'All of the animals and birds have gone out.' (Noah, Bible)

When relative quantifiers are used, the quantity of the referent is defined relatively, as a proportion of the maximal quantity. A similar kind of analysis has been provided for English quantifiers *no, some, all, every* and so forth. Langacker (1985, 2008) discusses the semantic distinction between absolute quantifiers such as *many, few* and, *little*, and the relative quantifiers such as *no, some*, and *all*. Langacker (2008: 278) claims that these two types of quantifier differ in the presence/absence of "maximal extension" in relation to which the actual quantity of the referent(s) is determined. The problem is, however, that he fails to define or characterize the nature of "maximal extension" explicitly. It is shown here that maximal extension is defined in pragmatic terms in Arta; the quantity expressed by the relative quantifiers is

determined in reference to an identifiable referent established in the discourse.

The most common pattern is with anaphoric relations. The referent is established prior to the occurrence of the quantifier and functions as a reference point, and with reference to the preceding referent, the actual quantity in question is determined relationally:

(72) 1. *Pab-bu:ras   ta   bunga   na   ayu,*
         PRG-pick.up   OBL.INDF   fruit   GEN.INDF   tree
         'He was picking up fruits of a tree,'

      2. *pal-lu:gun=na=tid   ta   **basket.***
         PRG-container=3SG.GEN=3PL.ABS   OBL.INDF   basket
         'and putting them into the basket.'

      3. *Unadda   na-pannud   ta   **gissa**=y   a   basket,*
         after   POT-full   OBL.INDF   one=SPCLIG   basket
         'After (the fruits) became full in one of the baskets,'

      4. *d⟨in⟩⟨um⟩imwang=di   kanakannak=i   nan-disikle:ta.*
         ⟨PST⟩INTRpass.away=POST   child=SPC   INTR-bicycle
         'the child passed away by bicycle.' (arta0005, Pear story)

(73) (Does he know the Arta language?)

      *Tataw=na   **a:duwan**,   konta   **a:duwan**,   awan.*
      know=3SG.GEN   some   but   some   NEG
      'He knows some (knowledge on Arta), but does not know others.' (arta0506)

In example (72), baskets are first introduced in the second line, and *gissa* in the third line designate one of the baskets. The speaker is talking about the "pear film" story, where three baskets are shown. In (73), the question 'Does he know the Arta language?' is followed by the answer; both instances of *a:duwan* are oriented to the prior 'the Arta language', which enables the respondent to mention '**some knowledge** of the language'. See further examples shown below:

(74) 1. A *Sa:ngan   a   Arta   atti: ta   Alicia?   Dikerawyan?*
           how.many   LIG   Arta.people   exist   OBL.INDF   Alicia   Dikerawyan
           'How many Arta people are there in Dikerawyan, Alicia?' (arta0108)

2. B *Nap-pati=d=ti.*

   PST.INTR-die=POST=here

   'They died here.'

3. C *Awan=di.   Nap-pati=d   **a:duwan**.*

   NEG=POST   PST.INTR-die=POST   some

   'Some of them died.' (arta0506)

(75) 1. *Atti   si:pang   a   arta   n-angay   nang-akkop   ta*

       exist   one   LIG   Arta.person   PST.INTR-go   PST.INTR-sow   OBL.INDF

       bukèl.

       seed

       'There is one person who sowed seeds.' (Sower, Bible)

   2. *Ta   n-i-sappuar   ta   bukèl,   atti   bukèl   ansasi:pang*

       OBL.INDF   PST-POT-sow   OBL.INDF   seed   exist   seed   each.one

       m⟨in⟩e:-wa   ta   degdeg   na   diddiman.   T⟨in⟩oktok

       ⟨PST⟩POT-do   OBL.INDF   edge   GEN.INDF   road   ⟨PST⟩pick

       na   manu:.

       GEN.INDF   bird

       'After he sowed the seeds, some of the seeds fell onto the edge of a road, (so) they were eaten by birds.'

   3. (4 sentences ommited)

   4. *Konta   d⟨in⟩⟨um⟩tun   tidi   **a:duwan**=i   a   bukèl   ta*

       but   PST⟨INTR⟩fall   PL.ABS.DEF   some=SPC   LIG   seed   OBL.INDF

       mepep-piya   a   tapa

       ADJ.RDP-good   LIG   soil

       'But the other seeds fell onto the good soil.' (Sower, Bible)

In (74), after the question 'How many Arta people are there in Dikerawyan, Alicia?', speaker C refers to the Arta people mentioned in the question, and answers that some of them died. In (75), the seeds mentioned in the first line falls down in various kinds of place, and in the fourth line, *a:duwan* is used to describe part of them falling on the 'good soil'. In

all the examples above, the prior context enables the quantifiers to be interpreted appropriately. However, in the examples below, the nominals that *follow* the quantifiers function as a reference point, that is, cataphoric relations are the basis for the proper understanding of the quantifiers. This is especially the case of *attanan* as in (65,77,78):

(76) *Ay*   **gissa**=*y*   *a*   *apu=ku,*   *m⟨in⟩ap-pati*   *a*
      filler   one=SPC   LIG   grand.parent=1SG.GEN   ⟨PST⟩INTR-die=POST   LIG

      p⟨in⟩alattug-an=di.
      ⟨PST⟩gun-TR=3PL.GEN

      '**One of** my grandparents, he was shot and killed.' (arta0100)

(65) *Nangib-bangga=tid*   *m⟨in⟩e:-bubbu*   **attanan**   *ni*   *karga*
      PST.RECP-collide=3PL.ABS   ⟨PST⟩POT-spill   all   SG.GEN.DEF   content

      ni   *baske:ti*   *ni*   *Yukinori.*
      SG.GEN.DEF   basket=SPC   SG.GEN.DEF   Yukinori

      'They collided with each other and all of the content of Yukinori's basket fell down.'
      (arta0005, Pear Story)

(77) *I-bu:lun=mu*   *i*   *pasassawan*   *a*   **attanan**   *a*   *kla:se:*
      TR-accompany=2SG.GEN   SG.ABS.DEF   spouses   LIG   all   LIG   class

      a   *animal*
      LIG   animal

      'You should bring with you the couples of all of the classes of animals.' (Noah, Bible)

(78) *G⟨in⟩imit*   *ni*   *Nue*   **attanan**   *a*   *n-i-bi:lin*
      ⟨PST.TR⟩make   SG.GEN.DEF   Noah   all   LIG   PST-TR-command

      ni   *Ya:we.*
      SG.GEN.DEF   Yahweh

      'Noah made all of what Yahweh commanded.' (Noah, Bible)

Most of the cases have anaphoric and cataphoric relations between a reference point and quantifier, but in (79), the reference point of the quantifier is more deictic; the two objects (clothes) are located in front of the speaker and addressee, and talking about the objects.

(79)   *Um-ustu=dèn*   *ayna*   *a*   *barowa:si,*   *konta*   *ay*   **gissa**=*y*

        INTR-good=1SG.OBL   DEM.MED   LIG   clothes   but   one=SPC

        ka:man   *balla:ng=u.*

        big   not.want=1SG.GEN

        'That shirt is good for me, but **the other** is big, and I don't want it.'

In conclusion, the maximal extension by which the actual quantity is determined is defined in pragmatic term in Arta. The quantity expressed by the relative quantifiers is determined via a reference point established in the discourse, and the relation between the quantifier and reference point may be anaphoric, cataphoric, or deictic.

6.4   Numerals

Numerals differ from the other two subtypes of quantifiers in that numerals constitute a complex system by itself. In Arta, there are two series of numerals: the native numeral system and the borrowed system from Spanish, both of which are used in different conversational settings and for different purposes. The Spanish numeral system is typically employed for concepts which are adapted from western or modern culture, such as prices (by peso), and time. It also tends to be used if the number is over 10; although the custom of counting households, or the member of a particular group would never be a borrowed cultural activity, Spanish terms are used if the number is over 10. The native numeral system is typically used when the number to be counted is relatively low (most frequently when the number is 2, 3, or 4). This section presents a grammatical overview of the Arta numeral systems primarily focused on native numerals.

Let me first present the native numerals, given in Table 6.2:

At least three numerals *si:pang* '1', *tallip* '2', and *ta'lu* '3' are considered to be native lexemes, rather than recent borrowings. *Si:pang* and *tallip* are not found in any other Austronesian language. It is thus possible that these items might belong to a non-Austronesian substratum (see Reid 1994). *ta'lu* is no doubt of Austronesian origin (cf. PAN *təlu), but this particular phonological form with a glottal stop is not attested in surrounding languages. There is so far no definitive idea as to whether it is a recent borrowing or inherited from PMP/PNLZN,

Table 6.2: Numeral roots

numeral	meaning	numeral	meaning
si:pang	1	*walu*	8
tallip	2	*syam*	9
ta'lu	3	(*ta:-*)*hulu*	10
appat	4	(*arta*)	(20)
lima	5	(*ta:-*)*gatut*	100
ènnèm	6	(*ta:-*)*ribu*	1000
pitu	7		

but it is at least evident that the /ə/ > /a/ is not a regular sound change in Arta (§2.2.2).[5]

Most of the other items might be borrowings from Yogad or other Cagayan Valley languages. *ə̄pat > *appat* includes *ə̄> /a/ with gemination after schwa, which is not a regular change which occurred in Arta, but is characteristic of Cagayan Valley languages.[6] The formative *ta:-* seen in the lexemes '10', '100', and '1000' means 'one unit of', co-occurring with various units such as *salub* 'sack, bag' > *ta:-salub* 'one sack (of something)', and *bulan* 'moon, month', > *ta:-bulan* 'one month'. This formative is probably a loan from Yogad, in which *ta:* (< PAn *sa-* 'one', perhaps with *ŋa (linker)) underwent two changes: *s > /t/ and the loss of *ŋ. Although 'twenty' is normally expressed as *tallip a hulu* 'two times ten', Reid (1989) reports that *arta* 'person' is used to encode 'twenty', and in fact it is found in my elicitation, and functions as the base of the numerical system, but unfortunately it seems obsolete since no actual instance was found in conversation. This is interesting in that it may be motivated by the bodily basis of counting systems. Heine (1997) surveys the numeral systems attested in the languages of the world, and found that most of the systems are significantly relevant to the embodied experience of counting (the body-part model, p.19ff); quinary and decimal systems are most widespread, which is not arbitrary because the digits of human hands and feet are most likely to be involved in the counting activity. It would be natural to utilize 'person' as a unit or the base of a particular numerical system, as in Arta, because the number of the digits of human hands and feet are quite concrete, common among almost all the members of the speech community, and further diachronically remain the same.

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[5]Lawrence A. Reid (p.c.) suggests that it could be a reflex of *Ca-təlu, as in Tag. *tatlo* (*Ca-tlu), with the schwa of the reconstructed form deleted.

[6]The sound change *p > /h/ (cf. *pulu > *hulu*) is also attested in Yogad.

Table 6.3: Complex expressions for cardinal numbers

expression	meaning	literal meaning
ta:-hulu aydi: si:pang	'11'	ten and one
ta:-hulu aydi: tallip	'12'	ten and two
ta:-hulu aydi: ta'lu	'13'	ten and three
tallip a hulu	'20'	two times ten
ta'lu a hulu	'30'	three times ten
appat a hulu	'40'	four times ten
tallip a gatu	'200'	two times hundred
ta'lu a gatu	'300'	three times hundred
ta'lu a hulu aydi: lima	'35'	three times ten and five
tallip a gatu aydi:	'375'	three times hundred
pitu a hulu aydi: lima		and seven times ten and five

Complex expressions combining the above lexemes are given in Table 6.3. Addition is expressed with the form *aydi:*, a conjunction 'and'; and multiplication with the ligature *a*.[7] For example, '11, 12, 13, …' are expressed as the decomposition of '10 and 1, 2, 3, …', thus *ta:-hulu aydi: si:pang, tallip, ta'lu, …*, whereas '30, 40, 50, …' as the decomposition of '2, 3, 4, … of 10', thus *tallip, ta'lu, appat, … a hulu*; and other numbers consist of the combination of the two strategies, as in *ta'lu a hulu aydi: lima* (3 times 10, and 5), '35'.

The numerals described above are used to form several kinds of derivational form, i.e. ordinal numerals, distributive numerals, and frequentative numerals. Ordinal numbers are expressed by the combination of *me:ka-* or *ika-* and a cardinal numeral, with the exception of 'first', which is one monomorphemic lexeme *dutul*, as given in Table 6.4

Table 6.4: Ordinal numerals

expression	meaning	expression	meaning
dutul	'first'	*me:ka-pitu*	'seventh'
me:ka-tallip	'second'	*me:ka-walu*	'eighth'
me:ka-ta'lu	'third'	*me:ka-syam*	'ninth'
me:ka-appat	'forth'	*me:ka-ta:-hulu*	'tenth'
me:ka-lima	'fifth'	*me:ka-ta'lu a hulu*	'thirtieth'
me:ka-ènnèm	'sixth'		

As exemplified in (80, 81), the noun to be modified follows the ordinal numerals with the

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[7]See §6.1.3 for the usage of *a* in a noun-modifying construction.

ligature *a*:

(80) **me:ka-pitu**   *a*   *bulan*
      ORD-seven   LIG   month
      'the seventh month'

(81) *Ta*   **dutul**   *a*   *langit*   *ta*   **me:ka-ta:hulu**   *a*   *bulan,*
      OBL.INDF first   LIG   day   OBL.INDF ORD-ten   LIG   month

      p⟨in⟩⟨um⟩e:ta   *toktok*   *didi*   *bukid=i.*
      ⟨PST⟩⟨INTR⟩CAUS.see   top   PL.GEN/OBL.DEF   mountain=SPC
      'On the first day of the tenth month the tops of the mountains became visible.' (Noah,
      Bible)

The lexeme *dutul* is frequently attested as the idiomatic phrase *ta dutul (a langit)* 'in those
days' (lit. at the first (days)), as in (82, 83):

(82) **Ta dutul**,   *awan*   *ta*   *kape:.*
      those.days   NEG   OBL.INDF   coffee
      'We did not have coffee in those days' (arta0002)

(83) **Ta dutul a langit**,   *pang-atti-nan=mi*   *ayta*   *mo:nayan.*
      those.days   PRG-exist-LOC.TR=1PL.GEN   there   Cagayan.river
      'In those days, we lived in the river(side).' (arta0001)

Distributive numerals are those which represent the number of objects distributed to
each possessor. Two distributive numeral forms are attested; *anCa-X*, shown in (84) takes
the distributed objects as the absolute argument *anCa-X* (X = numeral), whereas *anCaX-an*,
shown in (86), takes the possessor as the absolute argument, with the distributed objects
mapped onto the oblique argument.

(84) **anCa-X** 'each'

      a. *ansa-si:pang* 'one each'

      b. *anta-tallip* 'two each'

      c. *anta-ta'lu* 'three each'

(85) *Atti* **ansa-si:pang** *a* *bukèl* *a* *mine:-sappuwar* *ta* *karagatan*

exist DIST-one   LIG seed LIG POT-fall.down   OBL.INDF stone

a *killèk=i* *a* *tapa=na.*

LIG little=SPC LIG soil=3SG.GEN

'Each of the seeds fell down onto the stony ground with little soil.'

(86) **anCa-X-an** 'X (number) of something is distributed for each of ABS'

    a. *ansa-si:pang-an* '(they are) given one each'

    b. *anta-tallip-an* '(they are) given two each'

    c. *anta-ta'lu-an* '(they are) given three each'

(87) **Ansa-si:pang-a:ng**=am *ti* *bolpe:n=i.*

DIST-one-LOC.TR=2PL.ABS   SG.OBL.DEF ballpoint.pen=SPC

'Each of us is given one ballpoint pen'

The frequency of events is also expressed by the derived numerals, as given in Table 6.5. The prefix *manin-* is categorized as a verb, with the tense distinction: *mamin-* (non-past) vs. *namin-* (past).

Table 6.5: Frequentative numerals

expression	meaning
mamitta	'do once, sometimes'
mamin-tallip	'do twice'
mamin-ta'lu	'do three times'
mamin-'appat	'do four times'
mamin-ta:hulu	'do ten times'
mamin-a:du, mame"a:du	'do many times, how many times'

In actual data, frequentative forms appear with the verb denoting the event in which the frequency is involved.

(88) *Mamitta=te:=tèn* *a* *mang-isan* *ta* *talun.*

once=only=1SG.ABS LIG INTR-fishing OBL.INDF mountain

'I go fishing in the mountain once (a day, week).'

(89) *Mamin-a:du=taw   a   pad-di:muy   ta   si:pang   a   langit?*
      FREQ-many=2SG.ABS LIG   PRG-bathe   OBL.INDF one   LIG   day
      'How many times a day are you bathing?'

(90) *Na-madi=d   a   namitta   i   tapa.*
      PST.POT-dry=POST   LIG   PST.once   SG.ABS.DEF soil
      'The soil dried once.' (Noah, Bible)

(91) *Namitta=tèn   n-um-angay   ta   Manila.*
      PST.once=1SG.ABS   PST-INTR-go   OBL.INDF   Manila
      'I went/have been to Manila once.'

In conclusion, Arta has two series of numerals: "native" numerals and those of Spanish-origin. Native numerals in Arta underwent heavy borrowing from neighboring languages, and actual numbers are expressed with complex combinations. Other subsystems consist of cardinal numerals, distributive numerals, and frequentatives among others.

6.5 Conclusion

In this chapter, adjectives and related constructions were examined. First, morphological, syntactic and semantic aspects adjectives were explored. It was shown that adjectives differ from potentive verbs both morphologically and semantically. In a noun-modifying construction, adjectives and other relational concepts precede non-relational or less relational concepts. The latter half of the chapter dealt with quantifiers such as relative quantifiers, evaluational quantifiers, and numerals. Numbers are expressed constructionally by the combination of numerals, ligature *a*, and coordinator *aydi:*; numerals also have some morphologically complex including ordinal numbers, distributives, and frequentatives.

Chapter 7

Argument structure and subjecthood

The following three chapters (Ch.7–9) explore the structure of clause in Arta. This chapter concerns definition and syntactic property of clause in Arta, including the identification of argument structure (intransitive, extended intransitive, transitive, and extended transitive clauses), and the description of absolutive argument, which is treated as syntactically privileged argument (or a pivot) as opposed to other arguments such as ergative and oblique.

7.1 Argument structure

In §4.3., I argued that Arta has an absolutive-ergative alignment in case marking. This section discusses argument structures attested in the language in greater detail. In Arta, the following four patterns of argument structure can be recognized based on the surface distributions of cases; there are two types of intransitive and transitive clause in terms of the presence/absence of an oblique phrase, as shown in Table 7.1:

Table 7.1: Valence and transitivity (based on Dixon and Aikhenvald 2000)

transitivity	valency	case marking
intransitive clause (VS)	monovalent	predicate+ABS
extended intransitive clause (VSE)	bivalent	predicate+ABS+OBL
transitive clause (VAO)	bivalent	predicate+ERG+ABS
extended transitive clause (VAOE)	trivalent	predicate+ERG+ABS+OBL

Examples (1)–(4) illustrate each pattern of argument structures above:

(1) **Intransitive clause (VS)**

Manga:-bisin	*ti*	*Arsenyo.*
stv-hungry	sg.obl.def	Arsenyo
V	[S	]

'Arsenyo is being hungry.'

(2) **Extended intransitive clause (VSE)**

pal-lamun	*=tèn*	*ta*	*kadèt.*
prg-mow	=1sg.abs	obl.indf	weed
V	[S]	[E	]

'I am weeding.'

(3) **Transitive clause (VAO)**

Ga:gèlgèl-èn	*=di*	*i*	*laman=i.*
cut-tr	=3pl.gen	sg.abs.def	wild.pig=spc
V	[A]	[O	]

'They cut the wild pig.'

(4) **Extended Transitive clause (VAOE)**

Lugun-an	*=mu*	*i*	*baske:t=i*	*ta*	*pagay.*
container-tr	=2sg.gen	sg.abs.def	basket=spc	obl.indf	rice
V	[A]	[O	]	[E	]

'Put rice into the basket.'

It should be emphasized that oblique phrases are not identical with extended argument or E. Extended argument is one of the functions encoded by oblique phrases. Oblique phrases may also mark various kinds of *adjunct* including time, reason, and cause; thus the adjunct use of oblique phrases needs to be noted, in order to properly differentiate (in)transitive clauses from *extended* (in)transitives.

In what follows, I will argue against a traditional syntactic account for the categorical distinction between (core) argument and adjunct, I discuss that the distinction has a gradient nature in terms of the centrality/periphery of oblique NPs vis-à-vis the predicate. I conduct

a diagnostic test for indicating the centrality/periphery of oblique NPs, and reveal that patient, goal/recipient, inner-locative, and comitative are most central; oblique, instrument and outer-locative are less central; manner and reason are peripheral; and time is most peripheral (see Table 7.2). Based on the recognition of the gradient nature, the label "E (extended core argument)" is allocated to the most central oblique elements (patient, goal/recipient, inner-locative, and comitative) just for our descriptive purposes.

7.1.1   Defining canonical argument structure

The distinction between argument (or core argument, complement) and adjunct (or periphery) is more vague and fluid than has been assumed not only in formal theories but also functional and descriptive linguistics in the following three senses. First, the boundary between argument and adjunct may vary according to the criteria to be applied, and the arbitrary choice of one out of several syntactic tests may result in constructing an artificial boundary between them. For example, in English, various syntactic tests such as the absence of prepositions, obligatoriness, *do-so* test, and passivizability are proposed to differentiate arguments from adjuncts (Lyons 1968, Fillmore 1977, Jackendoff 1977 among others), but since these tests produce different results, the definition of the argument-adjunct distinction varies depending on the arbitrary choice of the test. Thus the definition cannot avoid the danger of circularity. Second, the proposed tests are also partially affected by semantic and pragmatic contexts. For example, seemingly obligatory NPs may be omissible under under lexico-semantic conditions and definiteness (Fillmore 1986), and passivizability are also affected by contextual effects (Rice 1987, Langacker 1987b). Finally, all the tests work language-internally, and there is no guarantee that the same criteria are available in other languages than English. For example in Japanese, all NPs are omissible, and all NPs should be postposed by one of the case adpositions, thus the syntactic distinction between the argument and adjunct is hard to justify. Rather a distinction proposed so far is purely semantic: whether a given NP is a semantically inherent component in a given event or not (Nitta 2009). This suggests that cross-linguistic application of the syntactic distinction is not warranted.

   Since the distinction lacks descriptive adequacy, it is unlikely that there is a clear struc-

tural differentiation between adjunct and argument either language-internally nor cross-linguistically. Rather, we need to consider that each event is conceptualized together with various entities, from central participants that play a significant role in the event (e.g. patient and agent), through instrument, inner-location, and benefactive, until the peripheral roles (e.g. time, outer-location, and reason). All of them constitute a continuum between centrality and periphery vis-à-vis the event conception. Different syntactic tests provide different results because each of them is affected by different parameters relevant to the continuum.

In Arta, three constructions are available for diagnosing the centrality/periphery of various semantic roles such as time, reason, outer-locative, manner, instrument, comitative ('with N'), inner-locative, goal/recipient, and patient.[1] The first one is topicalization, mentioned in Reid (2006), "[n]ot all oblique NPs were core [in Proto-Northern Luzon]. Only those that encoded undergoer participants are considered to be core. They could not be topicalized by fronting. Oblique NPs could also encode location and time settings. These were peripheral arguments and could be topicalized" (ibid.: 8, footnote). This is applicable to Arta, where oblique phrases designating time and outer-locative can be preposed in the sentence-initial position, whereas other oblique phrases cannot.

(5) | ***Aytay*** | ***a*** | ***langit,*** | ***Martis,*** | *atti:=tèn* | *ti* | *ayti* | *bunbun=i* |
|---|---|---|---|---|---|---|---|
| now | LIG | day | Tuesday | exist=1SG.ABS | SG.OBL.DEF | here | house=SPC |
| [Time | |] | [Time] | [Clause | | | |

ni	*Mam*	*Saure.*
SG.GEN.DEF	Ma'am	Saure
		]

'Today, on Tuesday, I am at the house of Ma'am Saure.' (arta0007)

(6) | ***Aydi:ti*** | ***ta*** | ***tyempo*** | ***na*** | ***hapon,*** | *meses-subèg=tid.* |
|---|---|---|---|---|---|
| before | OBL.INDF | time | GEN.INDF | Japan | ADJ.RDP-fear=3PL.ABS |
| [Time | | | |] | [Clause] |

'In those days in Japanese era, they [=Japanese soldiers] were fearful.' (arta0100)

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[1]The terminologies are taken from Yamanashi (1983: 502), which summarizes "cases" named in Fillmore's case grammar.

(7) *Konta=d* *=tay* *awan=de:=ta* *subèg=na.*

    but=POST =now NEG=POST=OBL.INDF fear=3SG.GEN

        [Time]   [Clause   ]

    'But now, they (=Japanese people) are not fearful.' (arta0100)

(8) *Ay* **ta dutul**, *awan=tep* *ta* *mabaw,* *awan* *ta* *asin,*

    filler before   NEG=still OBL.INDF rice   NEG   OBL.INDF salt

        [Time   ] [Clause   ] [Clause   ]

    awan *ta* *tina:pay.*

    NEG   OBL.INDF bread

    [Clause   ]

    'In those days, (we) did not have rice, did not have salt, and did not have bread.'
    (arta0003)

(9) **Ayta** **pang-attinan=mi**, *killèk=te:* *i* *bungor.*

    there   PRG-exist=1PL.GEN little=only SG.ABS.DEF mosquito

    [Outer   Locative   ] [Clause   ]

    'In our living place, there are few mosquitos.'

(10) *Konta* **ayta** **bukid=i**, *awan* *ta* *pasu=na.*

    but   there   forest=SPC NEG   OBL.INDF heat=3SG.GEN

     [Outer   Locative] [Clause   ]

    'But there in the forest, it is not hot.' (arta0003)

However, no other types of oblique phrase can be preposed, and in most cases, it is time phrases that are preposed, with only a few outer-location phrases observed in my corpus.

Another test for identifying the centrality–periphery continuum of oblique phrases is whether a given oblique phrase can be an absolutive NP within the 'verbal' clause. This test is similar to the passivizability test in that both of the tests measure the potential for granting the status of "primary figure" to a given semantic role (see §7.2). Note that this test is intended to exclude deverbal nouns from verbs. In the following cases, in which patient, goal/recipient, inner-locative, and comitative are realized as the absolutive case, the predicate form is a verb not a deverbal noun in that they inflect for tense–aspect (see §9.2).

(11)   Patient (OBL > ABS)

    a. ***Mang-ali***   *ti*   *ina=ku*   ***ta***   ***ilus***

       INTR-dig   SG.OBL.DEF   mother=1SG.GEN   OBL.INDF   purple.yam

       V(intr)   [ABS   ]   [**OBL**   ]

       'My mother will dig purple yams.'

    b. ***Ali-an***   *ni*   *ina=ku*   ***i***   ***ilus=i***.

       dig-TR   SG.GEN.DEF   mother=1SG.GEN   SG.ABS.DEF   purple.yam=SPC

       V(tr)   [ERG   ]   [**ABS**   ]

       'My mother will dig the purple yam.'

(12)   a. *Awa:ng=ami*   ***maka-ba:sa***   ***ta***   ***letra***.

       NEG=1PL.ABS   POT-read   OBL.INDF   letter

                  V(intr)   [**OBL**   ]

       'We cannot read letters. (= not literate)'

    b. *Awan=mi*   ***ma-ba:sa***   ***i***   ***letra***.

       NEG=1PL.GEN   POT-read   SG.ABS.DEF   letter

                  V(tr)   [**ABS**   ]

       'We cannot read letters.'

(13)   Inner-locative (OBL > ABS)

    a. ***Atti:***   *=ami*   *ta*   *bunbun=mi.*

       exist   =1PL.ABS   OBL.INDF   house=1PL.GEN

       V(intr)   [ABS]   [**OBL**   ]

       'We are (staying) in our house.'

    b. ***Atti-nan***   *=mi*   *i*   *bunbun=mi.*

       exist-TR   =1PL.GEN   SG.ABS.DEF   house=1PL.GEN

       V(tr)   [ERG]   [**ABS**   ]

       'We are (staying) in our house.'

(14)   a. *Awan=tèn*   ***n-um-angay/n-e:na***   ***ta***   ***diso:no   na***

       NEG=1SG.ABS   PST-INTR-go/PST.INTR-go   OBL.INDF   inside   GEN.INDF

         [ABS]   V(intr)   [**OBL**

bunbun=ya.

house=that

]

'I did not get into that house.'

b. *Awa:ng=u*   **n-angay-an/n-e:n-an**   **i**   *diso:no:*   *na*

NEG=1SG.GEN   PST-go-TR/PST-go-TR   SG.ABS.DEF   inside   GEN.INDF

    [ERG]   V(tr)   [**ABS**

bunbun=ya.

house=that

    ]

'I did not get into that house.'

(15)   Goal/Recipient (OBL > ABS)

a. **Y-a:tèd**   *=mu*   *i*   *mabaw=i*   **ta**   **arta=y.**

TR-give   =2SG.GEN   SG.ABS.DEF   rice=SPC   OBL.INDF   person=SPC

V(tr)   [ERG]   [ABS   ]   [**OBL**   ]

'You should give the rice to the people.'

b. **Atd-inan**   *=mu*   **i**   **arta=y**   *ta*   *mabaw=i.*

give-TR   =2SG.GEN   SG.ABS.DEF   person=SPC   OBL.INDF   rice=SPC

V(tr)   [ERG]   [**ABS**   ]   [OBL   ]

'You should give rice to the people.'

(16)   a. **I-lugun**   *=mu*   *i*   *pagay*   **ta**   **baske:t=i.**

TR-container   =2SG.GEN   SG.ABS.DEF   rice   OBL.INDF   basket=SPC

V(tr)   [ERG]   [ABS   ]   [**OBL**   ]

'You should put the rice into the basket.'

b. **Lugun-an**   *=mu*   **i**   **baske:t=i**   *ta*   *pagay.*

container-TR   =2SG.GEN   SG.ABS.DEF   basket=SPC   OBL.INDF   rice

V(tr)   [ERG]   [**ABS**   ]   [OBL   ]

'You should put the rice into the basket.'

(17)   Comitative (OBL > ABS)

a. ***Me:-bu:lu:ng***   *=a*   *ni*   *ama=mu=y?*

INTR-follow   =2SG.ABS   SG.GEN.DEF   father=2SG.GEN=SPC

V(intr)   [ABS]   [**OBL**   ]

b. ***E:-bu:lun-an***   *=mu*   *ti*   *ama=mu=y?*

follow-TR   =2SG.GEN   SG.OBL.DEF   father=2SG.GEN=SPC

V(tr)   [ERG]   [**ABS**   ]

'Will you go with your father? Will you follow your father?'

(18) a. ***Me:-karawag***   *=tèn*   *ta*   *ara:ra:pa=ku.*

INTR-play   =1SG.ABS   OBL.INDF   friend=1SG.GEN

V(intr)   [ABS]   [**OBL**   ]

'I will play with my friend(s).'

b. ***Ka-karawa:g***   *=u*   *i*   *ara:ra:pa=ku=y.*

TR-play   =1SG.GEN   SG.ABS.DEF   friend=1SG.GEN=SPC

V(tr)   [ERG]   [**ABS**   ]

'I will play with my friend(s).'

On the other hand, time, reason, manner, instrument cannot be an absolutive NP within a VERBAL clause. With regard to instrument and time, there is no morphosyntactic strategy for realizing these NPs as absolutive within a verbal clause; a deverbal noun *paN-* may introduce the absolutive phrase of instrument and time within a clause, but the predicate is a noun, not inflecting for tense/aspect. With regard to manner and reason, oblique is the only option, with no strategy for them to stand as an absolutive argument within a clause. Consider the following pairs of examples. In the second example of each pair, the deverbal nouns beginning with *paN-* take instruments as their absolutive arguments, although the sentences are pragmatically not preferred:

(19) a. ***Ga:-gèlgèl-èng***   *=u*   *i*   *ba:lag*   *ni*   *laman=i*

RDP-cut-TR   =1SG.GEN   SG.ABS.DEF flesh   SG.GEN.DEF wild.pig=SPC

V(tr)   [ERG]   [ABS   ]

        ta   **bisuruk.**

        OBL.INDF   bolo/knife

        [**OBL**   ]

        'I will cut the meat of wild pig with a knife.'

b. ***Pang-gèlgèl***   *=u*   ***i***   **bisuruk**   *ta*   *ba:lag*

   cutting.tool   =1SG.GEN   SG.ABS.DEF   bolo/knife   OBL.INDF   meat

   Derived.noun   [ERG]   [**ABS**   ]   [OBL

   na   *laman.*

   GEN.INDF   wild.pig

           ]

   'What I will use to cut the meat of wild pig is the knife.'

(20)   a. ***Alap-èn***   *=mi*   *i*   *laman=i*   ***ta***   ***pangal.***

        get-TR   =1PL.GEN   SG.ABS.DEF   wild.pig=SPC   OBL.INDF   arrow

        V(tr)   [ERG]   [ABS   ]   [**OBL**   ]

   b. ***Pa:ng-alap***   *=mi*   ***i***   ***pangal=i***   *ta*   *laman.*

        tool.for.getting   =1PL.GEN   SG.ABS.DEF   arrow=SPC   OBL.INDF   wild.pig

        Derived.noun   [ERG]   [**ABS**   ]   [OBL   ]

        'What we use for getting wild pigs is the arrow.'

(21)   a. *gèlgèl* 'cut' > *pang-gèlgèl* 'time to cut, instrument for cutting'

       b. *alap* 'get' > *pa:ng-alap* 'time to get, thing for getting'

       c. *inta* 'see' > *pa:ng-inta* 'time to see, thing for looking'

       d. *atèp* 'roof' > *pa:ng-atèp* 'material for roof'

       e. *asin* 'salt' > *pa:ng-asin* 'something used as salt'

       f. *tu:rèk* 'write' > *pantu:rèk* 'something to write with'

Manner and reason, as shown below have no absolutive counterpart with a particular verbal form. Interestingly, manner phrases often appear in the sequence of the predicate, rather than in the absolutive position (§9.1).

(22) a. *Ma-arawata:ng=u=d*   *lagip*   *na*   *Arta* ***ta***   ***kakillèk.***

POT-grasp=1SG.GEN=POST   language   GEN.INDF   Arta   OBL.INDF   small

   b. ***Kakillèk*** ***a***   *ma-arawata:ng=u=d*   *lagip*   *na*   *Arta.*

small   LIG   POT-grasp=1SG.GEN=POST   language   GEN.INDF   Arta

'I can hardly understand the Arta language.'

(23) a. *Pa-pu:nèd-èng=u*   ***ta***   ***meb-bayag***.

CAUS-rain-TR=1SG.GEN   OBL.INDF   ADJ-long

   b. ***Meb-bayag*** ***a***   *pa-pu:nèd-èng=u.*

ADJ-long   LIG   CAUS-rain-TR=1SG.GEN

'I will bring about rain for a long time.'

The third test relates to interrogativization. If an oblique phrase becomes the interrogative pronoun in a content question sentence, the main clause may differ with respect to the presence/absence of the absolute argument. Consider the following pair of examples, where the agentive and patientive participants of the DRINKING event are the focus of the question:

(24) a. *A:nu*   *ti:m-èn*   *didi*   *daddu:pu:=i?*

what   drink-TR   PL.GEN/OBL.DEF   old.men=SPC

'What will the old men drink?'

   b. **A:nu*   *mat-tim*   *tidi*   *daddu:pu:=i?*

what   INTR-drink   PL.ABS.DEF   old.men=SPC

'What will the old men drink?'

(25) a. *Tatin*   *mat-tim*   *ta*   *binarayan?*

who   INTR-drink   OBL.INDF   alcohol

'Who will drink alcohol?'

   b. **Tatin*   *ti:m-èn*   *i*   *binarayan=i?*

who   drink-TR   SG.ABS.DEF   alcohol

'Who will drink the alcohol?'

First, (24) illustrates the case where the patient of the event is interrogativized as *a:nu* 'what'. (24a) is grammatical, where the interrogative pronoun corresponds to the absolutive argument within the clause, but (24b) is ungrammatical, because the interrogative does not correspond to the absolutive; rather the other participant, the agent 'old men' is realized as the absolutive. It is also the case when the agent of the event is interrogativized as *tatin*, shown in (25). If the interrogative *tatin* 'who' functions as the absolutive argument within the clause, the sentence is grammatical as in (25a), but if the interrogative does not correspond to the absolutive case, as in (25b), the sentence becomes ungrammatical.

This is not the case when reason, time, and manner are interrogativized, however. Consider the following examples:

(26)   *Tanakan*   *=**taw***   *mat-tim*   *ta*   *binarayan?*
       when   =2SG.ABS   INTR-drink   OBL.INDF   alcohol
       'When will you drink alcohol?'

(27)   *Ata'ay*   *a*   *mat-tim*   *=**taw***   *ta*   *binarayan?*
       why   LIG   INTR-drink   =2SG.ABS   OBL.INDF   alcohol
       'Why will you drink alcohol?'

(28)   *Kassandi*   *mat-tim*   *=**taw***   *ta*   *binarayan?*
       how   INTR-drink   =2SG.ABS   OBL.INDF   alcohol
       'How will you drink alcohol?'

When the element in question is reason (*ada'ay ...?* 'why') as in (26), time (*tanakan ...?* 'when'), as in (27), or manner (*kassandi*) as in (28), the element does not correspond to the absolutive argument within the main clause, thus the clause requires the absolutive NP, here the second singular absolutive person form *=taw*. Interrogativization thus differentiates agent, patient, goal/recipient, comitative, instrument, and outer-locative, from reason, time, and manner. The first group is undoubtedly more central, the latter more peripheral within the clause.

The results of the three tests to measure the centrality/peripherality of various types of oblique phrase are summarized in Table 7.2. The table suggests that various tests show different results, and thus a clear dichotomy between complement and adjunct, as assumed

in formal syntactic theories, is not warranted. Rather, it seems that a gradient characteri-
zation of adjunct–argument is justified, each morphosyntactic test exhibiting different cat-
egorizations based on the central–peripheral continuum of semantic roles. Time, reason,
and manner are more like an adjunct, instrument and outer-locative less so, and comitative,
inner-locative, goal/recipient, and patient are more like an argument.

Table 7.2: Set of Diagnostic test for the adjunctness of oblique phrases

	no other ABS in interrogative	not topicalized	have verbal derivation	score
Time	—	—	—	**0**
Reason	—	✓	—	**1**
Manner	—	✓	—	**1**
Outer-locative	✓	—	✓	**2**
Instrument	✓	✓	—	**2**
Comitative (with N)	✓	✓	✓	**3**
Inner-locative	✓	✓	✓	**3**
goal/recipient	✓	✓	✓	**3**
patient	✓	✓	✓	**3**

It may be counterintuitive that comitative is analyzed as more likely to be an argument.
This involves the fact peculiar to many Philippine languages; that is, comitative is differen-
tiated from other semantic roles by verbal morphology, not by a preposition as in *with* in
English. See the following examples:

(29) a. ***Me:-**karawag=tèn*   *ti*   *ara:ra:pa=ku=y.*

        INTR-play=1SG.ABS   SG.OBL.DEF   friend=1SG.GEN=SPC

        'I will play **with** my friend(s).'

    b. ?? ***Mang**-karawag=tèn*   *ti*   *ara:ra:pa=ku=y?*

        INTR-play=1SG.ABS   SG.OBL.DEF   friend=1SG.GEN=SPC

        '?? I will play my friend(s).'

As shown in example (29) above, *me:-* signals the oblique phrase to be comitative; other af-
fixes such as *maN-* would change the meaning of the oblique phrase. The comitative meaning
in Arta is more like an argument, because the meaning is signaled by the morphology of the
verb, and is expected to be encoded by the oblique phrase or to be recovered from the context.
This is similar to the case where inner-locative in English is considered to be an argument

rather than adjunct; with respect to the verbs, such as *put* and *place* expect a particular location to be expressed or contextually recovered (e.g. *put/place the basket <u>on the table</u>*).

For descriptive purposes, however, I need to choose which semantic roles are included in the discussion of argument structure. From the observation above, this paper regards comitative, inner-locative, goal/recipient, and patient as arguments when appearing as an oblique phrase, and the others as adjuncts.[2]

7.1.2 Argument structure and predicate type

Based on the above discussion, the four types of argument structure are defined, as presented in the beginning of the previous section. Each type of argument structure differs in the predicates they can take, as shown in (30):[3]

(30) 1. Intransitive: **Predicate** + **Absolutive**

predicate = adjectives, stative verbs, potentive verbs, dynamic intransitive verbs

2. Extended Intransitive: **Predicate** + **Absolutive** + **Oblique**

predicate = adjectives, potentive verbs, dynamic intransitive verbs

3. Transitive: **Predicate** + **Ergative** + **Absolutive**

predicate = potentive verbs, dynamic transitive verbs

4. Extended Transitive: **Predicate** + **Ergative** + **Absolutive** + **Oblique**

predicate = dynamic transitive verbs

Brief definitions of each predicate are provided. Adjectives designate attributes, stative verbs designate temporary states, potentive verbs designate ability, resultative state, and dynamic verbs designate dynamic processes, which are subdivided into dynamic intransitive and transitive verbs.

First, intransitive clauses can take as a predicate an adjective, stative verb, potentive verb, dynamic intransitive verb.

(31) Adjectives

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[2]Note that the analysis developed here is based on the verbs, and thus it cannot be applied straightforwardly to adjectives, in which the meanings of oblique phrases differ significantly from the case of verbs. I will thus mention argument structure of adjectives separately below.

[3]Noun is another category which may occupy the predicate position, but in the following discussion, our concern is limited to the argument structure taken by adjectives and verbs.

a. ***Me'-'apaw***   *i*   *wagèt.*

   ADJ-surface   SG.ABS.DEF   water

   'The water is shallow.'

b. ***Mes-salub***   *i*   *binènnit*   *ni*   *ayu=y.*

   ADJ-good.smelling   SG.ABS.DEF   flower   SG.GEN.DEF   tree=SPC

   'The flowers of the tree smell good.'

c. ***Med-dègès***   *tya:ng=u=y,*   *pati*   *ay*   *ulu=ku=y.*

   ADJ-pain   belly=1SG.GEN=SPC   even   filler   head=1SG.GEN=SPC

   'My belly is painful, so is my head.'

(32) Stative verbs

a. ***Manga:-to:lay*** *=tep*   *i*   *babakat=i.*

   STV-live=still   SG.ABS.DEF   old.woman=SPC

   'The old woman is still alive.'

b. ***Manga:-dègnin*** *=de:=tid.*

   STV-cold=POST=3PL.ABS

   'They feel cold.'

c. ***Tig-gèpèt***   *i*   *lappul=i=ya.*

   STV-tie   SG.ABS.DEF   dog=SPC=DEM.DIST

   'That dog is tied (to something).'

(33) Potentive verbs

a. *Akkari:!*   ***M⟨in⟩a-sigi*** *=d*   *i*   *bunbun*   *ni*   *agani:.*

   Oh   ⟨PST⟩POT-born=POST   SG.ABS.DEF   house   SG.GEN.DEF   non-Arta

   'Oh, the house of the people have burnt.'

b. *G⟨in⟩imit=mi*   *sakripi:so,*   *take:ta*   ***ma-to:lay***   *tidi*

   ⟨PST.TR⟩do=1PL.GEN   sacrifice   so.that   POT-alive   PL.ABS.DEF

   kakka:nak=mi.

   children=1PL.GEN

   'We made sacrifices to keep our children alive.' (arta0101)

(34) Dynamic intransitive verbs

    a. *Maski   manga:-paditèng,   **mang-ka:rawèg**=tep   ta   lattong.*

       even   STV-sickness   INTR-play=still   OBL.INDF outside

       'Even when he is sick, he plays outside.'

    b. ***Mam-bu:lubulus***   *i*   *wanga:r=i.*

       INTR-flow   SG.ABS.DEF river=SPC

       'The river is flowing.'

In a few cases, transitive verbs with the suffix *-èn*, which generally form a transitive construction, may occur in intransitive clauses. In this particular construction, the verbs consist of the name of insect and *-èn*, meaning that the insect is affecting something which is expressed in the absolute NP.

(35)   a. *B⟨in⟩ogor=de:=tèn.*

       ⟨PST.TR⟩mosquito=POST=1SG.ABS

       'I was bitten by a mosquito.'

    b. *B⟨in⟩alitungig*   *i*   *ayna.*

       ⟨PST.TR⟩worm   SG.ABS.DEF DEM.MED

       'That (e.g. sweet potato) is infested with worms.'

(36) **Karabokob-èn=de:=ten*

    throat-TR=POST=1SG.ABS

    'I have a sore throat.

Note however that, as shown in (36), the *-èn* verb does not co-occur with body part terms (for this usage in Ilokano, see Liao (2004: 31)). Intransitive clauses with *-en* verbs remain to be examined.

    Second, extended intransitive clauses are formed with adjectives, potentive verbs, and dynamic intransitive verbs. The meanings of oblique phrases differ according to the predicate it takes. With regard to adjectives, oblique phrases appear when the construction means either DISTANCE or EVALUATION:

(37) Adjective (i) Distance

    a. *Me'-'adu:yu*   *i*   *bunbun=mi*   ***ti***   ***Maddela=y.***

       ADJ-distance SG.ABS.DEF house=1PL.GEN SG.OBL.DEF Maddela=SPC

'Our house is distant **from Maddela**.'

b. *Me'-'adu:yu*   *i*   *bunbun=mi*   ***ti***   ***ayti***.

ADJ-distance   SG.ABS.DEF   house=1PL.GEN   SG.OBL.DEF   here

'Our house is distant **from here**.'

c. *Yo:gèd,*   *meb-biyèn*   ***ti***   ***lagip=mi***   *a*   *Arta*.

Yogad   ADJ-near   SG.OBL.DEF   language=1PL.GEN   LIG   Arta

'The Yogad language is similar **to our language, Arta**.'

(38)   Adjective (ii) Evaluation

a. *Mepep-piya=**dèn***   *a:yi:.*   *Konta*   *awa:ng=u=ina*

ADJ.RDP-good=1SG.OBL   DEM.PROX   but   NEG=1SG.GEN=DEM.MED

kabbat.

want

'This is good **for me**, but I do not like that one.'

In (37), the adjectives meaning DISTANCE/PROXIMITY are used, where the oblique phrases function as the standard of distance, and in (38), an evaluational adjective is used, where the oblique phrase expresses the subject of the evaluation (i.e. the evaluator).

When the construction is used with potentive verbs or dynamic intransitive verbs, the oblique phrases generally encode the patient role in affective events as in (39,41), and the inner-locative role in motion events as in (40,42), among others:

(39)   Potentive verbs (i) Affective event

a. *Wa:ng=ami*   *maka-ba:sa*   ***ta***   ***letra***.

NEG=1PL.ABS   POT-read   OBL.INDF   letter

'We cannot read letters.'

b. *Amma*   *tidi,*   *maka-alap=tid*   ***ta***   ***laman***,   *awan=di*

if   3PL.ABS   POT-get=3PL.ABS   OBL.INDF   wild.pig   NEG=3PL.GEN

du:tung-an   *awan=di*   *i-wa*   *ta*   *dut.*

remove.hair-TR   NEG=3PL.GEN   TR-do   OBL.INDF   fire

'(Even) if they can get wild pigs, they do not prepare nor roast it. (arta0100)'

(40)   Potentive verbs (ii) Motion event

Atti,	*atti*	*konta*	*atti:*	*ti*		*ayti*	*Sinabagan.*	*Awan=tep*
exist	exist	but	exist	SG.OBL.DEF		here	Sinabagan	NEG=still

maka-angay	***ta***		***ayta,***	***lugar.***	*Ta:me:ta*	*i*		*attanan=di*
POT-go.to	OBL.INDF		there	place	different	SG.ABS.DEF		place=3PL.GEN

a	*talun.*
LIG	mountain

'They were, they were, but they were in Sinabagan. They could not go there yet. Their living place in the mountain was different.' (arta0002)

(41) Dynamic intransitive verb (i) Affective event

    a.

Pal-lamun=tèn	***ta***		***kadèt.***
PRG-mow=1SG.ABS	OBL.INDF		grass/weed

       'I am weeding.'

    b.

Ngay=tid	*ngay=tid*	*mang-ali*	*tidi*	*ina=mi*		***ta***
go=3PL.ABS	go=3PL.ABS	INTR-dig	PL.ABS.DEF	mother=1PL.GEN		OBL.INDF

giwat		***aydi***	***ilus***
kind.of.yam		and	kind.of.yam

       'They, our mothers, go to dig kinds of yam.' (arta0002)

(42) Dynamic intransitive verbs (ii) Motion event

Nar-rapu=tèn		***ta***	***Diso:mongal***	*m-angay=tèn*
INTR-come.from=1SG.ABS		OBL.INDF	Disimungal	INTR-go.to=1SG.ABS

ti	***Dipintin=i.***
SG.OBL.DEF	Dipintin=SPC

'(lit.) I came from Disimungal, and come here to Dipintin .'

Third, transitive clauses are constructed by dynamic transitive verbs (formed primarily by the affixes *-èn, -an* and *i-*), and in a few cases, by potentive verbs. The following examples illustrate the transitive clauses with dynamic transitive verbs by *-èn, -an* and *i-*:

(43) Dynamic transitive verbs (V-*èn*)

    a.

Ga:-gèlgèl-èn=mu		*i*	*ba:lag*	*ni*		*laman=i.*
RDP-cut-TR=2SG.GEN	SG.ABS.DEF		meat	SG.GEN.DEF		wild.pig=SPC

'You should cut the meat of wild pig.'

b. **G⟨*in*⟩*imit***   *attanan*   *ni*   *Nue*   *i*   *n-i-bi:lin*

⟨PST.TR⟩do   all   SG.GEN.DEF   Noah   SG.ABS.DEF   PST-TR-command

ni   *Ya:wi.*

SG.GEN.DEF   Yahweh

'Noah did everything that Yahweh had commanded him to do.' (Noah, Bible)

(44)   Dynamic transitive verbs (V-*an*)

a. *Amma*   *atti*   *itta-n*   *na*   *Hapon*   *a*   *mang-wa*   *a*   *asuk,*

if   exist   look-TR   GEN.INDF   Japanese   LIG   INTR-do   LIG   smoke

punan=di=ta,   ***pala-palattog-an=di.***

do.like.that=3PL.GEN=DEM.DIST   RDP-gun-TR=3PL.GEN

'If Japanese saw smoke, they gunned (the Arta people).' (arta0100)

b. ***In-an-'anu:s-an=mi***   *maski*   *da*   *mebeb-buyu:=di.*

PST-RDP-patient-TR=1PL.GEN   even   because   ADJ.RDP-bad.smelling=POST

'We were patient even for rice's bad-smelling.' (arta0007)

(45)   Dynamic transitive verbs (*i*-V)

a. ***N-i-tunu=di***   *ba:kaw=i.*

PST-TR-roast=3PL.GEN   corn=SPC

'They roasted the corn.'

b. ***Pal-lamu:ng=u***   *i*   *kadèt.*

paC-i-lamun=ku   *i*   *kadèt*

PRG-TR-mow=1SG.GEN   SG.ABS.DEF   weed

'I am cutting the weed.'

As shown below, *i*-V and V-*an* can appear in an extended transitive construction as well as in a transitive construction, whereas V-*èn* almost exclusively occurs in a transitive construction. These three verbs do not occur in intransitive and extended intransitive constructions, with the "infesting" meaning (see examples (35) above).

Potentive verbs with *ma-* may occur in the transitive construction as shown below:

(46)   Potentive verbs (*ma*-V)

a. *Awan=mu   ma-alap   i   pag-gimt-èn=mu*

   NEG=2SG.GEN   POT-get   SG.ABS.DEF   PRG-do-TR=2SG.GEN

   'You will not get what you are doing. (= You will not succeed.)'

b. *Awa:ng=u   ma-arawat-an.*

   NEG=1SG.GEN   POT-get-TR

   'I cannot understand it.'

c. *m⟨in⟩a-tanna:g=u   i   uru=y.*

   POT⟨PST⟩-fall.down=1SG.GEN   SG.ABS.DEF   medicine=SPC

   'I accidentally dropped the medicine.'

As indicated as GEN in gloss, *ma-* verbs may take an ergative argument, which is not seen in (extended) intransitive constructions (see (30)), indicating that the construction is undoubtedly transitive. Unlike the dynamic transitive verbs illustrated in (43–45), the co-occurrence of the ergative NP with potentive verbs is optional; the transitive construction is used only when the speaker intends to mention the causer of the situation or the locus of ability or responsibility.

Finally, extended transitive clauses are formed with dynamic transitive verbs: *i*-V and V-*an*, as illustrated in (47,48), rearranged from (15,16):

(47) Dynamic transitive verbs (*i*-V)

   a. **Y-a:tèd=mu**   i   mabaw=i   ta   arta=y.

      TR-give=2SG.GEN   SG.ABS.DEF   rice=SPC   OBL.INDF   person=SPC

      'You should give the rice to the people.'

   b. **I-lugun=mu**   i   pagay   ta   baske:t=i.

      TR-container=2SG.GEN   SG.ABS.DEF   rice   OBL.INDF   basket=SPC

      'You should put the rice into the basket.'

(48) Dynamic transitive verbs (V-*an*)

   a. **Atd-inan=mu**   i   arta=y   ta   mabaw=i.

      give-TR=2SG.GEN   SG.ABS.DEF   person=SPC   OBL.INDF   rice=SPC

      'You should give rice to the people.'

b. ***Lugun-an**=mu   i   baske:t=i   ta   pagay.*

   container-TR=2SG.GEN   SG.ABS.DEF   basket=SPC   OBL.INDF   rice

   'You should put the rice into the basket.'

In examples (47), the recipient and goal are expressed by oblique phrases, and in (48), the themes to be conveyed are again coded by oblique phrases.

7.1.3   Non-canonical argument structures

I have so far examined the canonical argument structures and the predicates that each construction may take. However, there are some irregular constructions deviating from the canonical structures in that they lack the absolutive case. This irregularity occurs in the following three cases: (i) when the clause describes a particular type of meteorological event, (ii) when an inner-locative NP occupies the absolutive slot, (iii) when the predicate is the negative-existential *awan* In what follows, I will examine the three constructions in order.

Meteorological states/events

When the situation described is a meteorological state or event, the absolutive argument may be absent. Consider the examples in (49–53):

(49)   ***Mep-pasu**   Ø   aytay   a   langit.*

    ADJ-hot   ABS   now   LIG   day

    'It is hot today.'

(50)   ***Med-dègnin**   Ø   aytay   a   dagun.*

    ADJ-cold   ABS   now   LIG   year

    'It is cold this year.'

(51)   1.   *Basta   in-an-'anu:s-an=mi=tèddi   ay   ka:man=i   a   tolda.*

        have.to   PST-RDP-patient-TR=1PL.GEN=just   filler   big=SPC   LIG   tent

        'We were patient enough in a big tent.' (arta0007)

    2.   *Ma   **b⟨um⟩ègbèg**   Ø,   iggam-an=mi*

        if   ⟨INTR⟩wind   ABS   hold-TR=1PL.GEN

        'If it blows wind, we held it.' (arta0007)

(52) a. *Awan*   *na-lipatan*   *na*   *Dios*   *ni*   *Noe,*   *ayde:=tidi*

       NEG   PST.POT-forget   GEN.INDF   God   SG.GEN.DEF   Noah   and=PL.ABS.DEF

       animal=i   *a*   *top=na*   *ayta*   *abang.*

       animal=SPC   LIG   companion=3SG.GEN   there   ark

       'God did not forget Noah and the animals that were with him in the ark,'

    b. **P⟨*in*⟩*a-bègbèg*=na**   Ø   *nar-rugi*   *a*   *k⟨in⟩⟨um⟩illèk*

       ⟨PST⟩CAUS-wind=3SG.GEN   ABS   PST.INTR-begin   LIG   ⟨PST⟩⟨INTR⟩small

       i   *wagèt.*

       SG.ABS.DEF   water

       'he sent a wind over the earth, and the waters receded.' (Noah, Bible)

(53) *Meb-bayag*   *a*   **pa-pu:nèd-èng=u**   Ø.

    ADJ-long   LIG   CAUS-rain-TR=1SG.GEN   ABS

    'I will bring about rain for a long time.' (Noah, Bible)

In these sentences, the predicates are describing a meteorological state relating to temperature (49,50), and meteorological changes involving the wind (51,52), and rain (53). A peciliarity of the construction is also indicated by the incompatibility with the topicalized third singular form the absence of the absolutive arguments is also indicated by the impossibility of topicalization (*siya*), as in (54–58):

(54) ?? **Siya,**   *Mep-pasu*   *aytay*   *a*   *langit.*

    3SG.ABS   ADJ-hot   now   LIG   day

    'It is hot today.'

(55) ?? **Siya**   *med-dègnin*   *aytay*   *a*   *dagun.*

    3SG.ABS   ADJ-cold   now   LIG   year

    'It is cold this year.'

(56) ?? **Siya,**   *b⟨um⟩ègbèg*

    3SG.ABS   ⟨INTR⟩wind

    'The wind blows'

(57) ?? ***Siya***   *p⟨in⟩a-bègbèg=na*   *nar-rugi*   *a*   *k⟨in⟩⟨um⟩illèk*

        3SG.ABS   ⟨PST⟩CAUS-wind=3SG.GEN   PST.INTR-begin   LIG   ⟨PST⟩⟨INTR⟩small

        i   *wagèt.*

        SG.ABS.DEF   water

        'he sent a wind over the earth, and the waters receded.'

(58) ?? ***Siya,***   *meb-bayag*   *a*   ***pa-pu:nèd-èng**=u.*

        3SG.ABS   ADJ-long   LIG   CAUS-rain-TR=1SG.GEN   ABS

        'I will bring about rain for a long time.'

Although this might be considered to indicate the *lack* of absolutive argument, there is evidence that demonstrates the predicates encoding meteorological states or events *have* a covert absolutive argument. First, if the root formatives *pasu* 'hotness' and *dègnin* 'coldness' appear as nouns, they have to be followed by the enclitic person form *=na* (3SG.GEN):

(59) *Awan*   *ta*   *pasu=**na***   *aytay*   *a*   *langit.*

        NEG   OBL.INDF   hotness=3SG.GEN   now   LIG   day

        'It is not hot today.'

(60) *Awan*   *ta*   *dègnin=**na***   *aytay*   *a*   *dagun.*

        NEG   OBL.INDF   coldness=3SG.GEN   now   LIG   year

        'It is not cold this year.'

Second, if the roots *bègbèg* 'wind' and *pu:nèd* 'rain' appear as a noun, they are optionally followed by *=na*:

(61) a. *Awan*   *ta*   *bègbèg(=na)*   *aytay*   *a*   *langit.*

          NEG   OBL.INDF   wind(=3SG.GEN)   now   LIG   day

          'We have no wind today.'

     b. *Awan*   *ta*   *pu:nèd(=na)*   *aytay*   *a*   *langit.*

          NEG   OBL.INDF   rain(=3SG.GEN)   now   LIG   day

          'We have no rain today.'

These facts indicate that these predicates may have a covert absolutive argument (third singular person form), which is particularly the case for temperature predicates because their

co-occurrence with *=na* is obligatory. But probably because of the low topicality, they are not compatible with the topicalization of the absolutive elements.

Location

It is cross-linguistically well-known that locative expressions may exhibit ambiguous behaviors between nominal and adverbial categories. As extensively discussed in Lyons (1977: 475ff), locational expressions are categorically indeterminate between nominal and adverbial, and when a locational word or expression stands as a subject, the subject may behave differently from other NPs. For example, *here* and *there* are generally considered as adverbs, but may behave as a nominal, because they can stand as a subject as in *this place/here is London.* It is also well-known that prepositional phrases in English may themselves become the complement of another preposition, as in *he appeared from behind the tree*; Langacker (1987b) also observes that prepositional phrases may also stand as a subject, as in *Near the fire is warm.* and *Under the bed is all dusty.* (ibid.: 387).

Arta also has a peculiarity in the treatment of locative expressions. When the slot that is expected to be occupied with the absolutive argument is filled by a locative expression, the phrase may be realized as oblique. I do not know similar data attested in other Philippine languages, but as shown in the following example, the clause with no absolutive is sporadically attested in Arta:

(62)

Ta	*dutul a langit,*	*pang-attinan=mi*	***ayta***	***mo:nayan.***
OBL.INDF	those days	PRG-living=1PL.GEN	DEM.DIST.OBL	Cagayan.river
		V(tr)=ERG	(canonically	absolutive)

'In those days, we were living near Cagayan river.' (arta0001)

It is predicted from the canonical argument structures discussed above that *mangattinan=mi* 'we were living in' should be followed by the absolutive argument functioning as O within the clause. However, in this case, the slot is filled by the oblique phrase introduced by the oblique demonstrative *ayta* 'there'.

This irregularity seems to be accounted for by considering semantic motivations that override the syntactic organization that would otherwise be applied. The use of absolutive

case may cause the speaker to construe the referent as it is, i.e. as an object, whereas employing the oblique case seems to motivate the speaker to construe the entity as a particular location or region associated with the referent. Thus the utterance shown in (62) is more similar to the sentence (63), with the nouns *degdeg* 'alongside' or */biyèn* 'near (n)', than a mere alternative by the absolutive case (64):

(63) *Ta dutul a langit,   pang-attinan=mi   i   degdeg/biyèn*
      in those days   PRG-living=1PL.GEN   SG.ABS.DEF   around(n)/near(n)

      ni   mo:nayan.
      SG.GEN.DEF   Cagayan.river

      'In those days, we were living **around/near** Cagayan river.'

(64) *Ta dutul a langit,   pang-attinan=mi   a:ya: mo:nayan.*
      in those days   PRG-living=1PL.GEN   DEM.DIST.ABS   Cagayan.river

      'In those days, we were living **in** Cagayan river.'

Arta people were of course not living in the river in the literal sense, but were constructing communities alongside the Cagayan river. The motivation to use an oblique phrase is thus similar to the one to use spatial nouns as in (63), but different from that which employs the absolutive case as in (64). Consider the further examples shown below:

(65) 1. *Tan=di   [ta   wa=y   ka:man=i   a   wagèt].*
          look=3PL.GEN   OBL.INDF filler=SPCbig=SPC   LIG   river
          'They look around the wide river (= Cagayan river).'

      2. *Me'-'a:du   a   Hapon   ta   ayta.*
          ADJ-many   LIG   Japanese   OBL.INDF   DEM.DIST.OBL
          'So many Japanese there!' (arta0100)

(66) *D⟨in⟩imadima=ku   [gindat   ta   Madde:la].*
      ⟨PST.TR⟩walk=1SG.GEN   up.to   OBL.INDF   Maddela
      'I walked all the way to Maddela.' (NOT 'I walked in Maddela').

In example (65), the O argument of the clause is realized in oblique. As illustrated in the second line, the speaker is describing the situation of the place *around* the river, which Japanese

soldiers occupy, rather than focusing the river itself. In the second example, (66), where s/he walked is not the town, but the way up to the town, as signaled by *gindat* 'up to', thus the oblique seems more appropriate. The examples below use the oblique phrases in the pre-verbal positions, which are again expected to occur as the absolutive, because the verbs are transitive with *-an*:

(67) *Apu=ku=di:ti*   *ay*   *ta*   *dutul*   *a*   *langit,*
grand.parent=1SG.GEN=before   filler   OBL.INDF   first   LIG   day

[ayta],   *attiyan=mi*   *ta*   *Agli:pay.*
DEM.DIST.OBL   exist.TR=1PL.GEN   OBL.INDF   Aglipay

'(Including) my grandparents before, we were living there in Aglipay.'

(68) *[Ayti*   *...*   *ayti*   *Dipintin=i],*   *attinan*   *na*   *kampu*
DEM.PROX.OBL   DEM.PROX.OBL   Dipintin=SPC   exist.TR   GEN.INDF   camp

na   *Sunda:lu.*
GEN.INDF   Sundalo

'Here in Dipintin is the camp of Sundalo.' (arta0502)

The oblique phrases are again used to signal that the entities should be interpreted as locations on which people were living (67) or setting up a camp (68), though the alternative choices do not result in a clear semantic difference as seen in the previous examples. Finally, the following example in (69a) uses an oblique NP, where the speaker is describing the field of view, or the whole situation, where the honeybees are flying, as opposed to (69b), which refers straightforwardly to the honeybees themselves:

(69) a. *Ta-n=mi*   *[didi*   *mang-èbèb-bèr=i*   *a*   *wa,*   *diyu]*
see.TR=1PL.GEN   PL.GEN/OBL.DEF   INTR-RDP-fly=SPC   LIG   filler   honeybee

'We (can) see honeybees flying (around a tree).' (arta0003)

Ta-n=mi   *[**tidi***   *mang-èbèb-bèr=i*   *a*   *wa,*   *diyu]*
see.TR=1PL.GEN   PL.ABS.DEF   INTR-RDP-fly=SPC   LIG   filler   honeybee

'We (can) see the flying honeybees.'

All the examples suggest that using oblique phrases where the absolutive is syntactically

predicted causes a metonymic shift from the object itself to the region or location associated with the object.

This metonymic shift from objects to locations is not limited to the "downgraded" oblique from absolute, but is attested in other syntactic environments. In the following examples, the oblique cases do not refer to the objects themselves, but the location where the objects are located:

(70)   *Mas-so:li=tid=**dèn**.*

INTR-go.back=3PL.ABS=1SG.OBL

'They came back **to me** (to the place where I was staying).'

(71)   *N-um-angay=tèn*   ***didi***   ***daddu:pu:=wi:**.*

PST-INTR-go=1SG.ABS   PL.GEN/OBL.DEF   old.men=SPC

'I visited **the old men** (the place where the old men live).'

(72)   *Um-angay   i   gissa=**did**   ta   bunbun   na*

INTR-go   SG.ABS.DEF   one=3PL.OBL   OBL.INDF   house   3SG.GEN

ara:ra:pa=di,   ay   punan=na,

friend=3PL.GEN   filler   say=3SG.GEN

'One of them go **to them** (to the place where they live), i.e. to the house of their friends, and then he said' (Jesus' Teaching on Prayer, Bible)

(73)   *Ta   r⟨um⟩ingdèm,   nas-su:li=**dya**   kalapa:ti.*

OBL.INDF   ⟨INTR⟩dark   PST.INTR-go.back=3SG.OBL   dove

'When it was getting dark, the dove came back **to him** (to the place where he was staying).' (Noah, Bible)

This metonymic shift does not occur in absolutive case, and human nouns cannot be used alone to refer to the place where they are staying; rather *attanan* '(someone's) place' should be used instead.

(74)   *Ta:me:ta   i   **attanan**=di   a   talun.*

different   SG.ABS.DEF   place=3PL.GEN   LIG   mountain

'They lived in a different place in the mountain. (lit. Their place in the mountains was different.)' (arta0002)

(75) *Ayti   Pinaripad   ayta   diddya.   Saya   **attanan**=mi.*

here   Pinaripad   there   upstream   that   place=1PL.GEN

'Here in Pinaripad, upstream, which is the place where we were living.' (arta0002)

This distribution is parallel to the case where the absolutive slot is occupied with the oblique case in that in both cases, the alternation involves different interpretations for absolutive and oblique cases. The non-canonical argument structure thus seems to be motivated by functional factors relevant to the morphosyntactic realization of the semantic opposition: location vs. object.

Negative existential

Negative existential in Arta, as well as positive existential, is expressed by the intransitive construction, but it is different from the positive counterpart in that the single core argument is obligatorily realized in the oblique case, Compare the two constructional schemas represented in (76):

(76)   *awan   ta   N*

NEG   OBL.INDF   [   ]

'There is no X'

cf.   *atti: ABS   N*

exist   [   ]

'There is X'

The negator, which is identical with the sentential negation, is followed by the oblique determiner *ta*, and the noun. (77–79) exemplify the construction of the negative existential.

(77) *Ay   ta dutul,   **awan   ta**   **kape**.*

filler   before   NEG   OBL.INDF   coffee

'In those days, we did not have coffee.' (arta0002)

(78) *Amma   tyempo   na   langit,   **awan   ta**   **pu:nèd**,   saya*

if   weather   GEN.INDF   sunny.day   NEG   OBL.INDF   rain   that

i   attinan   na   diyu,   ay   awan   ta   pu:nèd.

SG.ABS.DEF   exist.place   GEN.INDF   honeybee   filler   NEG   OBL.INDF   rain

'If the weather is fine, if there is no rain, that is the season for honeybees.' (arta0003)

(79) ***Awan   ta   waget*** *konta   bègbèg   i   med-digsèn.*

NEG   OBL.INDF rain   but   wind   SG.ABS.DEF ADJ-strong

'We had no rain, but what was strong was wind.' (arta0007)

(80) 1. ***Awan=de:=ta   America:no,   awan=de:=ta   Hapon,***

NEG=POST=OBL.INDF American   NEG=POST=OBL.INDF Japanese

'No more Americans, no more Japanese,'

2. *na-pista'im=di.*

PST.POT-peace.time=POST

'Peace time has arrived.'

3. *Punan   didi   ama=ku=ti.*

say   PL.GEN/OBL.DEF father=1SG.GEN=SPC

'Said my father.' (arta0100)

The use of oblique phrases in existential constructions is not applied in the following cases. First, it is not applicable to a sentence where the location of an identifiable individual is in question, in which case the single core argument is marked as absolutive:

(81) *Gindat   a   awan=tep   **tidi**   a:na:=ku=y,*

up.to   LIG   NEG=still   PL.ABS.DEF children=1SG.GEN=SPC

na-tagi:=de:=tèn.

PST.POT-remain=POST=1SG.ABS

'While our children are absent, I will wait (for them here).

(82) *Awan=de:=tèn   ma-to:lay   amma   awa:ng=**a**.*

NEG=POST=1SG.ABS   POT-alive   if   NEG=2SG.ABS

'I cannot live (any longer) if you are not (here).'

Second, the oblique case is used only when the referent is totally zero. Consider the following examples:

(83)   a. *Ayta*   *pangattinan=mi,*   *killèk=te:*   *i*   *bungor.*

there living.place=1PL.GEN few/small=only SG.ABS.DEF mosquito

'There are few mosquitos in our village.'

b. *Killèk=te:*   *lagi:p=u*   *a*   *Yo:gèd.*

few/small=only language=1SG.GEN LIG Yogad

'(lit.) My language of Yogad is only a little.'

(= I can hardly speak Yogad.) (arta0114)

In the above examples, the speaker's intention is not to express the existence of the mosquitos or her linguistic competence, but the absence of them. This is indicated by the use of *killèk* '(a) few, (a) little, small', and *=te:* 'only', which contributes to the emphasizing the small quantity of the referents in question. In spite of the fact, however, the case marking of the single core arguments is absolutive. This indicates that the use of oblique case is limited to the cases in which the referent is totally zero regardless of the pragmatic intents by the speaker.

7.2   Absolutive as a pivot

This section concerns so-called "syntactic ergativity" in Arta. There has been a long, sometimes controversial, discussion over the nature of ergativity, particularly because it presupposes the fine description of languages and requires the reconsideration of subjecthood, the case-marking system, grammatical relations, and case-sensitive syntactic phenomena. Dixon, in his seminal work (Dixon 1994), differentiates morphological ergativity and syntactic ergativity, and redefine subject and pivot, to clarify the confusing notion of ergativity. Morphological ergativity, or intra-clausal ergativity, is a subtype of case-marking system, defined as a formal grouping of S/A/O arguments indicated by nominal inflection, enclitics, adposition, cross-referencing on verbs, word order, etc. In Arta, the alignment of arguments within a clause exhibits ergative-absolutive alignment, as in (84,85):

(84)   Intransitive clauses with a full NP (= (30) in Ch.4)

a. *T⟨in⟩⟨um⟩adyor=di*   **i/tidi**   *babakat=i.*

⟨PST⟩⟨INTR⟩stand=POST   **SG/PL**   old.woman=SPC

'The old woman/women stood up.'

b. *Manga:-bisin=di*   **i/tidi**   *babakat=i*

INTR-hungry=POST   **SG/PL**   old.woman=SPC

'The old woman/women is/are hungry.'

(85)   Transitive clause with full NPs (= (31) in Ch.4)

B⟨in⟩isag=di   **ni/didi**   *babakat=i*   **i/tidi**   *bo:te.*

⟨PST⟩break=POST   **SG/PL**   old.woman=SPC   **SG/PL**   bottle

'The old woman/women broke the bottle(s).'

On the other hand, syntactic ergativity, or inter-clausal ergativity, is a grouping of S/A/O in terms of syntactic operations, such as gapping in co-ordination, and possible correspondence between the antecedent and the argument within relative clauses. The motivation for distinguishing syntactic ergativity from morphological ergativity resides in the fact that although morphological ergativity is cross-linguistically one of the common case marking strategies, syntactic ergativity is attested in only a small number of (morphologically-) ergative languages (Dixon 1994).

In Philippine languages, there are several syntactic constructions applied only to the absolutive argument (or variously called 'subject, topic, nominative, or focused-NP'), as discussed in Schachter (1977) and Kroeger (1991).[4] There is a growing recognition of Philippine languages as ergative languages (Mithun 1994, Reid and Liao 2002, Liao 2004, Aldridge 2012 and others), and these syntactic constructions may be discussed as pieces of evidence for identifying Philippine languages as syntactically ergative. However, Dixon's binary distinction between morphological (or intra-clausal) ergativity and syntactic (or inter-clausal) ergativity should be reclassified. Although he identifies all the syntactic phenomena as interclausal, there is a clause-internal phenomenon which may exhibit syntactic ergativity in

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[4]Schachter (1977) provides data against the idea of subsuming Tagalog under either accusative or ergative type by deconstructing the notion of "subject" into role-related vs. reference-related subject. But his deconstruction can actually be incorporated into Dixon (1994)'s differentiation between SUBJECT, a universal grouping of S and A, and PIVOT, the language-particular syntactic treatment of S, A, and O.

Arta, that is, quantifier floating. The quantifier *attanan* 'all' may function as an adverb adjacent to the predicate, but semantically refers to the quantity of an NP's referent. Notably, it exclusively relates to the *absolutive* argument, but not other arguments. This phenomenon is syntactically sensitive to case alignment, but clearly works at the clause-internal level. I thus reclassify the Dixon ' s binary distinction as follows:

(86) Re-classification of the subtypes of ergativity (cf. Dixon 1994)

    a. Intra-clausal (clause-internal) ergativity

        i. Morphological ergativity (case-marking)

        ii. Syntactic ergativity (e.g. quantifier floating)

    b. Inter-clausal ergativity

        (e.g. argument nominalization, relativization, interrogativization)

In this section, I will address the nature of the absolutive argument as pivot. In §7.2.1,I will first observe the phenomenon that exhibits clause-internal syntactic ergativity, that is, quantifier-float, and in §7.2.2, four phenomena showing clause-external syntactic ergativity are examined: argument nominalization, relativization, and interrogativization. §7.2.3 provides the empirical evidence for distinguishing clause-internal and clause-external levels for syntactic ergativity, by considering so-called possessor-assention, and in §?? I finally attempt to explaining functional motivations for each level of syntactic ergativity in terms of cognitive prominence.

7.2.1   Clause-internal ergativity: Quantifier-float

As attested in Tagalog (Schachter 1977), the floating of quantifiers may occur in Philippine languages, where quantifiers describe the quantity of the absolutive referent(s), but not other arguments. It is also the case in Arta, in which *attanan* 'all' may occur as an adverb adjacent to the predicate, and semantically modify the absolutive. Compare the following examples with and without the quantifier floating:

(87) *G⟨in⟩imit*   ***attanan*** ₍ [ₑᵣ𝒼*ni*   *Nue]*   [ₐᵦₛ*in-i-bi:lin*

      ⟨PST.TR⟩do   all   SG.GEN.DEF Noah   PST-TR-command

      ni   *Ya:wi]* ᵢ.

      SG.GEN.DEF   Yahweh

      'Noah did everything that Yahweh ordered him to do.' (Noah, Bible)

(88) *G⟨in⟩imit*   [ₑᵣ𝒼*ni*   *Nue]*   [ₐᵦₛ***attanan***   *a*   *in-i-bi:lin*

      ⟨PST.TR⟩do   SG.GEN.DEF   Noah   all   LIG   PST-TR-command

      ni   *Ya:wi]*.

      SG.GEN.DEF   Yahweh

      'Noah did everything that Yahweh ordered him to do.' (Noah, Bible)

In (87), *attanan* is located outside the two nominal phrases. It occurs adjacent to the verb
ginimit, but semantically it is quantifying the absolutive referent 'what Yahweh orderd Noah
to do'. This is comparable with (88), in which the quantifier *attanan* stands within the absolu-
tive NP, with little semantic difference. Note that the floated quantifier cannot be interpreted
as modifying the ergative NP because the ergative NP refers to a single participant, 'Noah'.
Further examples are shown below in (89–91), where the quantifier is shown in bold, the
semantically modifying absolutive NPs in brackets:

(89) *Pa-ka:man-èng=u*   *i*   *wagèt*   *ti*   *luta,*   *take:ta*

      CAUS-big-TR=1SG.GEN   SG.ABS.DEF   water   SG.OBL.DEF   earth   so.that

      map-pati   ***attanan***   *[i*   *atti:*   *angès=na*   *ti*   *apaw*

      INTR-die   all   SG.ABS.DEF   exist   breath=3SG.GEN   SG.OBL.DEF   surface

      ni   *tapa=y]*

      SG.GEN.DEF   soil=SPC

      'I am going to bring floodwaters on the earth every creature that has the breath of
      life in it. will die' (Bible, Noah)

(90) *Pa-latto:ng-an=mu=d*   ***attanan***   *[tidi*   *mang-èbèb-bèr=i]*

      CAUS-outside-TR=2SG.GEN=POST   all   PL.ABS.DEF   INTR-RDP-fly=SPC

      sakay   *aytidi*   *animal=i,*   *pa-bay-an=mu*   *a*

      and   PL.ABS.DEF   animal=SPC   CAUS-remain-TR=2SG.GEN   LIG

> *um-a:du=tid,*   *take:ta*   *um-a:du=tid*   *ta*   *tapaw*
>
> INTR-many=3PL.ABS   so.that   INTR-many=3PL.ABS   OBL.INDF   surface
>
> *na*   *tapa.*
>
> GEN.INDF   soil
>
> 'Bring out every kind of bird and animal and let them increase in number, so that they can multiply on the earth.' (Bible, Noah)

(91)   *L⟨in⟩⟨um⟩attong=tid*   **attanan**   *[tidi*   *animal=i,*   *ayde:=tidi*

         ⟨PST⟩⟨INTR⟩outside=3PL.ABS   all   PL.ABS.DEF   animal=SPC   and=PL.ABS.DEF

         mang-èbèb-bèr=i].   *Na-li:-linnya=tid*   *ta*   *guru-guru:pu=di.*

         INTR-RDP-fly=SPC   POT-line=3PL.ABS   OBL.INDF   RDP-group=3PL.GEN

         'All of the animals and birds went out (from Noah's ark). Each group formed a line (to go out).' (Bible, Noah)

Interestingly, all of the examples shown above are from the Bible translation from Ilokano, but the Ilokano counterparts that I provided for the language assistant are sentences without floated quantifiers. This suggests that quantifier floating is not influenced by Ilokano, but may constitute part of the grammatical phenomena in Arta.

7.2.2   Inter-clausal ergativity

Quantifier floating discussed above is described at the clause-internal level, which relates both to the nominal that is semantically modified, and to the predicate that the quantifier may syntactically modify, but not outside the clause. The other group of phenomena relevant to syntactic ergativity involves the "inter-clausal" level. This has to be described by taking into consideration organizations higher than the clausal level. It is argued in this section that the absolutive argument is the only target of relativization, nominalization, and interrogativization. The point to be discussed here is whether the argument selected for constructing a higher organization is constrained by its case marking. Consider, for example, the relative clause in English:

(92)   a.   *I could not understand the point [that Ø was at issue].*

      b.   *I could not understand the point [that they were discussing Ø].*

    c. *I could not understand the point [that they were talking about Ø].*

In relative clause constructions in English, the argument that is coreferential with the antecedent the point is not constrained by case. Whether it is an intransitive subject, a transitive object, or a prepositional object as shown in (92a–92c), the argument in question can be the target of a relativization. As opposed to English, many languages have a constraint on the selection of coreferential argument within a relative clause, as illustrated by Keenan and Comrie (1977). The Arta language is one with a strong constraint on the target of relativization in that the absolutive case is the only argument that can be relativized. In what follows, I examine how these constructions are shaped by the "exclusively-absolutive" constraint.

In what follows, I will examine that relativization, nominalization, and interrogativization show exclusively-absolutive constraint.

Relativization

In Arta, there is a strong constraint on the argument that is coreferential with the antecedent in a relative clause construction. To construct a relative clause, the antecedent is required to be coreferential with the absolutive argument within the relative clause, but not with any other argument (see the important exception discussed in §7.2.3). Suppose, for example, that the following transitive clause is given:

(93)   *G⟨in⟩imit*   *didi*   *babakat=i*   *i*   *aba.*

       ⟨PST.TR⟩make   PL.GEN/OBL.DEF old.woman=SPC SG.ABS.DEF mat

       V   [ERG   ]   [ABS   ]

       'The old women made the mat.'

    There are two possible ways of relativizing the clause according to whether the absolutive argument (O) or the ergative argument (A) is selected as the target of relativization. As shown below, the first pattern yields a grammatical sentence as in (94), but the second pattern becomes ungrammatical as in (95):

(94) *Adi:ni   attanan   ni   aba   a   [g⟨in⟩imit   didi*

     where   place   SG.GEN.DEF   mat   LIG   ⟨PST.TR⟩make   PL.GEN/OBL.DEF

     babakat=i   Ø]?

     old.woman=SPC   ABS

     'Where is the mat that the old women wove?'

(95) * *Adi:ni   attanan   didi   babakat=i   a   [g⟨in⟩imit*

     where   place   PL.GEN/OBL.DEF   old.woman=SPC   LIG   ⟨PST.TR⟩make

     Ø   i   aba]?

     ERG   SG.ABS.DEF   mat

     'Where are the old women who wove the mat?'

When the agent of the event of weaving is relativized, another verbal form, the extended intransitive must be used instead, whereby the agent is realized as the absolutive argument within the clause, and then it can be a target of relaviztion:

(96) *Adi:ni   attanan   didi   babakat=i   a   [nang-gimit   Ø*

     where   place   PL.GEN/OBL.DEF   old.woman   LIG   PST.INTR-make   ABS

     ti   aba=y]?

     SG.OBL.DEF   mat=SPC

     'Where is the women who weaved the mat?'

The following data from spoken and written (translated) texts illustrate that relative clauses lack the absolutive argument, not the ergative nor oblique arguments:

(97) *Manaka:ng=ami=d   a   mangi-yakkan   ti   [ba:lu=tidi*

     cook=1PL.ABS=POST   LIG   INTR-viand   SG.OBL.DEF   yam=SPC

     ayde:=tidi   ilus=i]ᵢ,   a   [aliy-an   didi   ina=mi=ti

     and=PL.ABS.DEF   yam=SPC   LIG   dig-TR   PL.GEN/OBL.DEF   mother=our=SPC

     Øᵢ]

     ABS

     'We cook the viand with yams, which our mothers dig.' (arta0002)

(98) *[Pagay]ᵢ,   mina-dippas   de:ti,   ta   kadigsèn   na   bègbèg,*

rice,   POT.PST-fall.down   because.of   strength   of   wind,

ayde:yi   [ka:huy]ⱼ,   a   [ni-mulamula=mi   Øᵢ₊ⱼ].

and   potato   LIG   PST.TR-plant.RDP=1PL.GEN   ABS.

'Rice, and potatos [we planted], were fell down because of the strong wind.' (arta0007)

(99) *saya   [ma-alap   didi   ama=mi=ti   Øᵢ]   a   [lamanᵢ].*

that   POT-get   PL.GEN/OBL.DEF   father=1PL.GEN=SPC   ABS   LIG   wild.pig

'(lit.) That is the wild pigs which our fathers can get.'

(That is what our fathers can get, that is, wild pigs.) (arta0002)

(100) *O:ni.   saya   [mepep-piya   Øᵢ]   a   [gimtèn=mi   Øᵢ]   a*

yes   that.is   ADJ.RDP-good   ABS   LIG   made=1PL.GEN   ABS   LIG

tanggu:yubᵢ.

fire.blower

'Yes, that is the [good] blower [we made].' (arta0501)

(101) *Me"a:du=ay,   [g⟨in⟩pègpètan=di   Øᵢ]   a   gilènganᵢ.*

ADJ-many=of.course,   ⟨PST⟩tie=3PL.GEN   ABS   LIG   male

'There are many. those males [who were tied together by them (= Sindalu)].' (arta0502)

Argument nominalization

The second construction constrained by grammatical relation is argument nominalization. Argument nominalization is defined here as a grammatical device which denotes individual(s), object(s) or, more generally, thing(s) by describing a particular event or state in which the thing(s) is/are involved as a participant. See the following English example:

(102) a. *I found [what he had been looking for].*

b. *I found {his bolo/his clothes/a bag of betel nuts}.*

In English, a *what*-clause may function as an argument nominalization. Although the clause means a particular event in which he was looking for something, but what the speaker found is not the situation itself, but a particular object designated by a null argument, here the O

argument of the verb *lost*, which may be a bolo, clothes, a bag of betel nuts, or something else.

In Arta, argument nominalization is different from that in English in two respects. First, there is no need to resort to any special formatives to create the construction; it is constructed by the combination of a determiner and a verbal or adjectival clause. Second, there is a strong constraint on the grammatical relation of the argument to be a target of nominalization: the target argument has to be the absolutive within the clause. Consider the following examples:

(103) a. *N-inta=ku*   *[i*   *pab-bab-biran=na*   *Ø]*

           PST-see=1SG.GEN   SG.ABS.DEF   PRG-RDP-search=3SG.GEN   ABS

           'I found what he had been looking for.'

    b. *N-inta=ku*   *i*   *bisuruk=na.*

           PST-see=1SG.GEN   SG.ABS.DEF   bolo=3SG.GEN

           'I found my bolo.'

First, in (103a), the argument nominalization indicated in brackets is introduced by the same nominal marker *i* as is used to mark other kinds of nominal, as in (103b), but not by a formative specialized to mark argument nominalization. Second, the zero realization of the argument within the nominalized clause corresponds to the absolutive. The absolutive argument is the only nominal which is allowed to be realized as zero; in other words, the absolutive argument is the only target for nominalization: S and O in Dixon's term. Further examples are shown below:

(104) *Pako:m-an=mu=a:mi*   *aytidi*   *liwaliwat=mi.*   *Da*

       forgive-TR=2SG.GEN=1PL.ABS   PL.ABS.DEF   sin=1PL.GEN   because

       pako:m-an=mi   *[aytidi*   *naka-liwat* *Ø*   *dami].*

       forgive-TR=1PL.GEN   PL.ABS.DEF   POT-sin   ABS (S)   1PL.OBL

       'Forgive us our sins, for we also forgive [everyone who sins against us].' (Luke 11, Bible)

(105) *I-singbit*   *[na*   *atti* *Ø*   *ta*   *bunbun]*

       TR-answer   GEN.INDF exist ABS (S) OBL.INDF house

       '[The one who was staying in the house] answered.'

(106) *Pa-latto:ng-an=mu=d*   *attanan*   *[tidi*   *mang-èbèb-bèr=i*

      CAUS-outside-TR=2SG.GEN=POST   all   PL.ABS.DEF   INTR-RDP-fly=SPC

      Ø   *]* *sakay*   *aytidi*   *animal=i,*   *pa-bay-an=mu*   *a*

      ABS (S) and   PL.ABS.DEF   animal=SPC   CAUS-remain-TR=2SG.GEN   LIG

      um-a:du=tid,   *take:ta*   *um-a:du=tid*   *ta*   *tapaw*

      INTR-many=3PL.ABS   so.that   INTR-many=3PL.ABS   OBL.INDF   surface

      na   *tapa.*

      GEN.INDF   soil

      'Bring out every kind of [what fly] (= birds) and animal and let them increase in number, so that they can multiply on the earth.' (Noah, Bible)

(107) *Manga:-pasiran*   *siya*   *[ta*   *g⟨in⟩imit=na*   *Ø*

      STV-shame   3SG.ABS   OBL.INDF   ⟨PST.TR⟩do=3SG.GEN   ABS (O)

      tasu:lèp=ti].

      yesterday=SPC

      'S/He feels ashamed of [what s/he did yesterday].'

(108) *Na-arawata:ng=u*   *a*   *dagda:gud*   *[n-i-bud=na*   *Ø*   *].*

      POT-grasp=1SG.GEN   LIG   immediate   PST-TR-say=3SG.GEN   ABS (O)

      'I immediately understood [what s/he said].'

(109) *Saya*   *[pang-a:n-èn=mi*   *Ø*   *ta*   *ayta*   *Disubu*   *aydi:ti].*

      DEM.DIST   PRG-eat-TR=1PL.GEN   ABS (O)   OBL.INDF   there   Disubu   before

      'That is [what we were eating there in Disubu before].' (arta0002)

In examples (104–106), the S arguments of the intransitive clauses are realized as zero, and become the target for nominalizations, whereas in (107–109), the O arguments of the transitive clauses appear as the target for nominalizations. Argument nominalization is thus constrained by the case relation, in which nominalization is allowed if the argument to be nominalized is the absolutive case within the clause.

Interrogativization

In content question or wh-question, the interrogative pronouns *tatin, a:nu*, and *adi:ni* should correspond to the absolutive case within the clause, not the ergative or oblique case. Compare the following examples:

(110) a.   * *Tatin*   *kabbat*   Ø   *i*   *baruwa:si?*

        who$_i$ want(tr)   ERG (A)$_i$ SG.ABS.DEF   clothes

        'Who wants the clothes?'

    b.   *Tatin*   *makang-kabbat*   Ø   *ti*   *baruwa:si?*

        who$_i$ INTR-want   ABS (S)$_i$ SG.OBL.DEF   clothes

        'Who wants the clothes?'

Although the transitive verb *kabbat* 'want' is morphologically unmarked, not like its intransitive counterpart *makang-kabbat*, the intransitive counterpart shows low acceptability when it appears in natural discourse, while the "unmarked" verb is unacceptable. The marked verb is acceptable in interrogative sentences. Again this fact comes from the principle that the interrogative pronouns *tatin, a:nu*, and *adi:ni* should correspond to the absolutive case within the clause as in (110b). Other examples are shown below:

(111) *Tatin*   *pap-pokpok*   Ø   *ti*   *lame:sa=y?*

    who$_i$ PRG.INTR-tap   ABS (S)$_i$ SG.OBL.DEF   board=SPC

    'Who is tapping the board?'

(112) *Adi:ni*   *na-rapu-an=mu*   Ø   *?*

    where$_i$ POT-come.from-TR=2SG.GEN   ABS (O)$_i$

    'Where did you come from?'

(113) *A:nu*   *alap-èn=mu*   Ø   *ta*   *Maddela?*

    what$_i$ get-TR=2SG.GEN   ABS (O)$_i$ OBL.INDF   Maddela

    'What will you (go to) get in Maddela?'

This is also the case when a whole clause is embedded as the complement of the verb, functioning as an indirect question:

(114) a. * *Awa:ng=u*   *tataw*   *amma*   *tatin*   *kabbat*   Ø   *i*

               NEG=1SG.GEN   know   if   who$_i$ want(tr)   ERG (A)$_i$ SG.ABS.DEF

               baruwa:si?

               clothes

               'I do not know who wants the clothes?'

    b. *Awa:ng=u*   *tataw*   *amma*   *tatin*   *makang-kabbat*   Ø

               NEG=1SG.GEN   know   if   who$_i$ INTR-want   ABS (S)$_i$

               ti   *baruwa:si?*

               SG.OBL.DEF   clothes

               'I do not know who wants the clothes?'

Whether it is a direct question, an indirect question, or an interrogativization with *tatin, a:nu,* and *adi:ni* each exhibits the constraint on the grammatical relation between the interrogative pronoun and the corresponding argument within the clause.

7.2.3   On possessor-ascension

It is shown that quantifier floating, argument nominalization, relativization, and interrogativization are sensitive to the grammatical relation of the argument in question. However, there is an important exception to the constraint. Consider the following examples:

(115) Relative clause

    a. *i*   *tiyèd=na*   *a*   *m⟨in⟩a-putèd*

        SG.ABS.DEF   foot=3SG.GEN   LIG   ⟨PST⟩POT-cripple

        'her foot which is crippled'

    b. *i*   *arta=y*   *a*   *m⟨in⟩a-putèd*   *i*

        SG.ABS.DEF   Arta-person=SPC   LIG   ⟨PST⟩POT-cripple   SG.ABS.DEF

        tiyèd=na

        foot=3SG.GEN

        'the Arta person whose foot is crippled'

Although I have discussed that the absolutive argument is the only target for relativization as in (115a), the possessor occurring within the absolutive NP can exceptionally be relativized,

and the absolutive NP remains within the relative clause in (115b). This is also the case in argument nominalization and interrogativization, as shown in the second examples of each pair in (116,117):

(116) Argument nominalization

  a. *i*   *minaputèd*

  SG.ABS.DEF   ⟨PST⟩POT-cripple

  'the one which is crippled'

  b. *i*   *minaputèd*   *i*   *tiyèd=na*

  SG.ABS.DEF   ⟨PST⟩POT-cripple   SG.ABS.DEF   foot=3SG.GEN

  'the one whose foot is crippled'

(117) Interrogativization

  a. *Adi:ni*   *minaputèd?*

  which/where   ⟨PST⟩POT-cripple

  'Which part is crippled?'

  b. *Tatin*   *minaputèd*   *i*   *tiyèd=na?*

  who   ⟨PST⟩POT-cripple   SG.ABS.DEF   foot=3SG.GEN

  'Whose foot is crippled?'

Further examples from discourse data are shown below:

(118) *Map-pati   attanan   [a   atti: angès=na   ti   apaw*

  INTR-die   all   LIG   exist   breath=3SG.GEN   SG.OBL.DEF   surface

  ni   tapa=y].

  SG.GEN.DEF   soil=SPC

  'All of those which are breathing on the earth will die.' (Noah, Bible)

(119) *Saya   ti   Kwiny   [a   med-dègès   lagip=na=y].*

  DEM.DIST   SG.ABS.PSN   Kwiny   LIG   ADJ-pain   voice=3SG.GEN=SPC

  'That is Kwiny (the name of a dog), whose barking is painful (to ears).'

(120) *Mel-lamèk   i   i:yan=i,   ansi:na   naka-pangan   [tidi   awan=i*

  ADJ-soft   SG.ABS.DEF   fish=SPC   so.that   POT.PST-eat   PL.ABS.DEF   NEG=SPC

ta   ngippèn].

OBL.INDF   tooth

'The fish is soft, so that those who have no teeth were able to eat it.'

Note that the exception to the constraint on the grammatical relation is not applied to quantifier floating. Although the floated quantifier can be coreferential with the absolute argument, it cannot be coreferential with the possessor of the absolute argument, which is shown in (121):

(121)   a.   *Gimit-èn=mu   attanan   tidi   bunbun=di.*

            make-TR=2SG.GEN   all$_i$ PL.ABS.DEF   house$_i$=3PL.GEN

            'Make all of their houses.'

        b.   * *Gimit-èn=mu   attanan   i   si:pang   a   bunbun=di.*

            make-TR=2SG.GEN   all$_i$ 1   one   LIG   house=3PL.GEN$_i$

            'Make the house of all of them (= Make one house for all of them).'

In the first sentence, *attanan* can be coreferential with the absolute NP *tidi bunbun=di*, thus the whole sentence is fully acceptable, but in the second example, where *attanan* cannot be coreferential with the absolute NP *i si:pang a bunbun=di*, because of the number is specified as *si:pang* 'one (house)', thus contextually induced to be coreferential with *=di* 'their', the sentence is totally unacceptable. In my corpus, I did not find any instances where a floated quantifier is coreferential with the possessor phrase.

This observation provides empirical evidence for distinguishing two types of syntactic ergativity (i.e. intra-clausal and inter-clausal types). As mentioned above, quantifier floating is subgrouped as an intra-clausal type of syntactic ergativity, and relativization, argument nominalization, and interrogativization as inter-clausal. In previous literature, various phenomena including relativization, argument nominalization, interrogativization, and quantifier floating are treated as tests for indicating the "subjecthood" of the absolute case. However, the observation conducted here seems to indicate intra-clausal and inter-clausal levels of syntactic ergativity may be qualitatively different phenomena.

The reason why the possessor NP of an absolute argument can behave in the same way as an absolute argument itself is not identified so far. It may involve functional nature of

possessor NPs that possessor NPs have higher topicality than other NPs, or are likely to be a reference point from which a target referent is accessed (*Tom > Tom's arm*) (Langacker 1993). As discussed in Kuno, eligible relativization is highly constrained by the topicality of extracted NPs.[5] Possible cognitive-functional factors may be revealed by referring to these lines of research.

7.3 Conclusion

This chapter examined argument structures in Arta and the nature of the absolutive argument as a pivot. The description of argument structure presupposes differentiation between an argument and an adjunct. This is found to be a difficult task, but some diagnostic tests suggest that some oblique phrases are peripheral within the clause. I also addressed non-canonical argument structures, which, as opposed to canonical argument structures, do not have an absolutive argument. Such non-canonical cases are observed when the clause describes meteorological states/events, locations, and negative existentials. The following section dealt with the syntactic functions and the conceptual motivations of an absolutive argument. After differentiating two types of syntactic ergativity: intra-clausal and inter-clausal levels, it was shown that the two levels differ in the possibility of possessor ascension.

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[5]Consider the following examples (Takami 1999: 153):

(1)   a.   *John is the person [who I slept for eight hours without meeting Ø]
       b.   Rice is something [that most Japanese would not be able to survive without eating Ø]

(2)   a.   *This is the bottle of whisky [that we ate pizza and John drank Ø]
       b.   This is the bottle of whisky [that we went to a liquor store and bought Ø]

Chapter 8

Verbs

This chapter addresses probably the most complex part in Arta grammar, i.e. verbal affixes. In the first section, I will examine the nature of the verbal affixes that have been called focus or voice affix, and will argue against the rigorous view that the affixes serve for voice alternation in Philippine-type languages. It will be shown that they exhibit significant overlap with the morphological, syntactic, and semantic characteristics of class-changing affixes; thus we should not regard them as voice affixes, but as "verbalizing" affixes. The first section also deals with the subclasses of predicates, and I will recognize dynamic transitive and intransitive verbs, potentive transitive and intransitive verbs, stative verbs, and adjectives. A detailed analysis of each affix is conducted from §8.2–§8.5, where three major dynamic transitive affixes (*-èn, -an* and *i-*), five major dynamic intransitive affixes (*-um-, maC-, maN-, mangi-* and *mangiC-*), potentive verb affixes (*maka-, ma-, ma- -an*, and *me:-*), and two stative verb affixes (*tiC-* and *manga:-*) are examined. §8.6 deals with causative derivation, and §?? discusses the relationship between the classification of affixes and aspect and affectedness, as concluding remarks.

8.1 Overview

8.1.1 Verbalizing affix

This section examines the overall characters of what is traditionally called a *focus affix* or *voice affix*. In Austronesian linguistics, voice affixes have been considered to function as

determining conferring absolute (or variously called such as nominative, topic, and subject) upon a particular semantic role, thus each construction formed with the given affix is called *actor voice, patient voice, location voice, instrumental voice*, among others. The following examples are particularly influential in that each verbal affix seems to uniquely determine the semantic role of the absolute:

(1)   Tagalog (Schacter 1976: 494–495)

a. ***Mag**-alis*   ***ang*** *babae*   *ng*   *bigas*   *sa*   *sako*   *para*   *sa*   *bata.*
AV-take.out   ABS   woman   GEN   rice   LOC   sack   BEN   LOC   child
'The woman will take some rice out of a/the sack for a/the child.'

b. *A-alis-**in***   *ng*   *babae*   ***ang*** *bigas*   *sa*   *sako*   *para*   *sa*
DUR-take.out-PV   GEN   woman   ABS   rice   LOC   sack   BEN   LOC
bata.
child
'A/the woman will take the rice out of a/the sack for a/the child.'

c. *A-alis-**an***   *ng*   *babae*   *ng*   *bigas*   ***ang*** *sako*   *para*   *sa*
DUR-take.out-LV   GEN   woman   GEN   rice   ABS   sack   BEN   LOC
bata.
child
'A/the woman will take some rice out of the sack for a/the child.'

d. ***Ipag**-alis*   *ng*   *babae*   *ng*   *bigas*   *sa*   *sako*   ***ang*** *bata*
CV-take.out   GEN   woman   GEN   rice   LOC   sack   ABS   child
'A/the woman will take some rice out of a/the sack for the child.'
(The glosses are changed for the current analysis)

Here it is illustrated that the changes in verbal affix function as "alternating" the grammatical relation among various semantic roles, and each voice is morphologically marked, with no unmarked voice warranted, as opposed to, say, the active–passive opposition in English, and various many languages. This unique voice system, as well as the underdeterminacy of "subject" in Tagalog and other Philippine languages has drawn attention from various typologists and theoretical linguists.

However, we should carefully consider whether the verbal affixes and the relevant syntactic construction are regarded as "voice affix" and "voice", respectively. In what follows, I will argue that these affixes should not be considered to be a voice affix; rather these are much more similar to class-changing derivational affixes, thus should be referred to as "verbalizing affix".

Let me consider the following four criteria; if the affixes are positioned in the left side, they are more like class-changing derivational affixes, whereas if they are positioned in the right side, they are more like voice affixes:

(2)   (i)   **possible alternation**: strictly limited —— applicable to almost all the stems

　　　(ii) **different semantic outcomes**: low (opaque) —— high

　　　(iii) **change of lexical category**: yes-no —— no

　　　(iv) **number of items**: many —— few

The first criterion is relevant to the applicability of a given affix to stems that it may attach to. With regard to class-changing derivational affixes, possible combinations between the affixes and stems are conventionally predetermined, and alternations between them are strictly limited (*retire-ment*, but not **retir-al, *retiration, *retir-is*). Voice alternations generally exhibit much higher applicability to verbs if the item (i.e. verb) and/or clause satisfy morphosyntactic and semantic conditions. Consider the verbalizing affixes in Arta. These affixes show the idiosyncratic blocking of the alternation. For example, to form dynamic intransitive verbs, a given stem should select the one of the two affixes: *maN-* and *maC-*. This is also true in dynamic transitive affixes *-èn* vs. *-an*, *-èn* and *i-*. However, regular alternations may be attested in the case of *i-* and *-an*, in which if the stem can take *i-* prefix, it can almost regularly take *-an* prefix, resulting in different arguments appearing as absolutive within the clause. In summary, the affixes in Arta show an intermediate status between typical class-changing derivational affixes and voice affixes.

The second criterion concerns the semantic or functional difference discernible among a set of items which are paradigmatically opposed to each other. Although voice phenomena, as in active–passive opposition, exhibit significant differences in function, morphological derivations often have little semantic or functional differences, say, between, *-fy, -ize, -ate,*

en-/-en, and conversion[1] In the case of verbalizing affixes in Arta, they are more like class-changing derivational affixes in that it is difficult to find semantic bases for differentiating a set of functionally-similar affixes, in particular, intransitive verb affixes between *maN-* and *maC-*, and between *maC-* and ⟨*um*⟩. However, it does not mean that semantic differences do not apply at all. As shown in the following sections, each affix will be shown to be differentiated in a rather systematic way, structured by a handful of semantic parameters. Again, Arta verbalizing affixes show an intermediate status between two polar categories.

Third, if a given affix changes the class of the lexical item, the affix can be qualified as class-changing derivational affix. In fact, most roots are categorized as nouns; even the action root may serve as a noun, as in the following sentence:

(3) *Tanakan*   *i*   *digdig=mu?*

     when   SG.ABS.DEF   arrival=2SG.GEN

     'When is your arrival?' = 'When did you arrive (here)?' (arta0506)

Although *digdig* 'arrival' is more likely to appear as a verbal form *d*⟨*um*⟩*igdig* 'arrive', it may appear as a bare form, in which it may function as a noun, literally meaning '(your) arrival.'[2] Since voice affixes typically do not carry a class-changing function, the verbalizing affixes in Arta are more like class-changing derivational affixes.

The final criterion relates to the paradigmatic opposition of the affix. Derivational affixes are significant in number, but typically voice alternations are limited to two (active vs. passive) or three (e.g. middle). Further, in many languages with an active and passive voice opposition, the active form is unmarked (zero), and only the passive form is morphologically marked, thus the number of affixes is virtually one. In the case of verbal affixes in Arta, there are nine affixes that are paradigmatically contrastive (three transitive affixes and six intransitive affixes). This situation is more similar to derivational affixes than voice affixes.

In summary, although the first two tests show the intermediate status of the affixes between the two polar categories, the latter two tests indicate that the affixes are closer to class-changing derivational affixes. To recognize the significant overlap with class-changing

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[1]e.g. *-ify* (*purify, fortify*) *-ize* (*nationalize, theorize*), *-ate* (*passionate, decorate*), *en-/-en* (*enlarge, engulf*), and conversion (*single out, water* (*the flowers*)

[2]See Himmelman (2007) for a similar argument on Tagalog lexical categories.

derivational affixes, and to avoid connotations employed by the notion of "voice", I use the term "verbalizing affix" to refer to "voice" affixes in the following discussion.[3]

In what follows, the subclassification of verbalizing affixes are examined from a broader point of view, where every class of expressions which may typically function as a predicate, excluding a noun, is considered.

8.1.2 Subclasses of predicative forms

In this section I attempt to provide an empirical basis for classifying various predicative forms into four categories: dynamic verbs, potentive verbs, stative verbs, and adjectives.[4] The four categories are set out in Table 8.1:

Table 8.1: Subclasses of predicative forms

subclasses	verbal affixes	examples	translations
dynamic verbs			
– intransitive	⟨um⟩, maC-, maN- mangi-, mangiC-	mar-ratang	'to buy, do shopping'
– transitive	-èn, -an, i-	ratang-èn	'to buy something'
potentive verbs			
– intransitive	maka-	maka-ratang	'can buy, can do shopping'
– transitive	ma-, ma- -an, me:-	ma-ratang	'can buy something'
stative verbs	manga:-	manga:-dègnin	'(be) feel(ing) cold'
	tiC-	Tit-tuttud	'(be) sitting'
adjectives	meC-	med-dègnin	'(something) is cold'

It should be noted that although the first three categories are labelled as 'verb' and the latter one as 'adjective', these labels are used just for descriptive purposes. This higher-order grouping is arbitrary.[5] The four categories are distinguished from the following parameters (Table 8.2).

First, the number of the tense-aspect distinction, which will be examined in the next

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[3]Although the literature is aware of the derivational nature of the affixes (Reid 1992, Himmelman 2007), the notion of "voice" still continues to be employed for describing the morphosyntactic phenomenon. But there is no consensus over the problem as to whether each affix should be considered to represent *different* voices, or some of them should be lumped together as, say, 'actor voice' or 'undergoer voice'.

[4]The term "dynamic verbs" is inherited form Reid and Liao (2002), and "potentive verbs" from Rubino (1997, 2000).

[5]See Croft (2001) for the arbitrariness of the distinction between verb and adjective.

Table 8.2: Four parameters for distinguishing four categories

	Dynamic V.	Potentive V.	Stative V.	Adjective
Number of the tense-aspect distinction	3	2	1	1
Argument structure	tr/intr	tr/intr	intr	intr
Dynamic vs. static situation	dynamic	static*	static	static
Implicature of temporal situation	yes	yes*	yes	no

chapter, differentiates dynamic verbs, potentive verbs, stative verbs and adjectives. Dynamic verbs have a three tense-aspect distinction, namely, non-past, past, and progressive; potentive verbs distinguish non-past and past with no progressive form; and stative verbs and adjectives have no tense-aspect distinction. Second, they differ in the argument structure that the predicate may take. Dynamic verbs and potentive verbs have intransitive and transitive subclasses, whereas stative verbs and adjectives constitute intransitive clauses, not transitives. The third parameter concerns the type of the described situation. Dynamic verbs differ from the latter three categories in that, as the label implies, dynamic verbs designate a dynamic process or event (Lyons 1977: 483, see also Van Valin 2005), with the described situation having internal change of state, rather than the state or property itself.[6] Stative verbs and adjectives describe static situations, but do it without any reference to an dynamic action.

Finally, what distinguishes stative verbs and adjectives is whether the use of the form may imply the temporality of the situation or not. If a stative verb form is used to describe a given situation, it implies that the situation occurs temporarily, whereas if an adjective is used, there is no implication (or implicature) of such temporality. This characterization does not imply the opposite generalization: "adjectives imply a permanent state", which seems to be a wrong attribution. Adjectives may well be used for temporary situations as well, as in *Mep-pasu=tep i mabaw=i* 'The (cooked) rice is still hot.', as well as permanent situations as in *Mep-pullaw i kubbang=na=y.* 'His skin is white.' What distinguishes stative verbs and

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[6]Potentive verbs do not describe a dynamic situation, but one's ability, or potential within an action, and the resultative state of an action; the static situation described is thus causally relevant to a dynamic situation, but do not directly designate any dynamic action (hence the table uses an asterisk onto the value).

adjectives is the possible implication (or implicature) of temporality; the use of a stative verb inevitably conjures up the speaker's commitment to the temporary implication of the situation.

The four parameters justify the four categories of predicates: dynamic verbs, potentive verbs, stative verbs, and adjectives. In what follows, the first three categories are examined (see §6.1 for the extensive discussion on adjectives).

8.2 Dynamic Transitive verbs

Dynamic transitive verbs describe volitional events by an agent toward an object, morphologically marked by *-èn, -an*, and *i-*. They are the reflexes of PMP *-en, *-an, and *ʔi- (Reid and Liao 2002), and may ultimately date back to what Ross calls Proto-Nuclear Austronesian, a reconstructed proto language in which all the current Austronesian languages excluding Puyuma, Tsou, and Rukai arguably have their origin (Ross 2009). The reflexes of *-en, *-an, and *ʔi- are attested in nearly all the languages in the Philippines, with their meanings slightly different among them (e.g. Liao 2010 for the survey of functional distributions of *i- in Philippine languages).

8.2.1 *-èn* verb

-èn (after vowel-final stem, *-n*) forms a verb describing an event or process in general, but prototypically describing a change of state or change of location. As opposed to the other two affixes, the root to which this affix is attached is not an object noun. Typical verbs with *-èn* code complete changes of state or changes of location are shown below:

Change of state

(4) *bisag-èn* 'break'

  pusin-èn 'break into two pieces'

  pissay-èn, *tastas-èn* 'tear'

  gupung-èn 'cut down'

  gèlgèl-èn 'cut into finer pieces'

gaddu-n 'cut into two pieces'

bakka-n 'shatter, smash'

gu:lak-èn 'crack, chop'

addèp-èn 'extinguish (fire)'

sigid-èn 'burn out'

(5) *Munati*   *kella:yug=na,*   **gu:lak-èn=di**   *a:ya:*   *gidat=ti.*

    like.this   length=3SG.GEN   crack-TR=3PL.GEN   DEM.DIST   up.to=here

    'The length is like this. That will be cracked (by the bolo) up to here.' (arta0501)

(6) **Ga:gèlgèl-èn=di**   *ta*   *bisuruk,*   *i-lu:lungsud=di*   *ta*   *kande:ro.*

    cut-TR=3PL.GEN   OBL.INDF   bolo   TR-put=3PL.GEN   OBL.INDF   pot

    'We cut (the meat) with a bolo, and put it into the pot.' (arta0108)

Change of location

(7) *alap-èn* 'get, take, fetch'

    abbi:t-èn 'carry with a cloth called abbit'

    ka:lig-èn 'carry'

    sa:bit-èn 'carry on one's shoulder'

    guyu:d-èn 'pull out'

    idut-èn 'pick up with one's fingers, pinch'

    pidut-èn 'pick up with one's hand'

    pisil- èn 'scoop with both of one's hands'

    tabu-n 'scoop with a ladle'

    takkaw-èn 'steal'

    ummung-èn 'gather something'

(8) *A:nu*   *a*   *o:rat*   *angin=na=taw*   **alap-èn**   *na*

    what   LIG   time   come=3SG.GEN=2SG.ABS   get-TR   GEN.INDF

    top=mu=y?

    companion=2SG.GEN=SPC

    'What time will your companion come and fetch you?'

(9) *Map-pati=d*   *i*   *laman*   *munata.*   *Amma*   *map-pati=d,*

       INTR-die=POST   SG.ABS.DEF   wild.pig   like.that   if   INTR-die=POST

       ***sa:bit-èn**=di.*   ***sa:bit-èn**=di=d*   *ngay*   *ti*   *bunbun=mi.*

       carry-TR=3PL.GEN   carry-TR=3PL.GEN=POST   go   SG.OBL.DEF   house=1PL.GEN

       'The wild pig die like this. If it has died, we carry it on our shoulder. We carry it to

       our house.' (arta0002)

(10) ***P⟨in⟩idut**=di*   *tidi*   *bunga*   *na*   *ayu=y*

       ⟨PST.TR⟩pick.up=3PL.GEN   PL.ABS.DEF   fruit   3SG.GEN   tree=SPC

       i-lugun=di   *tamman*   *ta*   *baske:t=i.*

       TR-put=3PL.GEN   again   OBL.INDF   basket=SPC

       'They picked up the fruits of the tree and put them into the basket again.' (arta0006)

Note however that the *-èn* verbs are not only used to describe change of state/location, but also applied to various types of event which are not expressed by the latter two affixes.

Perception

(11) *inta-n, ta-n* 'look at, find'

       ati:ng-èn 'listen to, pay attention to'

       angu:t-èn 'smell at'

       linès-èn 'touch on'

(12) ***Ta-n**=mu=nen.*

       look.at=2SG.GEN=please

       'Please Look (at that)!'

(13) ***Ati:ng-èn**=mu=nen*   *i*   *i-bu:d=u=da:w=i.*

       listen.to=2SG.GEN=please   SG.ABS.DEF   TR-say=1SG.GEN=2SG.OBL=SPC

       'Please Listen to what I will say to you.'

Others

(14) *asawa-n* 'get married to'

       luwag-èn 'wake up (someone)'

na:na:b-èn 'recall'

gimit-èn, gimt-èn 'make, do'

lègèd-èn 'wait for'

dutul-èn 'do first'

dage:t-èn 'sew'

singbit-èn 'answer'

ta:me:ta-n 'change'

arabis-èn 'cross (river)'

derettso:w-èn 'go straight'

dimadima-n 'walk to'

uru-n 'cure, heal'

èblu:n-èn '(faith healer) cure, heal'

(15) *Awa:ng=a=tep   da   **na:na:b-èng**=u.*
      NEG=2SG.ABS=still   because   recall-TR=1SG.GEN
      'Wait because I will recall (the name of the tree).'

(16) *Amma   manga:-paditèng=di,   saddya   **uru-n**=di.*
      if   STV-desease=POST   DEM.DIST medicine-TR=3PL.GEN
      'If someone becomes sick, that person is cured.' (arta0111)

(17) *Amma   munati   kaka:man   a   aba   a   **gimt-èn**=mi,*
      if   like.this bigness   LIG   mat   LIG   make-TR=1PL.GEN
      sali-an=di=te: ta   ta:-salub   a   baggat.
      exchange-TR=3PL.GEN=only   1+2SG.GEN   one-sack   LIG   rice
      '(Even) if the size of the mat we made is like this, they only exchange it for one sack
      of rice.' (arta0108)

(18) *Amma   a:yi:,   akkari:!   Me'-'a:du   i   **asawa-n**=na.*
      if   DEM.PROX   oh   ADJ-many   SG.ABS.DEF spouse-TR=3SG.GEN
      'If (the wife is) this, Oh my goodness! There are many who he will marry.' (arta0515)

This distribution of *-èn* suffix may indicate that although it can code the change of state and the change of location, it is only the prototypical use of the suffix, and the form can attach to various kinds of verb roots. Therefore in a schematic level, it should be analyzed as forming unmarked transitive verbs.

8.2.2   *-an* verb

Verbs taking *-an* suffix describe various situations in which an action by an agent is oriented to a location/object, or in which the surface of an object undergoes some change. There are three categories each of which are not clearcut categories, interrelated with each other, but constituting a cline from the one with less affectedness to the one with greater affectedness. However, As opposed to the prototypical use of *-èn* suffix, any category of *-an* verbs do not imply a holistic change in their state or location.

The first category is relevant to the action where the absolutive case expresses the location of the event, which implies the least affectedness on the referent (i.e., location). Depending on the stem that *-an* attaches to, the verb may mean an autonomous motion (the agent moving to a location) or a caused motion event (Giving to/Putting onto a location).

Moving to a location

(19)   *digdig-an* 'arrive at' (digdig 'arrival')

   e:n-an 'go to'

   angay-an 'go to'

Giving to/Putting in/into/onto a location   (Causing an object to moving to a location)

   1   General[7]

(20)   *addinan/atdinan* 'give'

   lugun-an 'put into container'

   pègkat-an 'paste, paint on'

   2   Specific the events with the moving objects specified

[7]They can appear with *i-* prefix, as in *yatèd, ilugun* and *ipègkat*. If *-an* is used, the absolutive case should be a location (or goal), but if *i-* is used, the absolutive case should be a moving object rather than a location.

(21)   *sibu-an* 'blow at (give air to)'

    yopyo:p-an 'blow on (fire) (give air to)'

    wagtan 'add/put water on' cf. *wagèt* 'water'

    asin-an 'add/put salt on' cf. *asin* 'salt'

    rika:du-an 'add seasoning to' cf. *rika:du* 'seasoning'

    tullub-an 'cover (a pot) (put the lid onto)' cf. *tullub* 'lid, cover'

    diding-an 'install the wall (give a wall to (the house)) cf. *diding* 'wall'

    angut-an 'kiss (give one's smell to)' cf. *angut* 'smell'

    tuppak-an 'spit on (give saliva to) cf. *tuppak* 'saliva'

As shown above, some verbs encode quite specific giving/putting meanings. In these cases, the roots of these verbs are commonly object nouns such as *wagèt* 'water', *asin* 'salt', *rika:du* 'seasoning', *tullub* 'lid, cover', *diding* 'wall', *angut* 'smell', and *tuppak* 'saliva'. Examples of this category are shown below:

(22)   *Adi:ni*   **e:n-an**=*mu?*

    where   go-TR=2SG.GEN

    'Where are you going to go?'

(23)   *Adi:ni*   **d⟨in⟩igdig-an**=*na=y?*   *Aytina*   *Pulang*   *Lupa=y.*

    where   ⟨PST⟩arrive-TR=3SG.GEN=SPC   DEM.MED   Pulang   Lupa=SPC

    'Where has he arrived?' 'There in Pulang Lupa.'

(24)   **Atdinan**=*mi*   *ta*   *mabaw,*   *aydi*   *yakkan,*   *aydi*   *ngangngal,*

    give.TR=1PL.GEN   OBL.INDF   cooked.rice   and   viand   and   betel.nut

    tabako,   *nusu.*   *Y-a:tèd=mi*   *dya.*

    tabacco   lime.powder   TR-give=1PL.GEN   3SG.OBL

    'We give them cooked rice, viands, betel nuts, tabacco, lime powder. We give them to him/her (to the dead when he/she dies).' (arta0111)

(25)   *Amma*   *ma-sungpu=d,*   **rika:du-an**=*di=d*   *ta*   *asin.*

    if   POT-boil=POST   seasoning-TR=3PL.GEN=POST   OBL.INDF   salt

    Asin-an=*di=d.*

    salt-TR=3PL.GEN=POST

'If it is boiled, we add seasoning (to the pot); add salt into it.' (arta0109)

(26) *Amma   manga:-paditèng=di,   saddya   uru-n=di.*

if   STV-desease=POST   DEM.DIST   medicine-TR=3PL.GEN

***Tuppak-an**=di=d   ta   tuppak=di.*

spit-TR=3PL.GEN=POST   OBL.INDF   saliva=3PL.GEN

'If someone becomes sick, that person is cured. They spit on the person.' (arta0111)

(27) *Ma-balin=mi=te: a   **diding-an**   ta   don   na   bagat.*

POT-finish=1PL.GEN=just   LIG   wall-TR   OBL.INDF   leaf   GEN.INDF   banana

'We can just (finish) the walls with banana leaves.' (arta0001)

The second category describes the situation in which an action by an agent is oriented to an object. Note that the action is merely oriented to an object, thus not designating the change of state on the object's part. Although the second and third subcategories (cleaning/washing subtype, and attacking/acting-on subtype) may have a strong implicature that the object is fully affected (e.g. becomes clean, stab to death), it is not the designated event, but the verbs encode the act oriented to the object (cf. the third category (changing the surface of object)).

Action oriented to something

(A) **leaving subtype**

pasensi-an 'be patient with'

anu:s-an 'tolerate'

bay-an, pabay-an 'leave, let something be'

(B) **cleaning/washing subtype**

linis-an 'do cleaning/sweeping'

pugal-an, punas-an 'wipe'

uras-an 'wash (dishes, cooking utensils, hand)'

baggu-an 'wash (one's body part)'

bambal-an 'wash (clothes)'

kiwa:r-an 'wash (rice)'

(C)   Attacking/acting-on subtype

Even though a meaning implies affectedness, what is designated by the verb is the attack/act itself, which enables the following verbs to take -an suffix.

gèpèt-an 'strangle the neck' (not entailing the completion of killing)

dasu:n-an 'stab'

kuttad-an 'kick'

èbut-an 'punch'

subg-an 'scold someone, get angry with'

pokpo:k-an 'hit, hammer'

kabkab-an 'embrace'

pètpèt-an 'grasp'

iggam-an 'hold'

delde:l-an 'lick'

tagi-an, lu:l-an 'call'

Verbs of this type are exemplified below:

(28)   ***Bay-an**=mu=te:*   *i*   *mad-du:yug=i.*
       ignore-TR=2SG.GEN=only   SG.ABS.DEF   INTR-wander=SPC
       'Just ignore those who are wandering.' (arta0114)

(29)   *Amma   nang-arat   i   lappul=na=i   ti   ayti,*
       if   PST.INTR-bite   SG.ABS.DEF   dog=3SG.GEN=SPC   SG.OBL.DEF   here

       ***pa-bay-an**=na=d=tiddya.*
       CAUS-ignore-TR=3SG.GEN=POST=DEM.DIST
       '(In the hunting), if his dog bit (a wild pig) here, he leaves them (for a while).' (arta0523)

(30)   ***Uras-a:ng**=u*   *i*   *lima=ku=y.*
       wash-TR=1SG.GEN   SG.ABS.DEF   hand=1SG.GEN=SPC
       'I will wash my hand.'

(31)   ***Iggam-an**=di   take:ta   awan   mas-su:li   ti   ayta   dingatu.*
       hold-TR=3PL.GEN   so.that   NEG   INTR-return   SG.OBL.DEF   there   upward
       '(In a home birth, the midwife(s)) keep on pushing (the belly of the woman) so that the baby will not go back upward.' (arta0514)

(32) ***Lu:l-an**=na=tiddya*   *da*   *um-angay=de:=tid=ti.*

     call-TR=3SG.GEN=DEM.DIST   because   INTR-go=POST=3PL.ABS=here

     'He calls those people because they will come here.' (arta0523)

The third category includes the verbs meaning the situation in which the surface of the object is affected by the action:

Changing the surface of the object

(33) *tingiya:b-an* 'bark (a tree), crack the surface part of tree/bamboo'

     du:tung-an 'clean the hair of (animals)'

     ali-an 'cultivate (a field)'

     saldub-an 'ignite (burnables)'

See the following examples:

(34) *Amma*   *wa,*   ***tingiya:b-an**=di*   *tamman,*   *i-so:li=d*   *tamman*

     if   filler   crack-TR=3PL.GEN   again   TR-return=POST   again

     i   *tullub=na=y.*

     SG.ABS.DEF   cover=3SG.GEN=SPC

     'If they crack away the surface of the bamboo, they set it again (on the bamboo).' (arta0114)

(35) ***Du:tung-an**=mu*   *ta*   *dut,*   *Ma*   *ma-pili=d*   *i*

     clean-TR=2SG.GEN   OBL.INDF   fire   if   POT-remove=POST   SG.ABS.DEF

     pulug=na,   *ma-du:tung-an=di,*   *gèlgèl-èn=di=d.*

     hair=3SG.GEN   POT-clean-TR=POST   cut-TR=3PL.GEN=POST

     'You clean the wild pig on the fire. If its hair is removed, already cleaned, they cut it.' (arta0108)

(36) *Manaka:ng=ami=d*   *a*   *mangi-yakkan*   *ti*   *ba:lu=tidi*   *ayde:tidi*

     cook=1PL.ABS=POST   LIG   INTR-viand   SG.OBL.DEF   yam=SPC   and.PL.ABS.DEF

     ilus=i,   *a*   ***ali-an***   *didi*   *ina=mi=ti.*

     purple.yam=SPC   LIG   dig-TR   PL.GEN/OBL.DEF   mother=1PL.GEN=SPC

'We cook and make viands with (a kind of) yam and purple yam that our mothers dig.' (arta0002)

8.2.3   *i-* verb

Verbs taking *i-* suffix construes the situation as the transferring of an object to a specific location by an agent, and morphosyntactically, an object to be transferred is marked by the absolutive case. There are four subcategories, (i) schematic transferring, (ii) transferring with more specific semantic values, (iii) metaphorical transferring, and (iv) phase of event (taking a complement clause). As opposed to *-an* verbs (see "moving to a location" type and "giving to/putting onto a location" type), *i-* verbs confer the absolutive case on the object to be transferred, not to the location, And, as opposed to *-èn* verbs (see "change of location" type), verbs of this class describe the situation not merely as the locational change in general, but as a transferring of the object *to a particular location.*

Schematic transferring

(37)   *y-arawat* 'take (to somewhere)'

       (i)y-a:tèd 'give'

       y-angay 'bring' (cf. *angay* 'go')

       i-ka:lig 'carry'

(38)   *Y-arawat=mu=dèn*   *i*   *nusu=y.*

       TR-get=2SG.GEN=1SG.OBL   SG.ABS.DEF   lime.powder=SPC

       'Hand me the lime powder.'

(39)   *Ma*   *mang-gèpè-gpèt*   *tidi*   *gillèngan=i,*   ***y-angay*=*di*=*tid***

       if   INTR-RDP-tie   PL.ABS.DEF   male=SPC   TR-go=3PL.GEN=3PL.ABS

       ta   *lattong.*

       OBL.INDF   outside

       'If they tied the males, they bring them outside.' (arta0502)

(40)   *Awan=na=tèn*   ***n-atdinan***   *ta*   *kuwarto.*   *Punan=na*

       NEG=3SG.GEN=1SG.ABS   PST-give.TROBL.INDF   money   say=3SG.GEN   NEG

> *awan*   *ta*   *kuwarto.*
>
> OBL.INDF   money
>
> 'S/he did not give me money. S/he says 'I do not have money'.'

(41)   *Attanan*   *a*   *abi:=ku,*   *med-dègès.*   **N-y-angay**=*di=tèn*

       all   LIG   body=1SG.GEN   ADJ-pain   PST-TR-go=3PL.GEN=1SG.ABS

       ta   *ospital*   *ta*   *Echague.*

       OBL.INDF   hospital   OBL.INDF   Echague

       'All parts of my body were painful. They brought me to the hospital in Echague.'

Specific caused motion   *i-* prefix is also applicable to the stems which include various types of semantic specification, such as the goal/direction of the motion, accompanied change of state, manner/instrument of the motion, and subcategories of the object.

(A)   **Caused motion + a specific goal**

     ittagu, ilisu: 'hide something somewhere'

     isullut, isukulup, isuk, isu: 'wear something'

     isera 'close something'

     idiso:no: 'put something inside' (cf. *diso:no:* 'inside')

     ilattong 'put something outside' (cf. *lattong* 'outside')

     ilugun 'put something in a container' (cf. *lugun* 'container')

     idegdeg 'put something away' (cf. *degdeg* 'edge')

(B)   **Caused motion + a specific change of state**

     ibisag 'throw and break something'

     iki:bu 'mix something into something else'

     itunu 'put it on the fire and roast it'

     ili:gat 'put cooked rice to the side of the fire to soften it'

     ilutu 'place something somewhere to heat it'

(C)   **Caused motion + a specific manner/instrument**

     ya:bit 'carry it on the shoulder'

     inanguy 'carry it by swimming'

     ikuttad 'kick it away'

> *ibbèr* 'carry it by flying'
>
> *ibèrèd* 'throw something'
>
> *ikotkot* 'bury something into the hole after digging it' (cf. *kotkot* 'digging')

(D)   Caused motion + a particular type of object

> *ilamun* 'mow/cut (the grass)'
>
> *iyana:* 'give birth to a child' (cf. *ana:* 'child')
>
> *ipangal* 'shoot (an arrow)' (cf. *pangal* 'arrow')

Fictive/Metaphorical motion   The *i-* prefix does not only apply to physical motion, but is used for more abstract kinds of transferring actions, which should be understood in particular semantic frames such as verbal communications, social interactions, and mental activities, where physical motions are semantically backgrounded or totally absent (cf. Talmy 2000). For example, the meaning of *ipe:ta* 'show', *ibud* 'tell something to someone', and *ipatataw* 'let someone know, inform' involve the transferring of visual information by a displaying act, that of information by a verbal act, and that of knowledge in general, respectively.

(42)   *ipe:ta* (*i-pa-ita*) 'show'

> *ibud* 'tell something to someone'
>
> *ipatataw* 'let someone know, inform'
>
> *ila:ku* 'sell something'
>
> *ipare:ho* 'compare something to another'

Causal/Phasal meaning   A more extended use of the prefix is found in the language, in which the prefix also attaches to the stems which have a causal or phasal meaning. In the causal use, the event to control and the change from the unrealized to realized state are construed as the transferred object and the change from the unlocated to located state of the object; in the phasal use, the event to be controlled and a specific phase on which the event is placed are construed as the transferred object and the goal of the transferring. In both cases, the control of the event and situating it within a specific state are expressed by the caused motion or transferring template.

(43)   *irugi* 'begin something'

> *itu:luy* 'continue something'
>
> *isungdu* 'finish something'
>
> *isugnud* 'allow something to do'

8.2.4 Functional and constructional differences between the three transitive affixes

Let me review the functional and constructional differences between the three affixes. First, both *-èn* verbs and *i-* verbs can describe the change of location, but *-èn* verbs do not describe the situation including the goal, whereas *i-* verbs describe the situation as a transferring of the object to a particular location, hence the difference in acceptability occurs as in (44). When the *-en* verb is used with the goal phrase, another verb must be inserted between the verb and the goal phrase, as in (44c):

(44) a. **Ka:lig-**èn**=mu*   *i*   *uding=i*   *ta*   *lattong.*
          carry-TR=2SG.GEN   SG.ABS.DEF   charcoal=SPC   OBL.INDF   outside
          'Bring the charcoal outside.'

   b. ***I**-ka:lig=mu*   *i*   *uding=i*   *ta*   *lattong*
       TR-carry=2SG.GEN   SG.ABS.DEF   charcoal=SPC   OBL.INDF   outside
       'Bring the charcoal outside.'

   c. *Ka:lig-**èn**=mu*   *i*   *uding=i*   *ngay*   *ta*   *lattong*
       carry-TR=2SG.GEN   SG.ABS.DEF   charcoal=SPC   go   OBL.INDF   outside
       'Get the charcoal and bring it outside.'

The difference between *-an* and *i-* resides in the alternative alignment of the cases, like the dative shift in English. *-an* verbs confer the absolutive onto the goal/location, whereas *i-* verbs confer the absolutive onto the object to be transferred.

(45) a. ***I**-lugun=mu*   *i*   *pagay*   *ta*   *baske:t=i.*
          TR-container=2SG.GEN   SG.ABS.DEF   rice   OBL.INDF   basket=SPC
          'Put the rice into the basket.'

   b. *Lugun-**an**=mu*   *i*   *baske:t=i*   *ta*   *pagay.*
       container-TR=2SG.GEN   SG.ABS.DEF   basket=SPC   OBL.INDF   rice

'Put rice into the basket.'

(46) a. *Atdinan=mu*   *i*   *arta=y*   *ta*   *mabaw=i.*

     give.TR=2SG.GEN   SG.ABS.DEF   person=SPC   OBL.INDF   cooked.rice=SPC

     'Give the person cooked rice.'

  b. **Y-a:tèd=mu**   *i*   *mabaw=i*   *ta*   *arta.*

     TR-give=2SG.GEN   SG.ABS.DEF   cooked.rice=SPC   OBL.INDF   person

     'Give the cooked rice to people/person.'

Note however that the alternation between the two constructions is observed only in a few cases. Even though the same stems can take both affixes, the meanings may significantly differ:

(47) a. *Adi:ni*   *angay-**an**=mu?*

     where   go-TR=2SG.GEN

     'Where will you go?'

  b. *A:no*   **y**-*angay=mu=ta?*

     what   TR-go=2SG.GEN=there

     'What will you bring there?'

8.3 Dynamic Intransitive verbs

Dynamic intransitive verbs are marked by three basic affixes: ⟨*um*⟩, *maC-*, and *maN-*, which are by far frequently used, and other affixes such as *mangiC-* and *mangi-*. The three basic affixes are difficult to differentiate in terms of their function; the functional distributions may be overlapped. However, it is possible to place the relative position of these affixes according to the following three parameters: ⟨*um*⟩ can be placed in the leftmost position, *maC-*, intermediate, and *maN-* in the rightmost position:

(48) ⟨*um*⟩ > *maC-* > *maN-*

     1. **number of participants**: monovalent > bivalent

     2. **aspect**: punctual > durative

     3. **event type**: thematic event > agentive event

    4. **possibility of transitive alternation**: no > yes

First, ⟨*um*⟩ expresses events of a single participant, whereas *maN-* typically codes two-participant events, the patient being expressed with oblique case if it is explicitly verbalized. Aspectually ⟨*um*⟩ expresses a punctual event, with no temporal configuration within the designated event, whereas *maN-* is used for expressing durative events (I will not refer to it as "distributive" because the prefix does not itself encode distributive event, which is encoded by the reduplication). The event coded by ⟨*um*⟩ is typically thematic such as the change of location of the single participant (e.g. go to, arrive at, enter), and change of state or inchoative (become cold, become tall), whereas *maC-* and *maN-* code agentive events such as middle and antipassive situations.[8] Since the clauses with *maC-* verbs and, more typically, with maN- verbs have an agent in absolutive case and a patient in oblique case, there are corresponding transitive clauses where the agent is realized in the ergative case and the patient in the absolutive. But ⟨*um*⟩ typically codes single participant events, hence it may not exhibit transitivity alternations.

8.3.1 ⟨*um*⟩ **verb**

The infix ⟨*um*⟩ is the intransitive infix, which is the reflex of PMP *⟨um⟩(intransitive infix). There is a significant functional overlap with *maC-* (see below), but ⟨*um*⟩ may be characterized as thematic, goal-oriented, and punctual. There are four subcategories concerning the functions of ⟨*um*⟩ infix, change of location, change of state (inchoative) punctual, and, in a few cases, change in body posture:

1. Change of location (transitional motion)   If the infix is combined with path, goal, or manner of motion stems, the verbs mean <change in location>. It focuses on the achievement of the locational change rather than the agent's activity to succeed in the motion. When the infix is used in this pattern, a large amount of cases exhibit *goal-oriented* meaning, with the oblique phrase coding the goal role. In fact, even if the manner of motion stems take the infix, the composite meaning should specify the goal of the motion, rather than the source/path, as in (51).

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[8]Middle situation and antipassive situation are defined semantically in what follows.

- **Source-oriented**

  g⟨um⟩inan 'leave somewhere' (*ginan* 'leaving')

(49) *Ta   ayta   a   langit,   g⟨in⟩⟨um⟩inan   ti   Dios   ta*

OBL.INDF   there   LIG   day   ⟨PST⟩⟨INTR⟩leave   SG.OBL.DEF   God   OBL.INDF

ayta   a   bunbun.

there   LIG   house

'One day, God left the house.' (Bible; Matthew 13)

- **Path/goal-oriented**

  um-arabis 'cross' (*arabis* 'to cross')

  s⟨um⟩arangsang 'climb' (*sarangsang* 'hillside')

(50)   a. **Um-arabis**   *ti*   *wagèt=i.*

INTR-cross   SG.ABS.PSN   water=SPC

'He will cross the river.'

b. **Um-arabis**   *ta*   *dibiliw.*

INTR-cross   OBL.INDF   north

'He will cross to the northern side (of the river).' (elicitation)

- **Goal-oriented**

  d⟨um⟩igdig 'arrive' (*digdig* = arrival)

  d⟨um⟩i:ras 'drop in on, pay a short visit to someone'

  d⟨um⟩tun 'fall down to'

  m-angay 'go to, come to'

  s⟨um⟩o:li 'go back to' (*so:li* 'going back, return')

  (stem: goal)

  b⟨um⟩i:yèn 'go near' (*biyèn* 'n. nearness')

  m-adu:yu 'go far away' (*adu:yu* 'n. being distant')

  l⟨um⟩attong 'go outside' (*lattong* 'n. outside')

  d⟨um⟩iso:no: 'go inside' (*diso:no:* 'n. inside')

  d⟨um⟩ingatu 'go high' (*dingatu* 'n. higher place')

(stem: manner)

um-bèr 'fly to' (*èbèr* 'fly')

g⟨um⟩urugud 'run to' (*gurugud* 'run')

(51) *G⟨in⟩⟨um⟩urugud*   *ta*   *bunbun=na=y.*
      ⟨PST⟩⟨INTR⟩run   OBL.INDF   house=3SG.GEN=SPC
      'S/he ran away {**to** / *****from**} his home.'

2. Change of state (inchoative)   If the stem means a state or property, the composite meaning of the verb becomes inchoative, meaning <become <state>>. It seems that this inchoative meaning is functionally analogous with the goal-orientation of the change-of-location class of verbs, as theoretically and descriptively shown as the parallelism between the domain of physical motion and that of abstract change of state.

- **Change of state (inchoative)**

  ⟨um⟩a:du 'increase in number/amount' (*a:du* 'n. many, much')

  k⟨um⟩a:man 'become big' (*ka:man* 'big')

  l⟨um⟩angit '(it) clear up' (*langit* 'blue sky, daytime')

  t⟨um⟩apra 'become bright, (the sun) come out' (*tapra* 'sunshine')

  t⟨um⟩anakuwan 'change' (*tanakuwan* 'different')

  d⟨um⟩ingatu 'become higher' (*dingatu* 'upward, high, top')

  l⟨um⟩amna 'become cold' (*lamna* 'coldness')

  s⟨um⟩iya: 'begin to cry/weep' (lit. come to the state of crying/weeping)) (*siya:* 'crying')

  b⟨um⟩irèng 'become a floodwater' (*birèng* 'flooding')

  p⟨um⟩u:nèd 'becoming rainy, start to rain' (*pu:nèd* 'rain')

  d⟨um⟩ibbi 'become to the low level' (*dibbi* 'lower part, underneath')

3. Punctual   The event with a punctual aspect, or the one construed as punctual including the one with a short duration, is expressed with ⟨*um*⟩. Although the prototypical meaning of the verb with the infix is inactive, verbs belonging to this category are not necessarily the case, where the volitional action conducted by an agent may be described.

- *b⟨um⟩ègbèg* 'the wind blows (once)'

  y⟨um⟩èbyèb 'urinate'

  s⟨um⟩irit 'defecate'

  g⟨um⟩i:nèk 'stop'

  t⟨um⟩uttud 'sit down' (lit. become seated)

8.3.2   *maC-* verb

As opposed to ⟨*um*⟩, which describes the change of state or location resulting from the action, the verbs prefixed with *maC-* express the action itself, with relatively short duration (cf. *maN-*). One of the distinctive features of the verbs is to describe middle situations (Kemmer 1993, Shibatani 2006), where "the development of an action is confined within the agent's personal sphere so that the action's effect accrues on the agent itself" (Shibatani 2006: 234). Although there are some stems which take both ⟨*um*⟩ and *maC-* because of the situational similarity to be construed, this class of verbs do not imply the goal to be arrived at, rather that the motion itself is in focus.

- **Middle**

    - **Non-locomotional**

      mad-dagsu 'lie down'

      mal-lètaltaw 'be floating'

      mat-taddyor 'stand up'

      mat-tuttud 'sit down'

      mar-ra:pug 'jump'

    - **Locomotional**

      mad-dima 'walk, move in general'

      mas-so:li, mas-su:li 'go back, return'

      mad-duyug 'wander, go around'

      mag-ginan 'leave'

      mab-biyèn 'come/go near'

– **Locomotional (manner)**

mab-bèbbèr 'fly'

mad-di:madima 'walk'

mas-say 'take a ride'

mad-derettsu 'go straight'

(52) *Kabba:t=u* **mas-say** *ti* *tarak=i* *awa:ng=u* *kabbat*

want=1SG.GEN INTR-ride SG.ABS.PSN car=SPC NEG=1SG.GEN want

mad-di:ma-dima.

INTR-RDP-walk

'I want to ride a car, and do not want to walk.'

(53) *Adinni* *Madde:la?* **Mad-derettsu**=am *aytina*.

where place.name INTR-straight=2PL.ABS there

'Where is Maddela?' 'You can go straight there.'

As opposed to the middle situations where the development of the action is confined within the agent's sphere, *maC-* can apply to more active situations, describing the two participant events with the patient optionally coded by the oblique phrase (identical with "antipassive" defined by Shibatani 2006 (see also Nagaya 2009)).

• **Antipassive**

mal-lutu 'cook'

mat-tim 'drink'

mal-lagip 'talk, speak' (*lagip* 'language, voice')

mal-lègèd 'wait (for someone)'

mad-daget 'sew'

mat-tu:rèk 'write'

ma-ratang 'buy'

mag-gi:nèk mag-gittud 'stop something'

mat-ta:me:ta 'do something different'

(54) **Mal-lutu**=tid *ta* *mabaw*, *yakkan*

INTR-cook=3PL.ABS OBL.INDF cooked.rice viand

'They cook rice and viands.'

(55) **Mat-tim**   *ta*   *binarayan*

INTR-drink   OBL.INDF   alcohol

'S/He will drink alcohol.'

Note that in a few cases, *maC-* describes similar situations as expressed with ⟨*um*⟩, where the single participant within a clause is lack of agentivity.

- **Inactive**

  mal-lamèk 'be soften'

  mad-diso:no: 'go deeply'

  mad-dutul 'begin'

  mag-gittud 'stop'

(56) **Mal-lamèk**=*di*   *i*   *tapa=y.*

INTR-soft=POST   SG.ABS.DEF   soil=SPC

'The soil becomes soft.'

(57) **Mad-diso:no:**   *i*   *lagip*   *na*   *Dios*   *did.*

INTR-deep   SG.ABS.DEF   language   GEN.INDF   God   3PL.OBL

'The message of God will go deeply to them.'

(58) **Mag-gittud**   *i*   *pu:nèd=i*

INTR-stop   SG.ABS.DEF   rain=SPC

'The rain will stop.'

8.3.3 *maN-* verb

maN- is the reflex of PMP *maN-, the reflexes being attested in various languages in the Philippines. There are two features characteristic of maN- verbs; first, it has durative aspect, with no inherent terminal point.

(59) **Man-timpla**=*d=taw*   *ta*   *andi=mu.*

INTR-mix=POST=2SG.ABS   OBL.INDF   possession=2SG.GEN

'You mix yours (your coffee)' (arta0506)

(60) *Awan=de:=tèn*   **man-tuntu:ru**   *daw.*

     NEG=POST=1SG.ABS   INTR-learn   2SG.OBL

     'I will not teach you (the Arta language).' (arta0520)

(61) *M-angay=tid=ta*   **mang-alap**   *ta*   *gillèngan.*

     INTR-go=3PL.ABS=there   INTR-get   OBL.INDF male

     'They go there and get males.' (arta0502)

(62) **Man-di:mad:ma***=te:=tid*   *ta*   *talun.*

     INTR-walk=only=3PL.ABS   OBL.INDF mountain

     'They just walk around in the mountain.' (arta0111)

In all the cases in which *maN-* is used, the event is aspectually atelic, with the verb imposes on the clause the construal that the event has no inherent terminal point at which the event must automatically end (see Comrie 1976: 44–48 for the telic–atelic distinction).

    Second, when the S argument is human, there is a strong tendency to be used in antipassive situations, where the action is directing toward a distinct patient. *maN-* verbs can thus frequently alternate with transitive clauses with *-en*, *-an*, and in a few cases, *i-* verbs.

- **mang***-alap* (intr. get something)

  *alap-***èn** (tr. get something)

e.g. **Mang-alap***=tid*   *ta*   *bidut* *ta*   *talun.*

     INTR-get=3PL.ABS   OBL.INDF deer   OBL.INDF mountain

     'They (used to) get deer in the mountain.'

- **man***-diding* (intr. make a wall in the house)

  cf. *diding-***an** (tr. make a wall in the house)

e.g. *Tatin*   **man-diding**   *ta*   *bunbun=i?*

     who   INTR-wall   OBL.INDF house=SPC

     'Who will build a wall in the house?'

- **man***-tunu* (intr. put something on the fire to roast it)

  cf. **i***-tunu* (tr. put something on the fire to roast it)

e.g. ***Man-tunu**=tèn*   *ta*   *i:yan.*

INTR-roast=1SG.ABS   OBL.INDF fish

'I will roast fish.'

See also the following examples:

(63) *Kabbat=man* ***man-tuntu:ru***   *ta*   *lagip*   *na*   *Paranan?*

want=CONTR   INTR-learn   OBL.INDF language GEN.INDF Paranan

'Do you want to learn the Paranan language?' (arta0520)

(64) ***Mang-ali**=tid*   *ta*   *ilus=tidi.*

INTR-dig=3PL.ABS   OBL.INDF purple.yam=SPC

'They (used to) dig purple yam. (arta0003)

(65) *Daddu:pu:=man,*   *ma-murab=tid*   *ta*   *laman,*   *burog,*   *bidut.*

old.man=CONTR   INTR-hunt=3PL.ABS   OBL.INDF wild.pig   monkey   deer

A:duwan   ***mang-antipa:ra***   *ta*   *igit.*

other   INTR-goggle   OBL.INDF eel

'Old men go hunting for wild pigs, monkeys, and deer, others go catching eels. (arta0108)

(66) *Sigu:ro,*   *um-imang=te:=tid*   *ta'lu*   *a*   *langit,*

surely   INTR-rest=only=3PL.ABS   three   LIG   day

***mam-bira**=mande:=tid*   *ta*   *wa*   *anèn=di.*

INTR-search/find=again=3PL.ABS   OBL.INDF filler   food=3PL.GEN

'Surely they just take a rest for three days, and they would go around to find their food again.' (arta0523)

It is not alway the case, however; explicit patients may be merely inferred rather than verbally expressed in the oblique phrase.

(67) ***Mam-bunbun**=tid*   *ta*   *kakka:man*   *a*   *arigi=na.*

INTR-house=3PL.ABS   OBL.INDF RDP-big   LIG   post=3SG.GEN

'They would build a house with very big (i.e. thick) posts.'

(68) *Da* *n-um-anga:y=ami,* **mang-antipa:ra***.*

   because PST-INTR-go=1PL.ABS INTR-goggle

   '... because we went catching (fish).' (arta0520)

(69) *Amma* *ma-rangu=d,* *karu:s-an=di=d=mandi.*

   if   POT-dry=POST tan-TR=3PL.GEN=POST=again

   Mang-gimit*=de:=tid*   *ta*   *biyungèt.*

   INTR-make=POST=3PL.ABS OBL.INDF night

   'If the leaves are dried, they tan the leaves again. (And) they weave (mats) at night.'

   (arta0108)

8.3.4 *mangi-* verb

mangi- is morphologically analyzed as *maN-i-*, structurally the intransitive counterpart of transitive verb prefix *i-*. In spite of this structural correspondence, the use of *mangi-* is not mechanically determined on the morphological basis, but it interrelates with the semantics of stems. If a given stem implies the meaning of caused-motion (e.g. *atèd* 'give'), *maN-* can be used, whereas if the stem does not imply the meaning of caused-motion (*pasu* 'hot'), and thus it cannot invoke the meaning of transferring, *mangi-* seems to be used (*mangi-pasu* 'put on fire to heat').

- **maN- verbs corresponding to i- verbs**

  mang*-atèd* 'to give'

  cf. **y***-a:tèd* 'to give something' < *atèd* 'give'

  mang*-a:na:* 'give birth to a child'

  cf. **iy***-ana:* 'give birth to'

  man*-lamun* 'mow/cut (the grass)'

  cf. **i***-lamun* 'mow/cut (the grass)'

- **mangi- verbs corresponding to i- verbs**

  mangi*-tuntu:ru* 'teach'

  cf. **i***-tuntu:ru* 'teach'

  (Note: **man***-tuntu:ru* 'learn, teach' cf. *tuntu:ru* 'learn, teach')

***mangi**-wa* 'put'

cf. ***i**-wa* 'put'

(Note: ***mang**-wa* 'to do whatchamacallit' cf. *wa* 'do, whatchamacallit')

***mangi**-pasu* 'put on fire to heat'

cf. ***i**-pasu* 'put on fire to heat'

(Note: ***mam**-pasu* 'get/become hot' cf. *pasu* 'hotness')

***mangi**-bu:lun* 'put together'

cf. ***i**-bu:lun* 'put together'

(Note: ***mam**-bu:lun* 'come together' cf. *bu:lun* 'together')

(70) *Tatin* ***nangi-tu:rèk*** *ta* *bulan-bulan.* *Ti* *Yukinori=wada.*

who   PST.intr-write   OBL.INDF   bulan-bulan   SG.ABS.PSN   Yukinori=possibly

'Who wrote down "Bulan-bulan" (name of a song)?' 'Possibly by Yukinori.'

(71) *Tatin* ***nangi-lattong*** *ti* *aba?*

who   PST.INTR-outside   SG.OBL.DEF   mat

'Who bring the mat outside?'

(72) *Adu:p-an=mu=tèn* ***mangi-diso:no:*** *didi*

help-TR=2SG.GEN=1SG.ABS   INTR-inside   PL.GEN/OBL.DEF

baruwasi=tam=i.

clothes=1+2PL.GEN=SPC

'Help me to bring our clothes inside.'

8.3.5 *mangiC-* verb (reciprocal)

mangiC- forms verbs meaning a reciprocal or collaborative action conducted by multiple participants. This prefix seems to be morphologically complex, at least etymologically relevant to *maN-*, but the formative *iC-* is so far unknown.[9] The examples with *mangiC-* used as a reciprocal sense are shown as follows:

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[9] David Zorc (p.c.) informed me that there is a Philippine affix *ki- with this function, and *mangiC-* might be from *mang- + *ki- historically. It seems convincing (except the final geminate consonant in *mangiC-*, which might reflect semantic complexity of reciprocal events because the event described by the prefix undoubtedly involves bidirectional subevents.

- *mangi'-'asawa* 'marry' cf. *asawa-n* 'marry someone'

  mangib-bangga 'collide with each other' cf. *bangga-an* 'collide into something'

  mangib-bud 'talk with each other' cf. *ibud* 'tell something to someone'

  mangis-subèg 'fight with each other' cf. *subgan* 'get angry with someone'

  mangik-karawèg 'play with someone' cf. *mangka:rawèg* 'play'

  mangil-la:gin 'miss each other' cf. *manga:la:ngin* 'feel sad, miss someone'

  mangi'-'ara:ra:pa 'make friends'

  mangik-kabkab 'embrace each other' cf. *kabkab-an* 'hold someone (e.g. a child) in one's arm'

(73)   **nangis-subè-subèg**=*tid.*

       PST.INTR-RDP-anger=3PL.ABS

       'They fought with each other.'

(74)   **Mangil-la:gi:ng**=*ami.*

       INTR-miss=1PL.ABS

       'We are missing each other'

8.4   Potentive verb

Potentive verbs describe static situations causally relevant to a dynamic event, namely, one's ability and potential for actions, and the resultative state of actions. *maka-* is a potentive form correspond to dynamic intransitive forms (e.g. *mad-dima* (INTR-walk) 'walk' vs. *maka-dima* 'can walk'), whereas *ma-* corresponds to dynamic transitive *-èn*, *ma- -an* to *-an*, and *me:* (< *ma-i-) to *i-*, respectively (e.g. *alap-èn* 'get' vs. *ma-alap* 'can get'). When potentive forms are used in a non-past tense, they imply that there exists a cause or condition at a given moment which makes it possible for a dynamic event to occur, that is, one's ability or potential to bring it about; when they are used in past tense, they imply that there exists a resultative state of a particular action or change of state at a given moment.

8.4.1 *maka-* verb

Verbs with the prefix *maka-* designate a state causally related to the action conducted by the actor(s) marked in the absolute case. Since they frequently appear in the non-past tense, they imply that there exists a cause or condition at a given moment which makes it possible for the participant to conduct an action. The specific cause or condition is specified in the actual use, but there are some preferences according to the stem which takes the prefix.

- **Condition (i): one's ability or the possibility afforded by the surrounding environment**[10]

  maka-dima 'can walk'

  maka-bbèr 'can fly'

  maka-gurugud 'can run'

  make:ta (< *maka-ita*) 'can see, can meet'

  maka-tu:luy 'can continue'

  maka-pangan 'can eat'

  maka-ba:sa 'can read'

  maka-ratang 'can buy'

  maka-alap 'can get, obtain, catch'

  maka-arawat 'can understand'

  maka-lupuy 'be boring'

  maka-llèlla 'can trigger laughter'

  maka-direttyo 'can move straight'

  maka-angay 'can go/come'

  maka-awid 'can draw a bow, can use a bow and arrow'

In (75), the whole sentence can be interpreted as mentioning the ability or talent of faith healers to see ghosts and spirits, whereas sentence (76) concerns the impossibility for the bus's to use a road because of the typhoon, rather than attributing the impossibility to the bus itself. The third example (77) may be an intermediate case between the two subtypes.

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[10]This distinction roughly corresponds to nooryoku-kanoo (abilitative possibility) vs. jokyo-kanoo (circumstantial possibility) in Japanese linguistics.

He is quite skillful at using a bow, but because of a physical problem with his arm, he cannot use it.

(75) Ability

> *Konta*   *munatina*   *kakillèk.*   *Tidi*   *daddu:pu:=ti,*   **make:ta.**
>
> but   like.that   small   PL.ABS.DEF   old.men=SPC   can.see
>
> 'But the size (of a ghost) is like that. The old men (faith healers) were able to see them before.' (arta0502)

(76) Possibility afforded by the environment

> *Gindat=tay,*   *awan=tep*   **maka-derettyo**   *i*   *Sa:mana.*
>
> up.to=now   NEG=still   POT-straight   SG.ABS.DEF   Samana.bus
>
> 'Up to now, the Samana bus still cannot use the road (because of the typhoon that attacked the area recently).' (arta0007)

(77) *Awan=de:=tèn*   **maka-awid**   *med-dègès*   *a:yi:.*

> NEG=POST=1SG.ABS   POT-draw.bow   ADJ-pain   DEM.PROX
>
> 'I cannot draw a bow any longer; this (= my arm) is painful.' (arta0523)

Most of the verbs seem to be used both as the participant's ability for the action, and as the possibility of the action provided by objects or environment.

The second type applies to currently relevant physiological conditions; such desiderative verbs encapsulate a stative situation, especially physiological drives through which the participant is oriented towards various implied actions or reactions.

- **Condition (ii) currently relevant physiological drives (desideratives)**
  maka-yèbyèb 'want to/feel like urinating'
  maka-psèpsil 'want to/feel like sneezing'
  maka-o:ta 'feel like vomiting'
  maka-tim 'want to drink something (i.e. being thirsty)'
  make:dèm (< *maka-idèm*) 'feel sleepy'

(78) **Maka-tim**=*tèn*   *ta*   *wagèt.*

> POT-drink=1SG.ABS   OBL.INDF   water

'I feel like drinking water.'

(79) *Ahu:,* **maka-yèbyèb**=de:=tèn.

oh   POT-urinate=POST=1SG.ABS

'I feel like urinating.'

When *maka-* forms are partially reduplicated (*makaC-*, *maka(C)CV:-*), the forms express an habitual action or a attribute of the participant(s):

- **makaC-**

  maka-r-rarru 'be always yawning'

- **maka(C)CV:**

  *maka-**ssi:**-siya* 'be always crying, be a crybaby'

  *maka-**so:**-so:li* 'often return'

  *maka-**du:**-du:yug* 'be always wandering around, be nomadic'

(80) *Pa-gi:nak-èn=mi=tid*   *da*   *maski*   *mepep-pu:nèdi-pu:nèdi*

CAUS-stop-TR=1PL.GEN=3PL.ABS   because   even   ADJ.RDP-rain-rain

maka-kara-karawèg=tid   *ta*   *lattong.*

POT-RDP-play=3PL.ABS   OBL.INDF   outside

'We stop them because even when it is raining, they used to playing outside.' (arta0101)

(81) **Maka-so:-so:li**   *ti*   *ayti.*

POT-RDP-return   SG.OBL.DEF   here

'He often comes back here.'

8.4.2 *ma-* verb

ma- verbs a morphologically derivational relationship with *-èn* verbs. Verbs with the prefix *ma-* express the state of the absolutive undergoer. They may appear in the non-past tense, meaning potentive 'be about to' or abilitative 'can be', but more frequently they appear in the past tense, meaning the resultative state of an action.

There are two subclasses of *ma-* verbs in terms of the semantics of the verbs and syntactic patterns they take. The first type of *ma-* verb encodes a state which brought about as a result

of the internal change that had occurred within the undergoer. In this case, in spite of the morphological relationship with the transitive *-èn* suffix, no ergative argument can co-occur. If the S argument is a human, the verb may often express their physiological state or physical state, whereas if it is non-human or inanimate, it may express various resultative states, as shown below:

- **Resultative physiological state of a human**

  ma-korkor, ma-bisin 'be hungry'

  me:dèm (< ma-idèm) 'be asleep'

  ma-ke:num 'be drunk, intoxicated'

  ma-lupuy 'be tired'

- **Resultative physical state of a human**

  ma-babakat '(female person) be old'

  ma-paditèng 'be sick'

  ma-putèd 'be crippled'

- **Resultative state of an inanimate**

  matannag 'have fell down'

  ma-binglès 'have molded, has gotten moldy'

  ma-rangu 'be withered'

  ma-tunaw 'be melted'

  ma-sigid 'be burned, be aflame'

  ma-bisa 'be wet'

  ma-madi 'be dried'

The second type of *ma-* verbs implies the involvement of two distinct participants: an actor and an undergoer. In this case, *ma-* verbs can optionally take an ergative argument as well as the absolute argument, and thus there is a clearer morphosyntactic derivational relationship with a dynamic transitive clause with *-èn*.[11]

- *ma-abbit* 'can carry with abbit' < *abbi:tèn* 'carry with abbit'

  ma-alap 'can get, obtain' < *alap-èn* 'get'

---

[11]They may imply the possibility or ability of the action, or resultative states of the action.

ma-ating 'can hear, hear' < *ati:ngèn* 'listen to'

me:ta (*ma-ita*) 'can see, see' < *inta-n* 'look at'

ma-tastas, ma-pissay 'be torn, can be torn' < *tastas-èn, pissay-èn* 'tear (v)'

ma-bisag 'be broken' < *bisag-èn* 'break'

ma-pusin 'be broken into two pieces' < *pusin-èn* 'break into two pieces'

ma-gimit 'be brought about, be made' < *gimit-èn* 'do, make'

ma-madi 'be dried' < *madi-n* 'dry something'

ma-ahut 'lose, be defeated' < *ahut-èn* 'defeat'

ma-pilèk 'can be torn'

ma-buka:lig 'be felled' (as a tree), have fallen down'

(82) *Awan   ta   ma-ati:ng=u.*

     NEG   OBL.INDF   POT-hear=1SG.GEN

     'I cannot hear anything.' (arta0002)

(83) *Awan=mu=d   me:ta   i   langit   de:ta,   me:ta   munata*

     NEG=2SG.GEN=POST   POT.see   SG.ABS.DEF blue.sky   there   POT.see   like.that

     arepla:no.

     airplane

     'You cannot see the sky there, you see airplanes like that.' (arta0100)

These two patterns are partially determined by the stem that *ma-* attaches to, but both inter-
pretations may be possible in some cases as in (84):

(84) a. *M⟨in⟩a-tanna:g=u*   *i*   *uru=y.*

        ⟨PST⟩POT-fall.down=1SG.GEN   SG.ABS.DEF   medicine=SPC

        'I accidentally dropped the medicine.'

     b. *M⟨in⟩a-tannag*   *i*   *uru=y.*

        ⟨PST⟩POT-fall.down   SG.ABS.DEF   medicine=SPC

        'The medicine dropped (e.g. from the table)'

8.4.3 *ma- -an* verb

ma- -an is a potentive counterpart of a dynamic transitive suffix *-an*. *ma- -an* differs from *ma-* in that it has the second pattern with a distinct A argument being linguistically specified or pragmatically implied; it thus exhibits a transparent derivational relationship with the dynamic clause construction with the *-an* suffix.

- *mo:lit-an* (*ma-ulit-an*) 'being peeled' (cf. *ulit-an* 'peel')

  mo:ras-an (*ma-uras-an*) 'being washed (e.g. kitchenware)' (cf. *uras-an* 'wash (kitchenware)')

  ma-bambal-an 'being washed (e.g. laundry)' (cf. *bambal-an* 'to wash (laundry)')

  ma-bukkat-an 'being open' (cf. *bukkat-an* 'open (vt.)'

  ma-tappug-an 'being buried' (cf. *tappug-an* 'bury')

  ma-arawat-an 'being understandable, understood' (cf. *arawat-an* 'to get')

  ma-lipat-an 'forget'

  ma-pili-an 'being removed' (cf. pili-an 'remove')

(85) *Na-bambal-an*   *i*   *barowasi.*
     PST.POT-wash-TR   SG.ABS.DEF   clothes
     'The clothes have (already) been washed.'

(86) *Na-bukkat-an*   *i*   *kande:ro=y.*
     PST.POT-open-TR   SG.ABS.DEF   pot=SPC
     'The pot has been (left) open.'

8.4.4 *me:-* verb

may-, *me(:)-*, and *ma-* are morphologically derived forms from *i-* verbs. No account can be provided for the variability of the forms so far. However, the occurrence of *may-* in *may-ana:* might be attributed to the fact that the stem begins with the vowel. The distinction between *ma-* and *me(:)-* may be relevant to the semantics of the stems (cf. the distinction between *maN-* vs. *mangi-*), in which *me:-* seems to be used if the morphological relationship with *i-* is not self-evident (cf. *me:-mula* '(plant is) being planted in a place' vs. *ma-mula-an* '(place is)

being planted with plants'; *me:-gpèt* '(rope/string) can be tied to something' vs. *ma-gapt-an* '(something)' can be tied to by a rope, string'.

- *ma-*

  ma-tunu 'can be roasted, grilled' (cf. *i-tunu* 'to roast, grill')

  ma-rugi 'can be begun, begin' (cf. *i-rugi* 'to begin something')

  ma-bilag 'can be placed under the sun to be dried' (cf. *i-bilag* 'to place something under the sun')

- *me(:)-*

  me-gpèt '(rope/string) can be tied with something'

  (cf. *i-gpèt* 'to tie something with a rope, string)

  me:-sappuwar 'can be scattered' (cf. *i-sappuwar* 'to scatter')

  me:-wagas, me:dagpu 'can fall down (by being scattered)' (cf. *i-wagas, i-dagpu* 'to scatter')

  me:-mula 'can be planted' (cf. *i-mula* 'to plant')

  me:-ki:bu 'can be mixed' (cf. *i-ki:bu* 'to mix with')

  me:-kari 'can be promised' (cf. *i-kari* 'to promise with someone')

- *may-*

  may-ana: 'being born' (cf. *y-ana:* 'give birth to')

8.5   Stative verb

Stative verbs, morphologically marked as *tiC-* and *manga:-*, are used to describe temporary state of participants. As shown below, the two prefixes are distinguished according to the relative agency and affectedness of the participants; with *tiC-* more agentive, and manga:- more patientive. Note that, as opposed to the progressive forms of dynamic verbs (see Ch.8), the situation described has no observable change or activity which is developing dynamically (cf. progressive forms: *pad-dalus* 'be cleaning (their house)', *pab-bambal* 'be washing laundry').

8.5.1 *tiC-* verb

tiC- describes a temporary state of a given participant, implying that the participant is less affected by the state. The situations described include the state realized as a result of the volitional action by the participant(s) themselves (e.g. *tid-dagsu* 'be lying') or others (e.g. *tig-gèpèt* 'be tied with'). Although the state may imply the affectedness on the participants, it is limited to the sustainment of the body posture, or the possessed state of superficial or non-harmful physical characteristics.

- *tid-dagsu*, *tippurpur* 'be lying'

  tittaddyor 'be standing'

  tigguligul '(snake) be lying in a coil'

  tip-pulot 'wear a g-string'

  tikkèrèpkèp 'be holding'

  til-le:but 'be gathered around something'

  tim-madu:yu 'be at a distance'

  tiggi:nèk 'be silent'

  ti"ababbit 'be carrying a child with a cloth'

  tikkabung 'be hunchbacked'

  tigguwe:ter 'be goitered'

  tirradu 'be fat, have obesity'

  tingngiwit 'be ugly'

  tiggèpèt 'be tied with a string'

(87) **Ti'-'ababbit**   *i*   *babakat=i*   *ta*   *ana:=na.*

      STV-cloth   SG.ABS.DEF   old.woman=SPC   OBL.INDF   child=3SG.GEN

      'The old woman is carrying her child with a cloth.'

(88) **Tid-dagsu**   *ti*   *Yuki*   *ta*   *m⟨in⟩a-bbayag*   *a*   *o:rat.*

      STV-lie   SG.ABS.PSN   Yuki   OBL.INDF   ⟨PST⟩POT-long   LIG   time

      'Yuki was lying for a long time.'

(89) *Awan=di,*   *awan=di*   *ta*   *la:laman=na=d*   **tim-madu:yu.**

      NEG=POST   NEG=POST   OBL.INDF   wild.pig=3SG.GEN=POST   STV-distant

'There are no wild pigs any more, rather they are staying far from here.'

(90) **Tik-kerèp**=*ta=de:=tèn*   *da*   *med-dègès*   *i*

STV-close=there=POST=1SG.ABS   because   ADJ-pain   SG.ABS.DEF

abi=ku.

body=1SG.GEN

'I was closing my eyes because my body was painful.' (arta0502)

8.5.2   *manga:-* verb

manga: is used to describe situations which exhibit more affectedness on the participant; the situations described are thus inactive, non-volitional, and sometimes negative. This includes emotive and other mental states, physical conditions and states, and temporary states of inanimates. The meanings expressed by verbs of this class are similar to those of potentive verbs in that both classes of verbs can designate temporary states, but they differ from the potentive verbs in that it does not imply that the state is brought about by the action.

- **Emotive and other mental states**

  manga:burungburung 'be sad, sorry'

  manga:la:ngin 'be sad, lonely'

  manga:pagès 'be interested, have fun'

  manga:luyan 'be sad'

  manga:pasiran 'be embarrassed'

  manga:lalipatan 'have forgotten, cannot remember temporarily'

- **Physical conditions and states**

  manga:to:lay 'be alive'

  manga:paditèng 'be sick, have a desease'

  manga:bisin, *manga:togong* 'being hungry'

  manga:sa:sbiw 'be yawning'

  manga:dègnin 'feeling cold'

- **Temprary states of inanimate**

  manga:ga:gipu 'be showering'

manga:buyubuyu: 'be bad-smelling'

manga:sa:suk 'giving off smoke'

manga:sigid 'be burning'

manga:limus 'be sunk'

(91) **Manga:-ga:gipu**=d   *aytay.*

    STV-showering=POST   now

    'It is showering now.'

(92) *Ay,*   *bunbun=mu=ti,*   **manga:-sigid**.

    oh   house=2SG.GEN=SPC   STV-burn

    'Oh, my house is burning.'

(93) **Manga:-limès**   *i*   *sapa:tos=i*   *ti*   *wagèt=i.*

    STV-sink   SG.ABS.DEF   shoes=SPC   SG.OBL.DEF   water=SPC

    'The shoes are being sunk under the water.'

8.6   Causative

In Arta, the morphological causative is coded by the verbal prefix *pa-*, which attaches to the stem of the verb. Verbs of causative derivation do not stand alone, since they have to take an appropriate verbalizing affix, in the same manner as non-causative verbs. A stem alone with the causative prefix *pa-* thus does not serve as a verb; the form is thus required to take a verbalizing affix to function as a verb. The paradigm of the combination of causative *pa-* with verbalizing affixes is set out in Table 8.3. Each form in the paradigm is rather transparent, with the exception that intransitive form *mam-pa-* (non-past) and *(mi)nampa-* (past) exhibit reduced forms *mama-* and *(mi)nama-*, respectively.[12]

Let us investigate how the causative derivation is related to the case alignment, according to the illustration in Figure 8.1. The first case I take here is what we may call a monovalent stem, that is, stems that usually derive monovalent predicates, or that imply one participant

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[12]It is "reduced" from a synchronic perspective, but from a diachronic perspective, the absence of voiceless consonant after *maN-* is a conservative feature in Philippine languages. Thus *mama-/(mi)nama-* seems a fossilized phenomenon of the conservative phonological process.

Table 8.3: Causative derivations in dynamic verbs

	Intransitive			
Intransitive	maN-	mampa-	(mi)nampa-	pappa-
maN- mangi-		mama- mampa- mangipa-	(mi)nama- (mi)namgipa- (mi)nampa- pa:ngipa-	pappa-
	Transitive mama-		(mi)nama-	
mangi-	-èn -an	pa- -èn mangipa- pa- -an	pina- pina- -an	(mi)nangipa- pappa- -èn pappa- -an	pa:ngipa-
Transitive	i-	ipa-, pe:-	nipa-	pappa-

Potentive				
-èn	pa- -èn	pina-	pappa- -èn	
-an	pa- -an	pina- -an	pappa- -an	
i-	ipa-, pe:-	nipa-	pappa-	

in the event, such as *dima* 'walk', *pati* 'die', and *ka:man* 'big'. In the first phase of causativization of these stems, which may evoke one participant (either an actor or undergoer), take the causative prefix *pa-*, whereby the forms now semantically designate two-participant events, which now add an additional role (the causer), as in *pa-dima* 'make someone walk' *pa-pati* 'kill (make someone die)', *pa-ka:man* 'raise someone (make someone get big)'.

Monovalent stems

1. Causativization

    [actor/undergoer]   →   [causer => [actor/undergoer]]

2. Verbalization   + INTR: **ABS** + OBL (intransitive clause)
         + TR: ERG + **ABS** (transitive clause)

Bivalent stems

1. Causativization

  [agent => [undergoer]]   →   [causer => [agent => [undergoer]]]

2. Verbalization   + INTR: **ABS** + OBL + OBL (intransitive clause)
         +TR: $\left\{ \begin{array}{ccccc} \underline{ERG} & + & \textbf{ABS} & + & OBL \\ \underline{ERG} & + & OBL & + & \textbf{ABS} \end{array} \right\}$ (transitive clause)

Figure 8.1: Morphological processes of causative derivations

At the second phase, where a verbalizing affix is introduced into the causativized stems, and the case alignment is determined. If an intransitive affix *maN-* attaches to the forms, where the head of the action chain is always chosen as absolutive, a causer is chosen as absolutive case, with the other participant (an actor/undergoer) realized as oblique case. If a tran-

sitive affix (*-èn*, *-an*, *i-*) is used, the transitive template is applied; the head of the action chain (the causer) is realized in ergative case, and the tail of the action chain (the actor/undergoer) in absolutive case. The difference in grammatical relation between intransitive and transitive verbal affixes is shown below:

(94) Intransitive derivations

a. **Mam-a-pati**   **i**   *arta=y*   *ta*   *bubuy.*

INTR-CAUS-die SG.ABS.DEF person=SPC OBL.INDF pig

'The person killed a pig.'

b. **M⟨*in*⟩am-a-ka:man**=*tèn*=*did.*

⟨PST⟩INTR-CAUS-big=1SG.ABS=3PL.OBL

'I grew them.'

(95) Transitive derivations

a. **Pa-pati-n**   *na*   *arta=y*   *i*   *bubuy.*

CAUS-die-TR GEN.INDF person=SPC SG.ABS.DEF pig

'A person will kill the pig.'

b. **P⟨*in*⟩a-ka:man**=*ku*=*tid.*

⟨PST⟩CAUS-big=1SG.GEN=3PL.ABS

'I grew them.'

When a given stem is a bivalent stem, that is, the one which derives a bivalent predicate, such as *ti:m* 'drink' and *ratang* 'buy', the causative derivation with *pa-* amounts to a trivalent predicate consisting of a causer, an actor, and an undergoer (e.g. *pa-tu:rèk* 'make someone write something', *pa-ratang* 'make someone buy something'). Again the actual grammatical relation of the verb is determined according to which verbalizing affix is chosen. If the form takes an intransitive affix, the head of the action chain (a causer) is chosen as the absolutive argument, with the others realized in oblique. If it takes a transitive affix, on the other hand, the causer is chosen as ergative, whereas one of the other participants is chosen as absolutive and the other as oblique. Whether the absolutive case is assigned to the actor or the undergoer is determined by the particular verbalizing affix it takes.

(96)   a. *Siya*   ***nam-pa-tu:rèk***   *ta*   *lagip*   *na*   *Arta*

        3SG.ABS   PST.INTR-CAUS-write   OBL.INDF   language   GEN.INDF   Arta

        dèn.

        1SG.OBL

        'S/He made me write down a text of Arta.'

    b. ***I-pa-tu:rèk=na***   *i*   *lagip*   *na*   *Arta*   *dèn.*

        TR-CAUS-write=3SG.GEN   SG.ABS.DEF   language   GEN.INDF   Arta   1SG.OBL

        'S/He made me write down a text of Arta.'

    c. ***Pa-tu:rèk-an=na=tèn***   *ta*   *lagip*   *na*   *arta*

        CAUS-write-TR=3SG.GEN=1SG.ABS   OBL.INDF   language   GEN.INDF   Arta

        'S/He made me write down a text of Arta.'

(97)   a. *Tatin*   *i*   ***mam-pa-tim***   *ti*   *ana:=i*   *ta*

        who   SG.ABS.DEF   INTR-CAUS-drink   SG.OBL.DEF   child=SPC   OBL.INDF

        binarayan?

        alcohol

        'Who will let the child drink alcohol?'

    b. *Awan=mu*   ***pa-ti:m-èn***   *i*   *ana:=yi:*   *ta*   *binarayan.*

        NEG=2SG.GEN   CAUS-drink-TR   SG.ABS.DEF   child=SPC   OBL.INDF   alcohol

        'Do not let the child drink alcohol.'

    c. *Awan=mu*   ***pa-ti:m-an***   *ti*   *ana:=i*   *i*

        NEG=2SG.GEN   CAUS-drink-TR   SG.OBL.DEF   child=SPC   SG.ABS.DEF

        binarayan=i.

        alcohol

        'Do not let the child drink alcohol.'

Examples with causatives are shown below.

(98)   *Konta*   *tami=te*   *a*   *passa:sawa,*   *tami=te*

      but   1PL.ABS=only   LIG   married.couple   1PL.ABS=only

      m⟨in⟩am-a-ka:man   *did.*

      ⟨PST⟩INTR-CAUS-big   3PL.OBL

'But we, the couple, raised them up.' (arta0101)

(99) *Ti   Mom   **mam-pa-ratang**   ni   Mari:na   ta*

     SG.ABS.PSN   Ma'am   INTR-CAUS-buy   SG.GEN.DEF   Marina   OBL.INDF

     Madde:la.

     Maddela

     'Ma'am caused Marina to go shopping in Maddela.'

(100) *Konta   awan   ta   **pa-dagsu-n**=mu,   **pa-sangde:r-an**=mu,*

      but   NEG   OBL.INDF   CAUS-lie.down-TR=2SG.GEN   CAUS-lean-TR=2SG.GEN

      take:ta   awan   me:-bubbu: wagèt=na.

      so.that   NEG   POT-spill   water=3SG.GEN

      'But do not lay down it, lean on something, so that the water will not spill from it.'
      (arta0114)

(101) **P⟨in⟩a-bay-an**=*mi*=*tèddi*   *gindat   ta   damadmèng*

      ⟨PST⟩CAUS-neglect-TR=1PL.GEN=just   up.to   OBL.INDF   morning

      'We just let them go until next morning.' (arta0007)

8.7   Conclusion

This chapter examined the morphosyntax of verbs with a special focus on the functions of
verbalizing affixes. After the definition and subclasses of verbalizing affixes were presented
in §8.1, §8.2–8.3 examined the dynamic transitive and intransitive verbs, followed by the de-
scription of potentive verbs (§8.4) and stative verbs (§8.5). Finally, the causative formation
with *pa-* is examined in §8.6. Dynamic verbs have the largest number of affix oppositions
with transitive and intransitive subclasses, and in each subclass one of the significant differ-
ences involves the degree of affectedness on the participant(s). Potentive verbs also consist
of one intransitive affix *maka-* and three transitive affixes *ma-, ma- -an* and *me:-*, and the
semantic difference between the latter three affixes are parallel with the one attested in the
dynamic transitive affixes. Stative verbs are formed with one of the two affixes *tiC-* and
manga:-, again differentiated by the affectedness relevant to the single participant according
to whether it is more agentive or patientive.

We now find the correlation between the prototypicality of verbs and the number of op-positions in terms of affectedness. If a given predicate class is more like a prototypical verb, regardless of whether it is an intransitive or transitive verb, then it has more paradigmatic oppositions relevant to affectedness. It is the case in dynamic verbs. On the other hands, if a given predicate class is less like prototypical verbs, less oppositions according to affect-edness are found. In fact, the stative verb class has two oppositions, and the adjective class has no affixal variations depending on affectedness. A vast number of paradigmatic opposi-tions in verbalizing affixes are organized rather by being systematically—and semantically—motivated.

Chapter 9

Verb phrase and tense-aspect-modality systems

In the previous chapter, the morphosyntactic and semantic analyses of verbalizing affixes were provided. This chapter investigates other aspects concerning the structure and functions of predicates and single-clauses. First, the main strategy for modifying the predicate is described in §9.1. Tense and aspect, and related aspectual functors (phasal enclitics) are analyzed in §9.2 and §9.3. Finally, the constructions relevant to modality and various types of negation are explored in §9.4 and §9.5.

9.1 Verb-modifying construction

In Arta, as seen in many Philippine languages, there are no morphological patterns that can productively derive adverbs (cf. *-ly* in English). Rather, semantic domains such as manner, speed, and duration are coded syntactically. They are expressed by placing an adjective or verb next to another predicate or "main predicate" with the ligature *a*.

(1) *Awa:ng=a   meb-bilèg   a   mad-dima.*
      NEG=2SG.ABS   ADJ-fast   LIG   INTR-walk
      'Do not walk fast.'

A similar predicate sequence with intervening *a* is observed in combining a complement clause and matrix, as in (2), indicating such concepts as the perception, cognition, phase,

negation, desiderative, and probability of the described situation.

(2) *I-sugnu:d=u*   *a*   *um-angay=taw*   *ta*   *Manila.*
    TR-allow=1SG.GEN   LIG   INTR-go=2SG.ABS   OBL.INDF   Manila
    'I will allow you to go to Manila.'

Despite the superficial similarity between them, the first variant of the construction *X a Y* differs from the latter in the possibility of the alternation between *X* and *Y*. In the first type of predicate sequence, the elements *X* and *Y* can appear in different orders, but in the latter case, *X* and *Y* cannot alternate with each other.

(3) *Awa:ng=a*   *mad-dima*   *a*   *meb-bilèg.*
    NEG=2SG.ABS   INTR-walk   LIG   ADJ-fast
    'Do not walk fast.'

(4) **Um-angay=taw*   *a*   *I-sugnu:d=u*   *ta*   *Manila.*
    INTR-go=2SG.ABS   LIG   TR-allow=1SG.GEN   OBL.INDF   Manila
    'I will allow you to go to Manila.'

The alternate ordering of the elements thus serves to differentiate two formally similar constructions.

Interestingly, in Arta (and probably in many Philippine languages), the use of the construction *X a Y* for manner attributions to verbs shows parallelism to noun-modifying construction, where *X a Y* serves for the noun-modifying strategy (see Ch.6). The possible alternation of the order between *X* and *Y* also indicates the parallelism between the two modifying constructions.

(5) a. *Awa:ng=a*   *mad-dima*   *a*   *meb-bilèg.*
       NEG=2SG.ABS   INTR-walk   LIG   ADJ-fast

    b. *Awa:ng=a*   *meb-bilèg*   *a*   *mad-dima.*
       NEG=2SG.ABS   ADJ-fast   LIG   INTR-walk
       'Do not walk fast.'

(6) a. *I-ka:rig=mu*   *i*   *med-dèttun=i*   *a*   *ayu.*
       TR-carry=2SG.GEN   SG.ABS.DEF   ADJ-heavy=SPC   LIG   wood

b. *I-ka:rig=mu*   *i*   *ayu=i*   *a*   *med-dèttun.*

TR-carry=2SG.GEN   SG.ABS.DEF   wood=SPC   LIG   ADJ-heavy

'Carry the heavy stone.'

In this language, the same constructional schema is employed for the verb-modifying strategy if the construction functions as a predicate as a whole, and for the noun-modifying strategy if it is introduced by a nominal marker and *X a Y* functions as an argument as a whole. The difference between them resides only in the syntactic context in which the construction appears, not in the internal structure. The construction used for verb modifications is thus called VERB-MODIFYING CONSTRUCTION.

Various classes or subclasses of lexical items can serve as modifiers. As shown below, dynamic intransitive verbs (7, 8), dynamic transitive verbs (9, 10), stative verbs, potentive verbs (11, 12), and adjectives (13, 14) can be used to modify these items:

(7) *Ay*   *wanga:r=i,*   **mam-bu:lu-bulus**   **a**   *m⟨in⟩a-rapu*   *ti*

as.for   stream=SPC   INTR-RDP-flow   LIG   ⟨PST⟩POT-come.from   SG.OBL.DEF

meddingato   *a*   *talun.*

ADJ-high   LIG   mountain

'As for the stream, it **flows** from the high mountain.'

(8) **Nan-dare-darettyo**   **a**   *k⟨in⟩⟨um⟩i:lèk*   *i*   *wagèt.*

PST.INTR-RDP-straight   LIG   ⟨PST⟩⟨INTR⟩small   SG.ABS.DEF   water

'The water decreased **continuously**.' (Noah, Bible)

(9) **Bulun-an**   **a**   *i-kotkot=di=d*   *ti*   *tapa=y.*

together-TR   LIG   TR-bury=3PL.GEN=POST   SG.OBL.DEF   soil=SPC

'They (dig and) bury them **together** (with her) into the soil.' (arta0111)

(10) **Dutul-èn=mu**   **a**   *ga:-gèlgèl-èn*   *i*   *a:yi:*   *natèng=i:.*

first-TR=2SG.GEN   LIG   RDP-cut-TR   SG.ABS.DEF   DEM.PROX   vegetable=SPC

'Cut this vegetable **first**.'

(11) **Manga:-tanagi=tèn**   **a**   *mangi-tuntu:ru*   *ta*   *Arta*   *ayte:tay.*

STV-busy=1SG.ABS   LIG   INTR-learn   OBL.INDF   Arta   now

'I am **busy** teaching Arta now.'

(12) ***Na-se:-sennut***   *a*   *m⟨in⟩a-gti:lan*   *i*   *wagèt*   *ta*

      PST.POT-RDP-gradual   LIG   ⟨PST⟩POT-decrease   SG.ABS.DEF   water   OBL.INDF

      diso:no: *na*   *ta:-gatut*   *a*   *langit*   *aydi*   *lima*   *a*   *pulo*   *a*

      inside   GEN.INDF   one-hundred   LIG   day   and   five   LIG   ten   LIG

      langit.

      day

      'The water decreased **gradually** in 150 days.' (Noah, Bible)

(13) *A:nu*   ***med-diso:no***   ***a***   *pan-no:no:t-èn=mu?*

      what   ADJ-inside   LIG   PROG-think-TR=2SG.GEN

      'What are you thinking (so) **deeply**?'

(14) *Mula=ku=ti,*   ***meb-bilèg***   ***a***   *m⟨in⟩an-tubu.*

      plant=1SG.GEN=SPC   ADJ-fast   LIG   ⟨PST⟩INTR-grow

      'The plants I planted grew **fast**.

Often, modifiers are composed of a single word, but occasionally, they consist of a phrase, as in:

(15) *M-angay=te:=tid*   *ta*   *lattong*   ***a***   ***awan***   ***ta***

      INTR-go=only=3PL.ABS   OBL.INDF   outside   LIG   NEG   OBL.INDF

      ba:baruwasi=di   ***a***   ***paka-k-kèrèwèg***   ***ti***   *diso:no*   *ni*

      clothes=3PL.GEN   LIG   NMZ.POT-RDP-play   SG.OBL.DEF   inside   SG.GEN.DEF

      'They just go outside, **wearing no clothes, going into (the forest).**)' (arta0101)

(16) ***Appat***   ***a***   ***dagun***   ***a***   *pangis-subè-subèg*   *tidi*   *Arta=y*   *aydi*

      four   LIG   year   LIG   PROG.RECP-RDP-anger   PL.ABS.DEF   Arta=SPC   and

      Bugkalot.

      Bugkalot

      'Arta an Bugkalot were fighting **for four years**.' (arta0100)

(17) *Ayde:yi,*   *atti:*   ***si:pang***   ***a***   ***dagun***   ***a***   *nangiw-wa=tid.*

      and   exist   one   LIG   year   LIG   PST.RECP-do=3PL.ABS

      'And, they did so with each other **for one year**.' (arta0100)

The verb-modifying construction may be integrated with gestures. In the following cases, the verbs *pappunan* 'is doing like (this)', and *mang-wa* 'do it' are used as the modifiers, but because of the abstract, vague meanings of the predicates, the modifications have little semantic import for the purpose of communication. However, the construction is integrated with a pounding motion (18) and the action of butchering a wild pig (19), which contributes to understanding the listener's part (see the gestures by the man on the right side in Figure 9.1 and Figure 9.2).

(18)   *Ay*   *wa=y*   *ulit*   *ni*   *ayu=y*   *a*   *t⟨in⟩èngtèng*
filler   whatcamacallit=SPC   bark   SG.GEN.DEF   tree=SPC   LIG   ⟨PST⟩pound

      a   ***pap-punan=di***   *ti*   *wa=y*   *karagatan.*
      LIG   PROG-do.like.this=3PL.GEN   SG.OBL.DEF   whatchamacallit=SPC   stone
      'The bark of the tree, which they pounded, **doing like this** with a stone.' (arta0101)

(19)   *Man-du:tung=de:=tid*   ***a***   ***mang-wa***   *ta*   *laman=i.*
INTR-remove.hair=POST=3PL.ABS   LIG   INTR-do   OBL.INDF   wild.pig=SPC
'They remove wild pig's hair, **doing that**.' (arta0101)

Figure 9.1: The pounding gesture in (18) *pappunan=di* 'doing like this' (arta0101)

There may be instances of multimodal construction composed of a predicate of vague meaning and iconic gesture.[1]

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[1]For the relation between gesture and grammatical construction, see Enfield (2009) and the multimodal construction approach explored by Steen and Turner (2013), Zima (2014).

Figure 9.2: The butchering gesture in (19) *mang-wa* 'doing that' (arta0101)

9.2 Tense and aspect

Verbalizing affixes in Arta inflect for tense and aspect. Thus, this section concerns the tense–aspect system in Arta. There is a primary opposition in aspect between perfective and imperfective: perfective aspect has a binary tense opposition between past and non-past, while imperfective aspect has no tense distinction. This is illustrated in Figure 9.3:
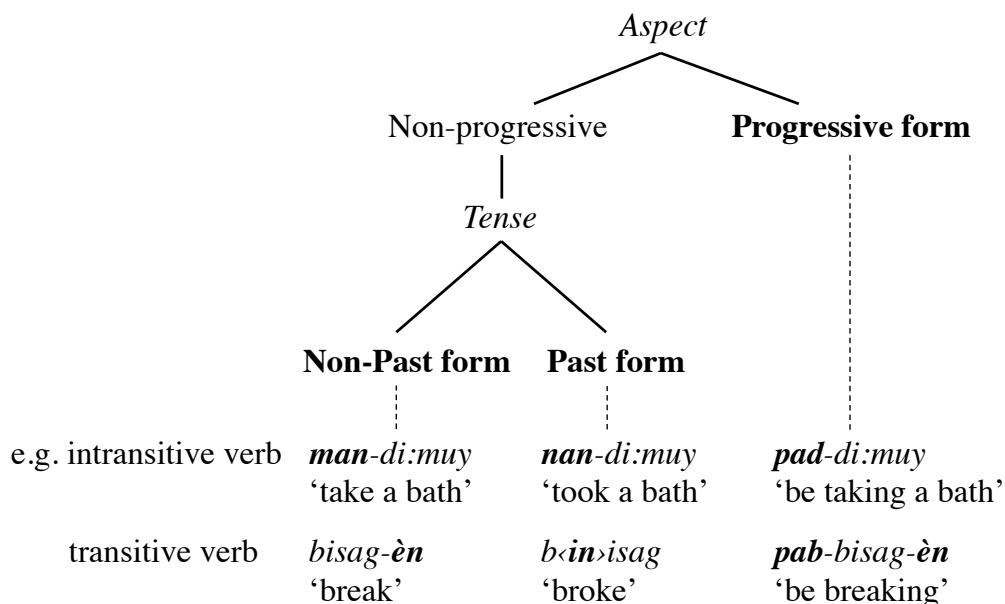
Figure 9.3: Tense and aspect system in Arta

As shown in Table 9.1, the number of the paradigmatic tense-aspect oppositions differ in

the type of verbs. The three-way opposition is observed in dynamic transitive and intransitive verbs. The progressive forms of intransitive verbs are neutralized into one variant *paC-*. Potentive verbs and stative verbs do not have progressive inflections, most likely because they designate stative aspect by themselves. Stative verbs do not inflect for past tense in addition to progressive aspect, a property that they share with adjectives.

Table 9.1: Tense and aspect forms for each verb class

VERBS	NONPAST FORM	PAST FORM	PROGRESSIVE FORM
DYNAMIC INTRANSITIVE			
‹*um*› verb	‹*um*›	‹*in*›‹*um*›	–
maC- verb *maR-	*maC-*	*(mi)naC-*	*paC-*
maN- verb (*maN-)	*maN-*	*(mi)naN-*	*paC-*
mangi- verb	*mangi-*	*(mi)nangi-*	*pangi-*
DYNAMIC TRANSITIVE			
-èn verb	*-ən*	‹*in*›	*paC- -ən*
-an verb	*-an*	‹*in*› *-an*	*paC- -an*
i- verb	*i-*	*(i)ni-*	*paC-*
POTENTIVE			
INTRANSITIVE	*maka-*	*naka-*	–
TRANSITIVE (cf. *-èn*)	*ma-*	*(mi)na-*	–
(cf. *-an*)	*ma- -an*	*(mi)na- -an*	–
(cf. *i-*)	*ma-, me:-*	*(mi)na-, (mi)ne:-*	–
STATIVE			
tiC-	*tiC-*	–	–
manga:-	*manga:-*	–	–

9.2.1 Aspect (progressive vs. non-progressive)

In Arta, dynamic verbs have a binary aspectual distinction between progressive and non-progressive. This largely corresponds to the perfective and imperfective distinction in other languages, but the unique property of the progressive inflection is that it is attested in dynamic verbs. Because potentive verbs and stative verbs designate stative situations, these verbal categories are incompatible with progressive aspect, which imperfectivizes *non-stative*

situations.[2] As the inflectional opposition is only attested in dynamic verbs, we refer to the aspectual distinction in Arta as "progressive" vs. "non-progressive" rather than perfective vs. imperfective, because the latter opposition can be applied broadly to atelic (or unbounded) situations in general.

As indicated in the illustration, progressive forms have no formal tense differentiation. Thus, we need to interpret such temporal status of the situation from context:

(20) *N-inta=ku*   *ti*   *Yukinori*   *in-um-une:*   *ta*   *ayu.*

  PST-see=1SG.GEN   SG.ABS.PSN   Yukinori   PST-INTR-climb   OBL.INDF   tree

  Pab-bu:ras   *ta*   *bunga*   *na*   *ayu.*

  PROG.INTR-harvest   OBL.INDF   fruit   GEN.INDF   tree

  'I saw Yukinori climbing the tree. harvesting fruits' (Past time) (arta0006)

(21) *O:,*   ***pam-mula**=tid*   *ta*   *pagay.*

  yes   PROG.INTR-plant=3PL.ABS   OBL.INDF   rice

  'Yes, they are planting rice.' (Present time) (arta0506)

(22) *Aytay,*   *mepep-piya*   *amma*   ***pam-mula***   *ta*   *ka:huy,*   *aytay*

  now   ADJ.RDP-good   if   PRG.INTR-plant   OBL.INDF   sweet.potato   now

  a   *takidègnin.*

  LIG   cold.season

  'If you are planting sweet potatoes in the cold season, it is good.' (Present/Future) (arta0506)

(23) *Awan=mu*   ***pap-pa:-bay-an***   *a*   *map-pati=tid.*

  NEG=2SG.GEN   PROG-CAUS-neglect-TR   LIG   INTR-die=3PL.ABS

  'Do not be letting them dying.' (Future) (Noah, Bible)

In these examples, the form *paC-* serves as a progressive aspect, but the past, present and future time reference should be inferred from the context.

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[2]Comrie (1976) classifies imperfective into habitual, continuous, progressive (ibid. 25). Progressive is defines as follows: "we can give the general definition of progressiveness as the combination of progressive meaning and nonstative meaning. Naturally, then, stative verbs do not have progressive forms, since this would involve an internal contradiction between the stativity of the verb and the nonstativity essential to the progressive." (ibid.: 35)

9.2.2 Tense (non-past vs. past)

Nonprogressive forms have tense distinctions between non-past and past. Here, we define tense as the grammatical category that "places the situation in time with respect to an established point in time, either the moment of speech or some other point in time" (Bybee 1985: 28). If the established point in time is the moment of speech, the tense may be called the "absolute" tense, but if it is some other point in time (i.e., employs some reference point), it may be called "relative" tense (Comrie 1985). In Arta, the past and non-past forms are differentiated with reference to the moment of speech, we can subsume it under the grammatical category of tense.

The tense distinction in Arta is primarily absolute tense. When absolute time reference and relative time reference require different tenses, absolute time reference is chosen. Consider the following example, in which the event expressed in the subordinate clause is not the past event in terms of the absolute time reference, but instead is the one that occurs prior to another event, which is expressed by the main clause in terms of the relative time reference.

(24)   *Amma*   *pibu:d-an=taw*   *na*   *agani*   *a*   *marakèt,*
    if   tell-TR=2SG.ABS   GEN.INDF   non-Arta.person   LIG   bad
    pa-bay-an=mu=te:
    CAUS-neglect-TR=2SG.GEN=only
    'If you are told by a bad person, you should just ignore him.'

In this example, the event of being told by a suspicious-looking person precedes another event of ignoring him. Despite this temporal order, the verb 'be told' in the subordinate clause is marked by the non-past inflection; the absolute time reference is chosen in the example. The same pattern is shown in the following data:

(25)   *Amma*   *l⟨**um**⟩**angit***   *aytay,*   *angay=tèn*   *mal-lèdèp.*
    if   INTRblue.sky   now   go=1SG.ABS   INTR-fishing
    'If it clears up, I will go fishing.'

(26)   *Ma*   ***ma-sungdu**=tèn*   *a*   *man-di:muy,*   *l⟨um⟩attong=de:=tèn.*
    if   POT-finish=1SG.ABS   LIG   INTR-bathing   ⟨INTR⟩outside=POST=1SG.ABS

'If I have finished taking a bath, I will go out.'

(27)　*Ma-pi:piya*　*dègès*　*ni*　　　*tian*　*ni*　　　*Delia*　*amma*

　　　POT-good　　pain　　SG.GEN.DEF　foot　SG.GEN.DEF　Delia　if

　　　man-tu:mar　*ta*　　　*uru.*

　　　INTR-medicine　OBL.INDF　medicine

　　　'The pain of Delia's foot will be cured if she takes medicine.'

This inclination of the tense toward an absolute time reference is further exemplified in the opposite case. In Arta, when the event expressed by the subordinate clause is posterior to another event expressed by the main clause, the verb in the subordinate clause should be marked by the past tense:

(28)　*Nan-di:muy=tep=tèn*　　　*ba:gu=tèn*　　　*l⟨in⟩⟨um⟩attong.*

　　　PST.INTR-bathe=still=1SG.ABS　before=1SG.ABS　⟨PST⟩.⟨INTR⟩-outside

　　　'I took a bath before I went out.'

cf.　*Man-di:muy=tep=tèn*　　　*ba:gu=tèn*　　　*l⟨um⟩attong.*

　　　INTR-bathe=still=1SG.ABS　before=1SG.ABS　⟨INTR⟩outside

　　　'I will take a bath before I go out.'

If the language employs the relative tense in this case, the verb would not be marked by the past tense (cf. Japanese *-(r)u* (non-past) vs. *-ta* (past)) because the event in subordinate clause has occurred *after* the event in the main clause. These examples indicate that because the tense distinction is organized absolutely, the vantage point from which the narrated event is anchored is primarily the time of the speech event, instead of some other reference point.

9.3　Phasal enclitics

Although grammatical tense and aspect are morphologically indicated by verbs, a different aspect (what we may call phasal enclitics) immediately follows verbs. They seem to be widely used in Philippine languages, such as Ilokano *=en*, Dupaningan Agta *=dan*, Casiguran Agta *den*, Tagalog *=na* and Waray-Waray *=na*, which are functionally similar to Arta *=di* 'already'. Particles of this class serve to frame the event in the larger configuration of the situation.

Arta has three phasal enclitics that are paradigmatically related: *=tep, =pa*, and *=di*. Consider the following examples:

(29)   a. *Awan   ta   baggat.*

            NEG   OBL.INDF   rice

            'We do not have rice.'

    b. *Awan=**tep**   ta   baggat.*

       NEG=TEP   OBL.INDF   rice

       (we did not have rice before and)

       'We do not have rice yet.' or 'We still lack rice.'

    c. *Awan=**pa**   ta   baggat.*

       NEG=PA   OBL.INDF   rice

       (we had rice before but)

       'We do not have rice just for a while.'

    d. *Awan=**di**   ta   baggat.*

       NEG=DI   OBL.INDF   rice

       (we had rice before but)

       'We do not already have rice.'

Although the four sentences designate the same situation truth-conditionally, the framing of the situation differs significantly. If the situation 'we do not have rice' is described as *awan ta baggat* as in (29a), the statement sounds neutral with no comparison or reference to the previous situation. If the phasal enclitics are used as in (29b–29d) on the other hand, the linguistic expressions impose a particular way of understanding in which the given situation is understood in relation to the previous and subsequent stages of the situation. When the current situation 'we do not have rice' is described with *=tep*, it construes the situation as a continuation of the previous stage (i.e., a shortage of rice), with the expectation that the current situation will be changed. *=pa* is used when the situation is instead construed as deviating (or digressing) from the "mainstream" situation. In this case, the use of *=pa* implies that they usually have enough rice but they are lacking rice temporarily. Finally, if the sentence co-occurs with *=di*, it signals that the shortage of their rice is a new phase, shifted

from the opposite phase, during which they had rice. We thus refer to each phasal enclitic as:

(30)   a. *=tep* (anterior phase (ANT)) 'still, yet, remain'

        b. *=pa* (digressive phase (DIGR)) 'just, for a while, a little'

        c. *=di* (posterior phase (POST)) 'already, just soon, before long'
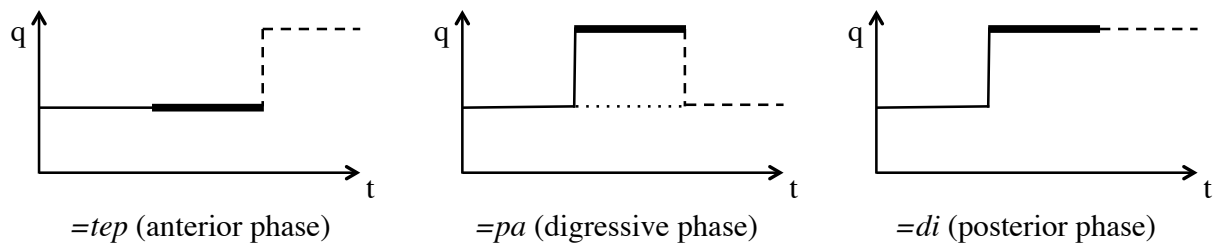
Figure 9.4: Three construals by the phasal enclitics

Three alternative construals imposed by the use of the enclitics are diagramed in Figure 9.4. A temporal development is represented in the *t*-axis, and any qualitative change in the *q*-axis, the notation of which is adapted from the aspectual diagram employed by Croft (2012). The bold lines indicate that it is a designated phase (profiled subpart) of the frame, and the narrow lines indicate the requisite implication conjured up by the use of the marking, and broken lines are used to represent the pragmatic implicature which is normatively expected by speech participants. I will describe each enclitic in order.

9.3.1   Phasal enclitics I: *=tep* (Anterior construal)

=tep signals that the situation to be described is merely a continuation of the previous situation, implying that the expected change, or a new phase has not been realized. In actual discourse, the current situation is largely a static situation; thus the following excerpts from discourses exhibit typical patterns:

(31)   *Awan=**tep***   *maka-angay*   *ta*   *Disubu.*

       NEG=ANT   POT-go   OBL.INDF   Disubu

       'S/he was not able to come to Disubu yet.'

(32) *Awan=na=a:mi* *p⟨in⟩a-bay-an* *na* *Dios,*

  NEG=3SG.GEN=1PL.ABS ⟨PST⟩CAUS-neglect-TR GEN.INDF God

  *atti:=ami=**tep**=ti* *aytay* *a* *na-tu:lay.*

  exist=1PL.ABS=ANT=here now LIG PST.POT-live

  'God did not abandon us. We are still alive here.' (arta0007)

In (31), the speaker says that one ethnic group could not come to the territory of Arta because the two groups are geographically separated, with an implicature that they currently can freely go and come to each other's territories. In (31), the speaker shows their gratitude to God for not neglecting them during the typhoon, and that they were able to survive it in the same way as before.

The enclitic is typically used with the clauses that describe stative situations, as shown above, but it is also applicable to the one with dynamic situations, as in the following examples:

(33) *Man-di:muy=**tep**=tèn* *ba:gu=tèn* *l⟨um⟩attong.*

  INTR-bathe=ANT=1SG.ABS before=1SG.ABS ⟨INTR⟩outside

  'I will take a bath before I go out.'

(34) *Mang-kape:=ita=**tep**!*

  INTR-coffee=1+2SG.ABS=ANT

  'Let's drink coffee (before we work).'

In this usage, *=tep* imposes on the events the construal that they are situated in between the larger sequences of events (staying home > going out, taking a rest > working), and that the events in question constitute the anterior phase (i.e., staying home or taking a rest) rather than the one after the transitions (going out or working). By using the enclitic *=tep*, the events are obligatorily framed within the larger sequence of events as in 'Let's drink coffee (before we work)' without being signaled by other linguistic devices such as the *before*-phrase.

Usually, situations are not framed with a temporally related sequence of events, but sometimes, they are understood as a particular value below a norm along a gradable scale. Consider the following examples:

(35) *Maski   manga:-paditèng,   atti:=**tep**   ta   lattong   mang-ka:rèwèg.*

even   STV-disease   exist=ANT   OBL.INDF   outside   INTR-play

'Even he is being sick, he is still playing outside.'

(36) 1. A: *Awan=taw   med-dègès?*

NEG=2SG.ABS   ADJ-pain

'Don't you feel pain?'

2. B: *Mepep-piya=**tep**=tèn.*

ADJ.RDP-good=ANT=1SG.ABS

'It is okay with me. (This level of pain makes no difference to me.)'

In both cases, *=tep* signals the relative position of the degree along the scalar notions. In the first case, *=tep* signals that the degree of his disease does not affect his behavior (playing outside), and in the second case, it signals that the degree of physical stimulus does not damage his physical and/or mental condition.

9.3.2 Phasal enclitics II: *=pa/p* (Digressive construal)

=pa (*=p* if the preceding syllable is monomoraic) signals that the situation is construed as a deviated event from the mainstream event. There is thus a strong implication that the deviated situation has a short duration and, afterwards, there is a return to the previous event.

(37) *Mampe:ma:yong=pa=tèn.*

INTR.rest=DIGR=1SG.ABS

'I will just take a rest. (utterance while working)'

(38) *Y⟨in⟩⟨um⟩èbyèb=pa=tèn.*

⟨PST⟩⟨INTR⟩urinate=DIGR=1SG.ABS

'I just went to urinate. (asked where the person was doing.)'

(39) *I-wa=ku=p=ti.*

INTR-do=1SG.GEN=DIGR=here

'I will just put it here (implicating that I will take it again before I go back home.)'

=*pa* can appear when utterances may be involved in, or serve as a particular social action that may affect the addressee or his/her subsequent behavior. By indicating that it takes only a short time to accomplish the event, the speaker can successfully avoid implying that it may impose a burden on the addressee(s). In this usage, the utterances may often co-occur with =*te:* 'only' as in (40), which is probably motivated by the same mechanism of politeness.

(40) *Ta-n=mu=**p**=te:*   *i*   *buka:gan=i!*
      look.TR=2SG.GEN=DIGR=only   SG.ABS.DEF   woman=SPC
      Please just look at the lady.' (Fieldnote)

(41) *Mangib-bubbu:d=am=**pa***   *ni*   *bebbe:=yi:*
      RECP.INTR-say=2PL.ABS=DIGR   SG.GEN.DEF   old.lady=SPC
      'Talk with the old lady for a while. (implicating that will take only a short time.)'
      (arta0506)

(42) *Me:dèm=**pa**=tèn.*
      POT.sleep=DIGR=1SG.ABS
      'I am just sleepy (but I can come back soon to continue the session again.)'

Interestingly in (42), which was attested during our fieldwork session, =*pa* appears in an assertive speech act. This use of =*pa* also involves the same interpersonal motivation. The informant tends to become sleepy during the sessions of vocabulary examination and she expresses feeling sorry for that. By using =*pa*, the statement can be understood as a request for a short suspension to take a nap, rather than the complete closing of the session.

9.3.3   Phasal enclitics III: =*di/d* (Posterior construal)

=*di* is used to signal that the situation described includes a change, constituting a new phase that is clearly distinguished from the previous situation, rather than a mere continuation (cf. =*tep*) or a temporary deviation from the previous phase (cf. =*pa*). This enclitic is by far the most frequently used item of the three. It can be used regardless of whether the event is situated in the past, present, future, or an indefinite time.

(43) Past

Unadda	*na-pannu=**d***		*ta*	*gissa=y*	*a*	*basket,*
after	PST.POT-full=POST		OBL.INDF	one=SPC	LIG	basket

*d⟨in⟩⟨um⟩imwang=**di***	*kanakannak=i*	*nan-disikle:ta.*
PST⟨um⟩leave=POST	child=SPC	PST.INTR-bicycle

'After the other basket was filled, a child has left, riding a bicycle.' (arta0006)

(44)　Recent past

Saya	*i*	*panga:-to:lay=mi*	*ta*	*dutul*	*a*	*langit*	*ayta*
DEM.DIST	SG.ABS.DEF	NMZ-live=1PL.GEN	OBL.INDF	first	LIG	day	there

Disubu.	*Konta*	*aytay*	*in-um-angay=ami=**d***		*ti*		*ayti.*
Disubu	but	now	PST-INTR-go=1PL.ABS=POST		SG.ABS.PSN		here

'That is how we lived in Disubu before. But now, we have moved here (in Nagtipunan).' (arta0002)

(45)　Near future

*Mamanga:ng=itam=**di**.*
INTR.eat=1+2PL.ABS=POST

'Let's eat.'

(46)　Hypothetical

Amma	*biyungut=**di**,*	*awan*	*me:ta*	*adu:yu.*
if	night=POST	NEG	POT.see	far

'If it becomes a night time, they cannot see far.' (arta0100)

As shown in the above examples, *=di* can serve to construe the event as a new phase distinct from a temporally preceding situation, whether it is a past situation (43), a recent past situation (44), a near future (45), or a hypothetical situation (46).

=di induces an inchoative construal of situations when it is taken by such non-dynamic predicates as a noun, adjective, stative verbs, or a negative clause. Since Arta does not have a grammatical copula form, the difference between 'he is old' and 'he became old' is normally

not signaled by the predicate[3]; instead, such a construal of the situation is imposed by the use of *=di.*

(47) 1. *Akkadi.   Me'-'a:du:=di=ina.*

  oh   ADJ-much=POST=DEM.MED

  'Oh, that has become much.' (arta0506)

 2. *Awan=de:=ta   andi=mu=y.*

  NEG=POST=OBL.INDF thing=2SG.GEN=SPC

  'You do not have yours any more.' (arta0506)

cf. *Awan ta   andi=mu=y.*

  NEG OBL.INDF thing=2SG.GEN=SPC

  'You do not have yours.'

(48) *Awan=mi=d   ta:tataw i   e:n-an=mi da*

 NEG=1PL.GEN=POST know.well SG.ABS.DEF go-TR=1PL.GEN because

 merer-ringdam=di talun.

 ADJ.RDP-dark=POST mountain

 'We did not know any more where we should go because the mountain was already dark.' (arta0007)

cf. *Awan=mi ta:tataw* 'We know very much'

(49) *Ka:ka:lak=ami=d ti ayti Diso:mungal=i Quirino=y.*

 pitiful=1PL.ABS=POST SG.OBL.DEF here Disimungal=SPC Quirino=SPC

 'We became pitiful in Disimungal, Quirino.' (arta0007)

(50) *Ara:ra:pa=na=d   i   Bugkalot.*

 friend=3SG.GEN=POST SG.ABS.DEF Bugkalot

 'The Bugkalot people became their friends (their: the Arta people).' (arta0100)

Not only does the use of *=di* affect the aspectual meaning of the predicate that takes the enclitic, but it also contributes to constructing coherent discourses, most specifically

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[3]Arta has a complement-taking verb *magabbalin* 'become' (e.g. *nagabbalin a marakèt* (became LIG bad) 'became bad/worse'), which is a quite marked way of speaking.

narrative discourses. The attachment of *=di* in the sentences enables them to interrelate with other clauses that are temporally and causally related. This serves to build a mental image in which a temporal sequence of events develops and unfolds through the narration:

(51) *Map-pati=**d**   i   laman   munata.*

INTR-die=POST   SG.ABS.DEF   wild.pig   like.that

'The wild pig dies like that.'

*Amma   map-pati=**d**,   sa:bit-èn=**di**,*

if   INTR-die=POST   carry=3PL.GEN

'If it dies, they carry it on the shoulder.'

*sa:bit-èn=di=**d**.   Ngay   ti   bunbun=mi.*

carry=3PL.GEN=POST   go   SG.OBL.DEF   house=1PL.GEN

'They carry it, going to our houses.'

*Man-du:tu:ng-ami=**d**.*

INTR-remove.hair=POST

'We remove the hair (by burning it on an open fire).'

*I-wa=mi=**d**   ti   du:t=i.*

TR-do=1PL.GEN=POST   SG.OBL.DEF   fire

'We cook it on the fire.'

(52) *Lagip-èn   ni   ama=ku=y.*

speak-TR   SG.GEN.DEF   father=1SG.GEN=SPC

'This was the story of my father.'

*Um-angay=**de:**:=tid   ti   karagatan   a   meded-diso:no: assaya*

INTR-go=POST=3PL.ABS   SG.OBL.DEF   stone   LIG   ADJ.RDP-inside   DEM.DIST

attanan=di,

place=3PL.GEN

'They went to inside of a hole of the stone. That is where they stayed.'

*da   mang-uwa=na=**d**   ti   ba:lat   aydi   bumba*

because   INTR-do=3SG.GEN=POST   SG.OBL.DEF   ballet   and   bomb

ni   *hapon=i*   *aydi*   *america:no=y.*

SG.GEN.DEF   Japanese=SPC   and   American=SPC

'They do (fell) the ballet and bombs of Japanese and Americans.'

*Awan=**de:**=ta*   *america:no,*   *awan=de:=ta*   *hapon.*

NEG=POST=OBL.INDF   American   NEG   POST=OBL.INDF   Japanese

'No more Americans and Japanese.'

*Na-pista'im=**di***   *punan*   *didi*   *ama=ku=ti.*

PST.POT-peace.time=POST   like.that   PL.GEN/OBL.DEF   father=1SG.GEN=SPC

'My father became aware that a peace time has come.'

Saddya   *l⟨in⟩⟨um⟩attong=**de:**=tid*   *ayti*   *karakaragatan=i*   *a*

DEM.DIST   ⟨PST⟩⟨INTR⟩outside=POST=3PL.ABS   here   stone=SPC   LIG

wagèt=i.

water=SPC

'So they came out from the hole of the stone in the river.'

Munata   *i*   *historia=di.*

like.that   SG.ABS.DEF   story=3PL.GEN

'That is their story. (arta0100)'

As indicated in the excerpts from the discourse, the relative frequency of the occurrence of *=di* is much higher than 'already' or 'just now' in English. By using these phasal enclitics, the events that have an equal value truth-conditionally are construed in relation to the broader context. These, in turn, contribute to organizing the discourse structure and managing the social relationship in interaction.

9.4   Modality

Modality is one of the semantic domains that may be coded morphologically in verbs in languages in which inflections are highly developed. In Arta, however, that functional domain is grammatically realized by independent words and enclitics. As schematized in (53), there are two possible constructions where modal words can appear. The items which may

fill each slot exhibit a complementary distribution, which is shown in Table 9.2; that is, if a given item can appear in the modality₂ slot, it cannot appear in the modality₁ slot, and vice versa.

phoneme	orthography	phonetic value	phoneme	orthography	phonetic value
/b/	b	b, b̄	/r/	r	r (trill)
/t/	t	t, t̄	/w/	w	w, ʊ, o
/d/	d	d, d̄	/j/	y	j, ɪ
/k/	k	k, k̄	/a/	a	a
/g/	g	g, ɣ, ḡ	/i/	i	ɪ, e
/ʔ/	'	ʔ	/e/	e	ɛ
/s/	s	s̩, ʃ	/u/	u	ʊ, o
/h/	h	h	/o/	o	ɔ
/ts/	ts	ts	/ə/	è	ə
/tʃ/	ty	tʃ			
/dʒ/	dy	dʒ			
/m/	m	m			
/n/	n	n			
/ŋ/	ng	ŋ			

(53) a. **modality₁** Predicate NP, ...

b. Predicate=**modality₂** NP, ...

Interestingly, lexemes for each slot differ significantly in their historical origin; the forms that can fill the modality₁ slot may have their origin in Tagalog or Spanish, probably via Ilokano; they seem to be a result of recent borrowing. On the other hand, the forms that can occupy the modality₂ slot may not be recent borrowings (it seems that =*an*, the evidential marker shows a regular sound change in Arta *k > zero).

Table 9.2: Two types of modality in Arta

Type	Item	Source, note
Modality₁ (independent)	*talaga* 'really, truely'	Tag. (adv.) 'really, actually'
	sigura:du 'surely'	Sp. *segurado* 'sure'
	sigu:ro 'probably'	Sp. *seguro* 'safe, sure, insurance'
	baka 'perhaps'	Tag. Ilk. *baka* 'perhaps, maybe'
Modality₂ (enclitic)	=*antu* 'really, truly'	
	=*wada* 'possibly, perhaps'	
	=*mina* 'if only, I wish' (hypothetical)	
	=*an* 'it is said that, as X said' (hearsay)	cf. AgtDu, AgtCas *kan*, Ilk. *kanu*

It could be speculated that during the process of borrowing these items, the whole construction was also borrowed from Tagalog, possibly via Ilokano or Casiguran Agta. It should be noted that Arta has sequential predicate constructions without intervening ligature between them. The structural substratum also seems to have contributed to this structural borrowing.

An extensive analysis of modal forms is yet to be conducted; I just show the data with epistemic modal forms that appeared in my corpus.[21]

(54) *Ay* **talaga** *me:ta=mi=d*   *i*   *ay*   *mepep-piya*   *a*

     oh   truly   POT.see=1PL.GEN=POST   SG.ABS.DEF   filler   ADJ.RDP-good   LIG

     attinan=mi.

     place=1PL.GEN

     '**It is sure** that we can see a nice place to live in.' (arta0101)

(55) *Amma*   *awan*   *lagi-lagip,*   *awan*   *manlu:lul,*   **talaga**   *g⟨um⟩ina:ng=a*

     if   NEG   RDP-voice   NEG   INTR-cry   really   ⟨INTR⟩leave=2SG.ABS

     da,   *awa:ng=a*   *maki:ta*   *ta*   *laman.*

     because   NEG=2SG.ABS   POT.see   OBL.INDF   wild.pig

     'If you do not hear their voice and crying, you will **probably** leave there because you

     cannot see wild pigs.' (arta0100)

(56) **Sigu:ro** *um-iman=te:=tid*   *ta'lu*   *a*   *langit,*

     likely   INTR-rest=only=3PL.ABS   three   LIG   day

     mam-bira=mande:=tid   *ta*   *anèn=di.*

     INTR-earch=again=3PL.ABS   OBL.INDF   food=3PL.GEN

     'They **may** take a rest for, say, three days, and they look for their food again.' (arta0523)

(57) *Amma*   *atti:*   *Ta:ling=mina*   *man-to:pan=mi,*   **sigu:ro,**

     if   exist   Taling=hopefully   INTR-companion=1PL.GEN   probably

     s⟨um⟩o:li,   *tata:w=u=d.*

     ⟨INTR⟩   return   know=1SG.GEN=POST

     'If Taling comes here, **it is likely** that I come to speak the language.' (arta0506)

(58) *I-diso:no*   *i*   *b⟨in⟩ambal=mu=ti,*   **baka**   *ma-basèssèg.*

     TR-inside   SG.ABS.DEF   ⟨PST⟩wash=2SG.GEN=here   probably   POT-wet

     'Put your laundry inside; it **may** become wet.'

(59) *Kabbat=mu*   *m-e:na*   *ta*   *Kalbo.*   **Sigura:do**=taw?

     want=2SG.GEN   INTR-go   OBL.INDF   Kalbo   really=2SG.ABS

     'Do you want to Kalbo. Are you **really**?'

(60) *Pi:-pi:pi-an=mu=**antu***   *mal-lagip*   *ta*   *lagip*   *na*

     RDP-good-TR=2SG.GEN=really   INTR-speak   OBL.INDF   language   GEN.INDF

Arta.

Arta

'You should **really** improve the speaking of Arta.' (arta0114)

(61) *Mas   malala:ki=**antu**   i   labi=mu=y.*

more   good=really   SG.ABS.DEF   mouse=2SG.GEN=SPC

'It **must be** better to use your mouse.' (arta0501)

(62) *Inta-n=mu=nen   ana:=ku=y   manga:-paditèng*

see-TR=2SG.GEN=please   child=1SG.GEN=SPC   STV-disease

*ma-pati=**wada**=d*

POT-die=perhaps=POST

'Please look at my child, who is sick and she **might** die.'

(63) *Anu:=mu=**wada**   amma   osto?*

know=2SG.GEN=perhaps   if   correct

'Do you know if it is correct, **by any chance**?'

(64) *Me:ta=mi=**mina**=tep   a   mepep-piya=d   i*

POT.see=1PL.GEN=hopefully=ANT   LIG   ADJ.RDP-good=POST   SG.ABS.DEF

bu:hay=di   aytay   a   dagun.

life=3PL.GEN   now   LIG   year

'We **could** see their better life in the near future.' (arta0101)

(65) *Ta   Arta,   awan=di=man   tataw   i   Arta.   (...)*

OBL.INDF   Arta   NEG=3PL.GEN=CONTR   know   SG.ABS.DEF   Arta

*I-lagip=di=**mina**   ta   Arta.*

TR-speak=3PL.GEN=hopefully   OBL.INDF   Arta

'As for Arta, they do not know Arta. (...) **I wish** that they **would** speak Arta.'
(arta0515)

(66) *N-inta=na,   atti:=**an**   m⟨in⟩am-pe:si   ta   sapa:ng=u*

PST-see=3SG.GEN   exist=hearsay   ⟨PST⟩INTR-whip   OBL.INDF   bottock=1SG.GEN

'S/he saw it; **it seems that** there is something whipped on my buttocks.'

9.5   Negation

In this section, the syntax and semantics of negation will be examined. Broadly speaking, there are two major categories of negation in Arta; the one is truth-functional negation 'not p' marked by *awan*, and the other is the correctional negation 'not p (but q)', marked by *bangat*. According to the target of the negation, the first type is divided into relational (or propositional) negation and existential negation.

9.5.1   Relational negation

Relational negation is the negative sentences in which the negative element awan is immediately followed by a predicate, which becomes the target of a negation.

(67) *Amma   biyungut=di,   **awan**   me:ta   adu:yu.*
      if   night=POST   NEG   POT.see   far.distance
      'If it gets dark, you cannot see the far distance.' (arta0100)

(68) ***Awan**=tep   maka-angay   ta   ayta.*
      NEG=ANT   POT-go   OBL.INDF   there
      'They (the Bugkalot people) were not able to go there.' (arta0100)

(69) ***Awan**=mi=d   ta:tataw   i   e:n-an=mi.*
      NEG=1PL.GEN=POST   know.well   SG.ABS.DEF   go-TR=1PL.GEN
      'We did not know where to go.' (arta0007)

(70) ***Awan**=di=tid   p⟨in⟩a-pati,   konta   pang-uwa=na=tid*
      NEG=3PL.GEN=3PL.ABS   ⟨PST⟩CAUS-die   but   PROG-do=3SG.GEN=3PL.ABS
      ta   wagèt.
      OBL.INDF   water
      'They did not kill them, but he may do (tolerate them) on the water.' (arta0502)

(71) ***Awan**=mu   tataw=mu   diyu?*
      NEG=2SG.GEN   know=2SG.GEN   honeybee
      'Don't you know 'diyu'?' (arta0003)

First, the negator *awan* and the predicates can be adjoined without intervening the ligature *a.* Second, the negator *awan* can attract bound person forms (69–71) and other enclitics, as in the phasal enclitics *=tep* in (68) and *=di* (realized as *=d* in (69)). Note, however, that this raising phenomenon does not mean that the person forms are not deleted. As shown in (71), the person form can appear both in the negator *awan* and the predicate *tataw* 'know'.

9.5.2   Existential negation

In Arta, unlike many other Philippine languages, existential negation is indicated by the same form *awan* as used for relational negation (cf. Ilokano *saan/haan* 'not' vs. *awan* 'there is no'; Tagalog. *hindi* 'not' vs. *wala* 'there is no'). There are two distinct constructional patterns (i) *awan* + ABS and (ii) *awan* + OBL, which may be translated into English as 'X is not (around, absent)', and 'there is no X', respectively. The first pattern *awan* + ABS describes that an individual (= topic) is absent within a particular spatio-temporal setting (= comment). In the following examples, third person definite NPs, second person singular NP, and first person singular NP are chosen as a topic, and state that they are absent within a particular spatio-temporal region.

(72)   *Gindat   a   awan=tep   tidi   a:na:=ku=y,*

     up.to   LIG   NEG=ANT   PL.ABS.DEF   child.RDP=1SG.GEN=SPC

     na-tagi:=de:=tèn.

     PST.POT-stay=POST=1SG.ABS

     'While our children were absent, I will stay here.'

(73)   1. : *Awan=tep=tid=ti.*   *Awan=tep=tid.*   *Awan=man=tep=tid.*

       NEG=ANT=PL.ABS.DEF=here   NEG=ANT=3PL.ABS   NEG=CONTR=ANT=3PL.ABS

       'They are not here. Still not around. As for them, not here yet.'

     2. : *O: Tidi   agani:=ti?*

       yes   PL.ABS.DEF   non-Arta=SPC

       'The non-Arta people?'

     3. : *O:.*

       yes

'Yes.' (arta0506)

(74) *Awan=de:=tèn*   *ma-to:lay*   *amma*   ***awa:ng=a***.

NEG=POST=1SG.ABS   POT-live   if   NEG=2SG.ABS

'I cannot live if you were not.'

(75) ***Awan=tep=tèn=ta***.   *Konta*   *pangistorian*   *na*   *ama=ku.*

NEG=ANT=1SG.ABS=there   but   story   GEN.INDF   father=1SG.GEN

'I was not there (at that time) yet. Rather (it is) my father's story.' (arta0106)

The second constructional pattern *awan* + OBL describes the state in which in a specific time and space, there is no one belonging to a particular category. Here, the category does not serve as a topic of the sentence; rather, it constitutes part of the comment or predicate (See also Schachter 1977 for Tagalog).

(76) *Amma*   ***awan***   ***ta***   *don*   *na*   *bagat,*   *don*   *na*   *lati.*

if   NEG   OBL.INDF   leaf   GEN.INDF   banana   leaf   GEN.INDF   rattan

'If banana leaves are not available, (we use) leaves of rattan.' (arta0001)

(77) ***Awan***   ***ta***   *wagèt*   *konta*   *bègbèg*   *i*   *meddigsèn.*

NEG   OBL.INDF   water   but   wind   SG.ABS.DEF   ADJ-strong

'We had little rain, but what was strong was the wind (during the typhoon).' (arta0007)

(78) *Ta*   *dutul,*   ***awan=tep***   ***ta***   *mabaw,*   ***awan=tep***   ***ta***   *asin,*

OBL.INDF   first   NEG=ANT   OBL.INDF   rice   NEG=ANT   OBL.INDF   salt

awan=tep   ***ta***   *tinapay.*

NEG=ANT   OBL.INDF   bread

'In those days, there was no rice yet, there was no salt yet, there was no bread yet.' (arta0003)

(79) *Ay*   *ta*   *dutul,*   ***awan***   ***ta***   *kape.*

filler   OBL.INDF   first   NEG   OBL.INDF   coffee

'We did not have coffee long ago.' (arta0002)

(80) *Amma*   *tyempo*   *na*   *langit,*   ***awan***   ***ta***   *pu:nèd.*

if   season   GEN.INDF   blue.sky   NEG   OBL.INDF   rain

'If it is the dry season, we do not have rain.' (arta0003)

Note that existential construction in many Philippine languages differ from that in English in that the oblique NP can take a possessor as a genitive phrase (English: *There is no my money. vs. Ilokano: *Awan ti kuwarta=**k** (NEG DET money=1SG.GEN).). Consider the following examples in Arta:

(81)   a.   *Awan=di   ta   kuwarto=**ku**.*

           NEG=POST   OBL.INDF   money=1SG.GEN

           '(lit.) There is no money of mine.'

    b.   *Awan   ta   baggat=**mi**.*

           NEG   OBL.INDF   rice=1PL.GEN

           '(lit.) 'There is no rice of ours.'

    c.   *Awan   ta   dukuldukul=**na***

           NEG   OBL.INDF   roughness=3SG.GEN

           '(lit.) There is no bumpiness/roughness of it.'

Furthermore, the possessor can be realized as an absolutive argument ((lit.) There is no **my** money > **I** have no money.). In the below examples (82a, 83a), the possessor phrases are preposed as external absolutive arguments rather than located within the oblique phrase (82b, 83b):

(82)   a.   *Awan=tep=**tèn**   ta   asawa.*

           NEG=ANT=1SG.ABS   OBL.INDF   spouse

           'I did not have my husband/wife yet.'

    b.   *Awan=tep   ta   asawa=**ku**.*

           NEG=ANT   OBL.INDF   spouse=1SG.GEN

           'I did not have my husband/wife yet.'

(83)   a.   *Awa:ng=**itam**=di   ta   to:top.*

           NEG=1+2PL.ABS=POST   OBL.INDF   companions

           'We no longer have any friends (who know about WWII).'

    b.   *Awan=di   ta   to:top=**tam**.*

           NEG=POST   companions=1+2PL.GEN

           'We no longer have any friends (who know about WWII).'

This construction with a preposed possessor seems to represent the following meaning: for a particular individual (e.g. *=tèn* 'I' and *=di* 'they') (= the topic), there is no individual identified as asawa 'spouse' or to:top 'companion'. It constitutes an information structure comparable with an English possessive construction *X has/does not have Y* (see Langacker 1993, 2009). The existence of this construction with a topicalized possessor supports the hypothesis I provided above that the rest of the construction, that is, a predicate and oblique function as a comment instead of a topic.

9.5.3 Corrective negation

In the standard theory of negation, the relation between a proposition and a negative counterpart is defined in terms of the opposite value of truth. However, some negative sentences are difficult to deal with for the truth value, one of the representative phenomena is METALINGUISTIC NEGATION, and there has been a long discussion over its description and theoretical treatment of it (Horn 1985, 1989, Carston 1996, Yoshimura 1998). In Arta, there is a construction with *bangat*, similar to metalinguistic negation, which does not mean that the negation of p results in an opposite truth value:

(84) *Bangat ta X* 'not X'

Bangat	*ta*	*"kabbat=mu*	*i*	*dut".*	*"Awa:ng=itam*	*ta*
NEG	OBL.INDF	want=2SG.GEN	SG.ABS.DEF	fire	NEG=1+2PL.ABS	OBL.INDF

dut.	*Um-ulas=taw*	*da*	*awa:ng=itam*	*ta*	*dut,"*
fire	INTR-put.on.fire=2SG.ABS	because	NEG=1+2PL.ABS	OBL.INDF	fire

munata.
like   that

'Not "Do you want the fire?", (but) "We do not have fire, so you should put on fire because we do not have fire", like that.' (arta0501)

The first sentence means that the expression itself is not correct, rather than the normal negative meaning 'do**n't** you want the fire?' (the opposite of 'do you want the fire?'). Since this negation does not affect the truth value, it seems to be a typical case of metalinguistic negation. This negation cannot be expressed by *awan*.

However, we cannot consider the construction with *bangat* to be a special template for expressing a metalinguistic negation, which is shown in the following examples:

(85) **Bangat**   *ta*   *Arta,*   *agani:.*

     NEG   OBL.INDF Arta.   non-Arta

     'He is not a Negrito, (but) non-Negrito.'

(86) *Amma*   *munati*   *kaka:man*   *na*   *aba,*   *a*   *gimt-èn*   *=di,*

     if   like.this   bigness   of   mat   LIG   make-TR   =3PL.GEN

     'Even in case of this big mat which we made,'

     saliy-an   *=di*   *=te:*   *ta*   *ta:salub*   *a*   *baggat.*

     exchange-TR   =3PL.GEN   =only   OBL.INDF   one.sack   LIG   rice

     'they exchange it with only one sack of rice.'

     Bangat   *ta*   *me'-'a:du,*   *killèk=te.*

     NEG   OBL.INDF   ADJ-much   small=only

     'Not much but only a small (amount of rice).' (arta0108)

The sentence in (85) explicitly denies the fact that the individual is Arta, and the sentences in (86) deny the quantity of rice is large. In both cases, the use of the construction affects the truth value (this type of 'normal' negation is referred to as descriptive negation by Horn). The existence of (85, 86) strongly indicates the theoretical difference between descriptive and metalinguistic negations does not show us the semantic opposition observed between the *awan*-type negation and the *bangat*-type negation.

The following semantic opposition seems to be involved in the two types of negation in Arta; *awan*-type and *bangat*-type negations differ in the two entities to be compared:

(87)   1. One statement p and the contradictory statement $\sim p$

        If the latter is consistent with the fact: *awan p*

    2. one statement p and another statement q

        If the latter is consistent with the fact: *bangat ta p*

As formalized above, the construction *bangat ta p* is not the assertion of the contradictory statement of p, but the assertion that another statement is consistent with the fact. Thus almost all the instances include the specification of q (see also the instances cited above):

(88) *Bangat. Lando a agani:.*

        NEG   Lando LIG non-Arta

        'No. it is another Lando who is non-Arta.' (arta0506)

(89) Y: *Mam-pulo-pulot?*

        INTR-RDP-g-string

        'Wear a g-string?'

    D: *Mam-pulot=tid.*   *Bangat ta*   *mam-pulo-pulot.*

        INTR-g-string=3PL.ABS NEG   OBL.INDF INTR-RDP-g-string

        'You should say *mam-pulot=tid* ('They wear g-strings'). not *mam-pulo-pulot.*'

        (arta0114)

The Arta language thus seems to have two modes of negation as a language-internal natural logic. One mode of negation is truth-functional negation, in which denying a statement means asserting the contradictory statement. The other mode of negation is that denying a statement does not mean the assertion of the contradictory counterpart but instead it indicates asserting another statement. The two modes of natural logic in negation appear to account for the functional difference between the two negators *awan* and *bangat* in the language.

9.6 Conclusion

This chapterprovides the morphosyntactic and semantic analyses of functors and constructions related to verbs and single clauses. §9.1 described the verb-modifying construction which employs dynamic, potentive, and stative verbs and adjectives as modifiers, or may be composed of a phrasal modifier and multi-modal modifiers with gestures. §9.2 dealt with tense and aspect system; it was argued that the tense system in Arta is primarily oriented to the absolute time reference. In §9.3, what may be called phasal enclitics was explored. There are three paradigmatically opposed enclitics *=tep, =pa*, and *=di*, and they differ with respect to the construals they impose on the situation to be described. §9.4 dealt with epistemic modality. In Arta, epistemic modality is encoded by two types of construction; some items are realized as an independent word occurring in the preverbal position within the clause,

whereas other items occur as enclitics that normally attach to the predicate. Finally, in §9.5, various types of negation were described. In particular two negators *awan* and *bangat* are distinguished in the language; the difference resides in the two modes of negation, whether the comparison between p and the contradictory situation $\sim p$ or between p and a different situation q is assumed.

Chapter 10

Complex sentences

10.1 Complement clause

In this section, the structure of a complement clause is described. A complement clause is defined by Dixon (2010b: 370) as follows:

(1) Definitive properties of a complement clause (ibid. 370)

    a. It has the internal structure of a clause, at least so far as core arguments are concerned.[1]

    b. It functions as a core argument of another clause. The range of functions available to a complement clause always includes O (object in a transitive clause).

    c. It describes a proposition, which can be a fact, an activity, or a state (not a place or a time).

I first take one example of a complement clause introduced by a morphologically irregular predicate *kabbat*.

(2)   *Kabba:t=u*   *(a)*   *[mang-gimit=tid*   *ta*   *bunbun=mi.]*
    want=1SG.GEN   LIG   INTR-make=3PL.ABS   OBL.INDF   house=1PL.GEN
    'I want them to build our house.'

cf.   *Kabba:t=u*   *[i*   *mabaw].*
    want=1SG.GEN   SG.ABS.DEF   cooked.rice

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[1]Under this condition, lexical nominalization as in *[John's deep appreciation of the history] impressed her* is excluded.

'I want cooked rice.'

For the first criterion, the construction has the internal structure of a clause; i.e. the verb *mang-gimit* has two core arguments, both the absolutive person form *tid*, and the oblique argument *ta bunbun=mi* 'our house'. The verb itself may inflect for tense-aspect; the verb *mang-gimit* is realized as the non-past (present) form. For the second criterion, the clause refers to an event that may occur in the future, rather than a time or place. Finally, the clause may be substituted by the NP that functions as O of the predicate *kabbat*. This shows that the embedded clause truly serves as the core argument of another predicate. This indicates that this construction should be considered a complement clause, and the predicates that exhibit such a substitution between a clause and NP may be called complement-taking predicates. A complement clause may be introduced by the ligature *a*, but this is optional.

For the morphology of complement-taking predicates, we can recognize two types of predicate: the one conforming to the regular verbal morphology, and the one exhibiting an irregular morphological alternation or with no change at all. As set out in Table 10.1, the second type is attested in *anu:* 'think', *tataw* 'know', *kabbat* 'want, like', and *ballan* 'do not like'. *Anu:* and *tataw* 'know' have no morphological change, and the other predicate forms have intensified form *kakkabbat* 'want very much, love', and *pabballan* 'hate'.

Table 10.1: Complement-taking predicates with irregular morphologies

base form	meaning	derived form	meaning
anu:	'think, guess'	—	—
tataw	'know'	—	—
kabbat	'want, like'	***kak**-kabbat*	'want very much, love'
ballan	'do not like'	***pab**-ballan*	'hate'

(3) ***Anu:**=ku=d*   *me"adu:yu*   *attanan=na.*
     think=1SG.GEN=POST   distant   place=3SG.GEN
     'I thought he was staying far distant (from here).' (arta0003)

(4) ***Anu:**=ku=d*   *a*   *na-baya:g=a=d=ti.*
     think=1SG.GEN=POST   LIG   PSTPOT-long=2SG.ABS=POST=here
     'I thought you have been here for a long time.' (arta0003)

(5) *Awa:ng=u* **tataw** *ma a:nu meb-bungko a mangga.*

NEG=1SG.GEN know if what ADJ-delicious LIG mango

'I do not know which is a delicious mango.'

(6) **Tataw***=na* *mal-lisnad ta yèkkan.*

know=3SG.GEN INTR-cook OBL.INDF viand

'She knows how to cook.'

(7) **Kabbat***=mu* *a um-angay ta Maddela?*

want=2SG.GEN LIG INTR-go OBL.INDF Maddela

'Do you want to go to Maddela?'

(8) **Kakkabba:t***=u* *mat-tim ta wagèt.*

want=1SG.GEN INTR-drink OBL.INDF water

'I am eager to drink water.'

(9) **Ballan***=na* *adu:p-an ni agani.*

not.want=3SG.GEN help-TR SG.GEN.DEF non-Arta

'I do not want to be helped by others.'

(10) **Pabballa:ng***=u* *mang-kansion.*

not.want=1SG.GEN INTR-sing

'I hate to sing.'

As shown in the above examples, the four predicates are attracting the ergative person forms. This indicates that these irregular predicates occur in the transitive clause.

Regular verbs, or the verbs conforming to regular morphological derivations/inflections, are used with a complement clause in the following semantic categories (Table 10.2):

Aspectual verbs Verbs of this class include *mar-rugi, i-rugi* 'begin', *kakkapan* 'try', *ma-sungdu, i-sungdu* 'end, finish', and *itu:luy, itu:lus* 'continue'. If the verbs introduce a complement clause, the verbs should inherit all of the arguments of the complement clause.

(11) **Mar-rugi***=ita=d* *mantraba:ho=mandi.*

INTR-begin=1+2SG.ABS=POST INTR-work=again

'Shall we begin working again?'

Table 10.2: Regular verbs serving as complement-taking predicates

semantic category	examples
Aspectual verbs	*mar-rugi, i-rugi* 'begin',
	kakkapan 'try',
	itu:luy 'continue',
	ma-sungdu, i-sungdu 'end, finish'
Causative verbs	*isugnud* 'cause, allow'
	agid-èn 'beg someone to do something'
	pabayan, bayan 'leave someone to do something'
	adu:p-an, to:p-an 'help someone'
Perception, cognition,	*inta-n, me:ta* 'look at, see'
and emotion verbs	*ma-biran* 'find', *ma-na:nab* 'remember',
	manganting 'be afraid of', *mekkayèng* 'be reluctant'
Speech,	*ikari* 'promise', *Pibe:bud* 'ask if',
communication verbs	*ituntu:ru* 'teach', *ibud* 'tell'

(12) **Kakkap-an**=*tataw*   *a*   *sa:bit-èn.*

try-TR=1SG.GEN.2SG.ABS   LIG   carry-TR

'I will carry you on my shoulder.'

(13) **Na-sungdu** *nang-insun*   *ti*   *ama=ku*   *ta*   *malu:tèp.*

PST.POT-end   PST.INTR-weed   SG.ABS.PSN   father=1SG.GEN   OBL.INDF   afternoon

'My father finished weeding in the afternoon.'

(14) **Pat-tu:lustulus**=*na=te*   *man-tatim*   *ta*   *binara:yan.*

PRG-continue=3SG.GEN=only   INTR-drink   OBL.INDF   alcohol

'He just kept drinking.'

Causative verbs   The meaning of causation is not only coded morphologically by *pa-*, but instead is also expressed periphrastically with a complement-taking predicate and complement clause. Complement-taking verbs of causation include *i-sugnud* 'cause, make', *agid-èn* 'beg someone to do something', *pabayan, bayan* 'leave someone to do something', and *adu:p-an, to:p-an* 'help someone'.

(15) **I-sugnud** *na*   *Dios*   *a*   *pumu:nèd.*

TR-cause   GEN.INDF   God   LIG   ⟨INTR⟩rain

'God **makes** it rain.' (Noah, Bible)

(16) **I-sugunu:d**=u=tid   a   m-angay=tid

TR-cause=1SG.GEN=3PL.ABS   LIGINTR-go=3PL.ABS   INTR-work

mamtaraba:ho   *maddit=de:=tid.*

teenager=POST=3PL.ABS

'I **made** them go to work when they became teenagers.' (arta0101)

(17) **N-agi:d**=u   n-y-atèd=na=dèn   i   bisuruk.

⟨PST.TR⟩beg=1SG.GEN   PST-TR-give=3SG.GEN=1SG.OBL   SG.ABS.DEF   knife

'I **begged** him to give me the knife.'

(18) *Awan=mu*   **pap-pa:-bay-an**   a   map-pati=tid.

NEG=2SG.GEN   PRG-CAUS-neglect-TR   LIG   INTR-die=3PL.ABS

'Do not **let** them die.' (Noah, Bible)

(19) **To:p-an**=di=a:mi   a   passa:sawa   a   mantaraba:ho

companion-TR=3PL.GEN=1PL.ABS   LIG   husband.and.wife   LIG   TR-work

ta   *panga:nèn=mi*

OBL.INDF   food=1PL.GEN

'They helped us, their parents, to work for our food.' (arta0101)

As opposed to the morphological causative *pa-*, this pheriphrastic causative construction has various lexical alternatives to differentiate the manner of causation and the social relationship between the causer(s) and the causee(s). First, *isugnud* 'cause, make' and *agid-èn* 'beg' are similar in the sense that they designate the active involvement in the instigating phase of the event. However, they are different in that *isugnud* implies the causer enjoys a higher status or authority than the causee in controlling the current situation, while *agidèn* presupposes an opposite power balance. Second, *pabayan*, and *bayan* 'neglect, leave someone doing something, let' are the negative counterpart of *isugnud* 'cause, allow'. *Pabayan*, and *bayan* indicate the realization of the event by the *non*-active involvement into the event. Finally, *to:pan, adu:pan* are also unique in that they are not a trigger for the initiation phase of the event; rather they contribute to the accomplishing the event by participating in the event by themselves.

Perception, cognition, and emotion verbs   Perception verbs can also take a complement clause, but the visual perception verb *inta-n* is the only one that is found in my corpus. Unlike the case in English, the verbs in the complement clause can inflect for tense.

(20)   *N-inta=ku*   *ti*   *Yukinori*   *n-um-une:*   *ta*   *ayu.*
⟨PST.TR⟩-see=1SG.GEN   SG.ABS.PSN   Yukinori   PST-INTR-climb   OBL.INDF   tree
'I saw Yukinori climbing the tree.' (arta0006)

(21)   *Awan=mu=d*   *me:ta*   *i*   *langit*   *de:ta,*   *me:ta*   *munata*
NEG=2SG.GEN=POST   POT.see   SG.ABS.DEF   blue.sky   there   POT.see   like.that
arepla:no.
airplane
'You cannot see the blue sky over the sky. You can (only) see airplanes flying like that (with the gesture of airplanes).' (arta0100)

Verbs of cognition and emotion include *ma-biran* 'find', *ma-na:nab* 'remember', *manganting* 'be afraid of', *mekkayèng* 'be reluctant', as well as the irregular verbs seen above: *anu:* 'think', *tataw* 'know', *kabbat* 'like, want', and *ballan* 'do not want, like'.

(22)   **Na-bira:ng**=u   *a*   *taw=te*   *mepep-piya*   *ayti*   *tapa=y.*
PST.POT-find=1SG.GEN   LIG   2SG.ABS=only   ADJ.RDP-good   here   earth=SPC
'I **found** you are the only one who is virtuous on earth.' (Noah, Bible)

(23)   *Awan=mi=d*   **ma-ma:nab**   *a*   *m-anga:y=ami*
NEG=1PL.GEN=POST   POT-remember   LIG   INTR-go=1PL.ABS.
'We don't **remember** where we went.'

(24)   *Konta*   *ta*   *ana:=ku=d,*   **mekek-kayèng**=de:=tèn   *a*
but   OBL.INDF   child=1SG.GEN=POST   ADJ.RDP-reluctant=POST=1SG.ABS   LIG
pa:ngi-tuntu:ru   *ta*   *lagip*   *na*   *Arta.*
PRG.INTR-learn   OBL.INDF   langauge   GEN.INDF   Arta
'But as for our child, I am **reluctant** to teach them the Arta language.' (arta0114)

(25)   **Mang-anting**=tèn   *a*   *m-une:*   *ta*   *ayu.*
INTR-afraid=1SG.ABS   LIG   INTR-climb   OBL.INDF   tree
'I am **afraid** to climb the tree.'

Speech, communication verbs   Verbs encoding various speech acts including *ikari* 'promise', *Pibe:bud* 'ask if', *ituntu:ru* 'teach', and *ibud* 'tell', can also take a complement clause.

(26)   *Mine:-kari=ku=d*   *a*   *me:na=tèn=ti*

⟨PST⟩POT-promise=1SG.GEN=POST   LIG   INTR.go=1SG.ABS=here

'I will promise (you) to come back here.'

(27)   *Pibe:bud=mu*   *amma*   *a:nu*   *gimt-èn=mu*

ask=2SG.GEN   if   what   do-TR=2SG.GEN

'Ask someone what you should do.'

(28)   *Apo,*   *i-tuntu:ru-an=mu=nen=tèn*   *mang-kara:rag*

Lord   TR-learn-TR=2SG.GEN=please=1SG.ABS   INTR-pray

'Loard, please tell me how to pray.' (Jesus' Teaching on Prayer, Bible)

(29)   *N-i-bud=u*   *tasu:lèp=ti*   *ni*   *Arsenyo*   *m-angay=tèn*

PST-TR-say=1SG.GEN   yesterday=SPC   SG.GEN.DEF   Arsenyo   INTR-go=1SG.ABS

ta   *Maddela=ti*   *dèm.*

OBL.INDF   Maddela

'Yesterday I told Arsenyo that I will go to Maddela.'

As shown in this section, various concepts such as causation, perception, cognition, and negation[2] (Secondary concepts in Dixon's term[3]) may, or should be encoded in a periphrastic way by embedding a complement clause. The pervasive use of this construction indicates that Arta (and probably other Philippine languages as well) exhibits rather analytic (or syntactic) strategies in encoding these concepts, which would otherwise be expressed morphologically as in the evidential markers for inferring, perceiving situations, modal markers, and negative affixes.

10.2   Adverbial clause

In Arta, an adverbial clause is not indicated by any verbal morphology, but instead by syntactic constructions with a clause introduced by function words. These include subordinators,

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[2]cf. *awan* (negation) is not a bound morpheme.
[3]See Dixon (2005, 2010b).

which are exclusively used in adverbial clauses and other formatives that seem to be adopted from other word classes. The latter function word is further divided into those that may have originated from prepositions, adverbs, and complement-taking verbs:

1. Subordinate conjunctions

   take:ta 'in order to, so that'

   da 'because'

   ènsi:na 'which is why'

2. Prepositions

   ta 'when (past)'

   unadda 'after'

3. Adverbs *amma* 'if'

   maski 'even if/though'

   gindat, ki:gad 'up to, until'

4. complement-taking verbs

What follows is an examination of each subtype of function word used to construct adverbial clauses.

10.2.1   Subordinate conjunctions

The following three forms are used exclusively in adverbial clauses.

Da 'because, for'   Adverbial clauses introduced by *da* serve to encode a reason or cause. The occurrence of the *da*-clause is strictly limited to the position *after* the main clause, thus exhibiting a distribution similar to English *for/because*-clause, rather than *since*-clause. This distribution indicates the clause does not serve as backgrounded or presupposed information for highlighting an assertion, but instead suggests that both the main clause and the subordinate clause are symmetric with the information structure.

(30) *Konta   maski   atti:=taw   ti   munata   bunbun   mepep-pasu*

but   even   exist=2SG.ABS   SG.OBL.DEF   like.that   house   ADJ.RDP-hot

da   awan=di   ta   ayu.

because   NEG=POST   OBL.INDF   tree

'But even you stay in the house, it is hot, because we have no trees around.' (arta0003)

(31) *P⟨in⟩a-pati=na   i   buka:gan=i.   Da   nang-asawa*

⟨PST.TR⟩CAUS-die=3SG.GEN   SG.ABS.DEF   woman=SPC   because   PST.INTR-spouse

ta   gissa   gilangan.

OBL.INDF   one   man

'He killed the woman, for she married another man.' (arta0106)

(32) *Konta   aytay,   awan=di   da   n-arawat=mi=d   i*

but   now   NEG=POST   because   ⟨PST.TR⟩-get=1PL.GEN=POST   SG.ABS.DEF

Dios.

God

'But now we do not have (ghosts) because we have known God.' (arta0114)

(33) *Amma   be:kut   na   Ilokano,   mat-ta:me:ta   da*

if   spirit   GEN.INDF   Ilokano   INTR-different   because

mal-lutu=d=tid   ta   mabaw,   aydi   yakkan.

INTR-cook=POST=3PL.ABS   OBL.INDF   cooked.rice   and   viand

'In case of the spirits of Ilokano, (the custom) is different, because they cook rice, and viand.' (arta0111)

(34) *Mampa-salama:t=ami   da   maski   na-pe:perdi   karsa:da=y,*

INTR-grateful=1PL.ABS   because   even   PST.POT-destroy   road=SPC

awan=na=ami   p⟨in⟩a-bayan   na   Dios.

NEG=3SG.GEN=1PL.ABS   ⟨PST⟩CAUS-neglect   GEN.INDF   God

'We are grateful (to God) because, even though the road was destroyed, our God didn't neglect us.' (arta0007)

Take:ta **'in order to, so that'**   A clause introduced by *take:ta* occurs after the main clause and is used for representing a purpose in a particular action, or a logical consequence of the

action. The subordinate clause must be non-finite; the subordinator does not allow the verb within the clause to specify a particular value of tense. The verb thus needs to be realized in a basic (non-past) form (this implies that the proposition represented by the subordinate clause is not grounded in the temporal axis by itself. Thus, the temporal framing of the proposition needs to refer to the temporal grounding of the preceding main clause, or context).

(35) *Pa-ka:man-èng=u*   *i*   *wagèt*   *ti*   *luta*   **take:ta**

      CAUS-big-TR=1SG.GEN   SG.ABS.DEF   water   SG.OBL.DEF   soil   in.order.to

      ma-pili   *attanan.*

      POT-remove   all

      'I will increase the water in the earth to kill everyone.' (Noah, Bible)

(36) *Pi:pi:pi-an=mu=antu*   *mal-lagip*   *ta*   *lagip*   *na*   *Arta,*

      good-TR=2SG.GEN=really   INTR-speak   OBL.INDF   language   GEN.INDF   Arta

      take:ta   *korek=de:=taw.*

      in.order.to   correct=POST=2SG.ABS

      'You should improve your speaking of Arta for your language to be correct.' (arta0114)

(37) *Amma*   *kabbat=mu,*   *m-anga:y=a=d*   *di:te,*   *(...)*

      if   want=2SG.GEN   INTR-go=2SG.ABS=POST   here.only

      gimt-èn=tam.   **Take:ta**   *inta-n=mu.*

      make-TR=1+2PL.GEN   in.order.to   see-TR=2SG.GEN

      'If you like, you can come here. ... We can cook it so that you will see it.' (arta0114)

Ènsi:na 'that is why, so that'   *ènsi:na* and the reduced form *si:na* are used to express a logical consequence of another event. This implies that the consequence in question is the one readily expectable from the preceding or following linguistic context or by pragmatic inference.

(38) (After being asked how they learned to cultivate the field)

      Tidi   *ama=ku,*   *pat-tuntu:ruw-an=tid*   *na*   *agani:*   *ayta*

      PL.ABS.DEF   father=1SG.GEN   PRG-learn-TR=3PL.ABS   GEN.INDF   non-Arta   there

Alicia,	*ènsi:na*	*tataw=di*		*nang-uma.*
Alicia	so.that	know=3PL.GEN		PST.INTR-field

'My fathers were taught by non-Arta in Alicia (in Isabella province), that's why they know how to cultivate the field.'

In (38), the speaker provides an answer to the question of how the Arta people learned to cultivate the field. Thus, the information conveyed by the *ensi:na*-clause 'they come to know how to cultivate' is interpreted as a mere confirmation of the consequence, not as giving unexpected new information. In this case, the preceding linguistic context makes possible the use of *ènsi:na*.

(39) A man, K, prefers GoodTaste coffee rather than Nescafé. But he currently has Nescafe coffee, and a woman, D, has GoodTaste coffee. He asks her if she can exchange Nescafe with GoodTaste. Then, she does not know what he possesses, so she is wondering why he wants to exchange his coffee.

K. *Sali-an=mu=mine:*   *a:yi:.*

exchange-TR=2SG.GEN=HYP   DEM.PROX

'Could you exchange this?'

D. *Ballan=mu=sika*   *a:yi:na.*   *O:ni=sika.*   *Neskape:=sika,*

not.like=2SG.GEN=MIR   DEM.MED   yes=MIR   Nescafe=MIR

'Oh, you don't like that. Oh, yes. That is Nescafe.'

ènsi:na   *pab-ba:lan=na.*

so.that   not.like=3SG.GEN

'which is why he does not like it.' (arta0506)

D knows that K does not like Nescafé, and in line 1, K states that he wants D to replace his own Nescafé with D's GoodTaste. D notices that the coffee that K has is Nescafé, and then, as a natural consequence, D has understood why he wants to exchange it with D's GoodTaste.

One of the contexts in which *ènsi:na*-clause occurs frequently is in the following discourse organization; the clause appears when one statement is confirmed (third position):

(40)   1. provide a statement

2. mention the reason, cause, evidence for the first statement

3. confirm the first statement

In this discourse organization, the speaker first provides a statement, and then mentions the reason, cause, or evidence for the first statement, and finally s/he confirms the first statement. It is the third position where *ènsi:na* clause may frequently appear. Consider the following example:

(41) 1. *Ayta   dutul   a   langit,   awan   ta   pasu.*
         OBL.INDF first   LIG day   NEG   OBL.INDF hotness
         'It was not so hot before.'

      2. (...)

      3. *Amma   atti=ami   ta   diso:no: ni   talun=i,*
         if   exist=1PL.ABS OBL.INDF insode   SG.GEN.DEF mountain=SPC

         manga:-sirra:ng=ami   ti   ayti   don   ni   ayu=y.
         POT-cool=1PL.ABS   SG.OBL.DEF here   leaf   SG.GEN.DEF tree=SPC
         'If we were in the mountain, we feel cool under the leaves of trees.'

      4. **Énsi:na** *awan=di   ta   pasu   na   abi:=mi.*
         so.that   NEG=POST   OBL.INDF hotness   GEN.INDF body=1PL.GEN
         'That's why our body is not so hot.' (arta0003)

In (41), after the speaker states that it was not so hot in his childhood (line 1), he mentions the reason why it was not hot, and subsequently *ènsi:na*-clause appears to provide partially overlapped information with the utterance in line 1, confirming the first statement from a slightly different perspective.

(42) *Ay   ina=ti   ni   Bilma,   nap-pati.*
      GAP   mother=SPC   SG.GEN.DEF   Bilma   PST.INTR-die
      'As for Bilma's mother, she died.'

      Nap-pati   a   pa:nga:na.
      PST.INTR-die   LIG PRG.child
      'She died during the delivery.'

Ina	*ni*	*Bilma,*	***ènsi:na***	*awan*	*ta*	*ina=na.*
mother	SG.GEN.DEF	Bilma	so.that	NEG	OBL.INDF	mother=3SG.GEN

'It is Bilma's mother. That is why she does not have her mother.' (arta0514)

A similar organization of a sequence is observed in (42) in the description of a girl's mother. After the speaker states that Bilma's mother is dead, she states the cause of her death. Then, *ènsi:na*-clause appears in the third position in which she closes the sequence by re-stating the fact that her mother died.

10.2.2   Subordinators of prepositional origin

***Ta* 'when'**   The subordinator *ta* 'when' seems to have developed historically from the oblique marker *ta*. The form is used when the subordinate clause indicates a past time, which is parallel with the usage of the oblique marker *ta*.[4]

(43)	*Munata*	*i*	*bu:hay=mi*	*aydi:ti*	*ta*	*dutul*	*a*	*langit,*
	like.that	SG.ABS.DEF	life=1PL.GEN	before	OBL.INDF	first	LIG	day

ta	*kaki:lèk=tep*	*tidi*	*kakka:nak=mi.*
when	youth=ANT	PL.ABS.DEF	children=1PL.GEN

'Our life is like that in those days when our children were still young.' (arta0101)

(44)	***Ta***	*mang-ka:rawèg*	*tidi*	*kakka:nak=i,*	*atti:=tèn*	*ta*
	when	INTR-play	PL.ABS.DEF	children=SPC	exist=1SG.ABS	OBL.INDF

lattong,	*pat-taraba:ho.*
outside	PRG.INTR-work

'When my children were playing, I was working outside.'

(45)	*DeGuzman*	*apili:du=ku*	***ta***	*awan=tep=tèn*	*ta*
	Deguzman	family.name=1SG.GEN	when	NEG=ANT=1SG.ABS	OBL.INDF

asawa.
spouse

'My family name was DeGuzman when I did not have my husband yet. (arta0003)

[4]Compare ***ta*** *su:lèp=ti* 'yesterday' and *ti* *dèmèdèng=i* 'tomorrow'. Oblique *ta* is used when the phrase refers to a definite past time, or an indefinite time, whereas *ti* is used when the phrase refers to a definite future time.

In several examples, *ta* may be interpreted as indicating a cause. However, it is possible that the usage is not established, or lexicalized; rather, it might be one of the contextual interpretations of the temporal meaning, with a pragmatic inferencing (in the sense of Hopper and Traugott (2003: 71–98)).[5]

(46) *Ta*   *awan=de:=tèn*   *ma-pa-tuma-tumar=de:=tèn*   *ta*
      when   NEG=POST=1SG.ABS   POT-CAUS-RDP-medicine=POST=1SG.ABS   OBL.INDF

      ta'lu   *a*   *biyungèt,*   *awan*   *ti*   *ma-pili*   *paditèng=u=y.*
      three   LIG   night   NEG   SG.OBL.DEF   POT-cure   disease=1SG.GEN=SPC

      '**Since** I did not take a medicine for three nights, my disease was not cured.'

      (When/after I did not take a medicine for three nights, my disease was not cured.)

This (pragmatic) interpretation is also parallel with the oblique *ti/ta*; in (47, 48), the coldness and strong wind can be interpreted as temporal as well as causal:[6]

(47) *Man-sipun=tèn*   ***ti***   *dègnin=na=y.*
      INTR-running.nose=1SG.ABS   SG.OBL.DEF   coldness=3SG.GEN=SPC

      'I will catch a cold **in/by** this coldness.'

(48) *Na-tomba*   *ayu=y*   ***ta***   *med-digsèn*   *a*   *bègbèg.*
      PST.POT-fall.down   tree=SPC   OBL.INDF   ADJ-strong   LIG   wind

      'The tree fell down **during/because** of the strong winds.'

Although *ta* is sometimes ambiguous between the two interpretations, a causal meaning can be expressed with *da* unambiguously.

***Unadda* 'after'**   The formative *unadda*, the etymology of which is still unknown, represents 'after X'. In all the examples, subordinate clauses with *unadda* precede main clauses; the clause introduced by *unadda* is also backgrounded rather than the foregrounded (or assertive), with little new information. This informational aspect is shown in the examples below, where the information similar to the *unadda*-clause is already provided in the preceding contexts:

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[5]I am grateful to Professor Shuanfan Huang for indicating this analysis.

[6]For the similar case in Japanese, see Yamanashi (1994).

(49) *N-atdinan=na=tid   ta   ta'lu   a   bunga na   ayu.*
PST-give.TR=3SG.GEN=3PL.ABS   OBL.INDF three LIG   fruit GEN.INDF tree

Saya   innan=di.   Unadda   n-y-arawat=na=d,
DEM.DIST   ⟨PST.TR⟩.eat=3PL.GEN   after   PST-TR-get=3SG.GEN=POST

man-di:ma-dimad=tid.
INTR-RDP-walk=3PL.ABS

'He gave them three fruits. That is what they ate. **After** he handed those to them, they walked away.' (arta0006)

(50) *P⟨in⟩idut=di   p⟨in⟩a:-suwit-an=di.*
⟨PST.TR⟩pick.up=3PL.GEN   ⟨PST⟩CAUS-whistle-TR=3PL.GEN

'They picked up (the hat he dropped) and whistled at him.'

Unnada   na-pasuwitan=di,   g⟨in⟩⟨um⟩i:nèk   ti
after   PST.POT-CAUS-whistle-TR=3PL.GEN   ⟨PST⟩⟨INTR⟩stop   SG.ABS.PSN

Yukinori.
Yukinori

'After they whistled, then Yukinori stopped walking.' (arta0006)

The backgrounded nature of the adverbial clause is further shown in the prepositional use of *unadda*. *Unadda* is frequently used with *wa* 'what-cha-ma-call-it' (PMP *kua 'what-cha-ma-call-it'), in which case the whole phrase *unadda=wa* 'after that, then' contains only given information within it, functioning merely as discourse marker connecting the main clause and a preceding sentence:

(51) *Atti: disi-disikle:ta,   unadda=wa=d   nangib-bangga=tid.*
exist   RDP-bicycle   after=whatchamacallit=POST   PST.RECP-collide=3PL.ABS

'Then bicycles have come. After the arrival, they collided with each other.' (arta0006)

(52) (Noah sent out a raven, and it kept flying back and forth until the water had dried up from the earth;)

Unadda=wa,   p⟨in⟩a-bbèr=na   kalapa:ti   inta-n=na
after=whatchamacallit   ⟨PST⟩CAUS-fly=3SG.GEN   dove   see-TR=3SG.GEN

amma   na-gti:l-an   i   wagèt.

if   PST.POT-decrease   SG.ABS.DEF   water

'After that, he sent out a dove to see if the water had receded. (Noah, Bible)

Unadda can be used both as a subordinator and a preposition, but in both cases, the whole phrase provides highly backgrounded (or given) information.

10.2.3   Subordinators of adverbial origin

Some subordinate clauses are introduced by the subordinators of adverbial origin. The function words can be identified as adverbs because they can be placed before NPs or adverbs, and the whole phrase serve as adverbials to modify predicates or clauses.

***Amma* (conditional)**   *Amma* (or *ma*) 'if' encodes the conditional meaning. As shown in the following examples, the clause introduced by *amma* may be placed in the sentence-initial, -medial, or -final position.

(53)   *Konta   [**ma**   mamanga:ng=ami=ta],   ma:ng=amid=di   namangan*

but   if   INTR.eat=1PL.ABS=DEM.DIST   as.if=1PL.ABS=POST   PST.INTR.eat

ta   mabaw.

OBL.INDF   rice

'But if you eat that, (it is) as if we ate rice.' (arta0003)

(54)   *Ma-sungdu   ayya,   [**amma**   t⟨um⟩appra   i   langit],*

POT-finish   DEM.DIST   if   ⟨INTR⟩shine   SG.ABS.DEF   sunshine

ka:lig-èn=mi   sakay   y-a:ligi=mi.

carry-TR=1PL.GEN   then   TR-transfer=1PL.GEN

'Having finished it, if the sun shines, we carry and transfer (the house).' (arta0001)

(55)   *Man-di:ma-dima=te:=tid   ti   talu-talun=i   i*

INTR-RDP-walk=only=3PL.ABS   SG.OBL.DEF   RDP-mountain=SPC   SG.ABS.DEF

*be:kut=na,   [**amma**   map-pati=tid].*

ghost=3SG.GEN   if   INTR-die=3PL.ABS

'The ghosts just walk around the mountains if they died.' (arta0111)

Amma can co-occur with various elements and the meaning may vary according to the adjacent elements and the whole contexts. When it is used with an NP or a temporal adverb, the phrase serves as a conditional element as above, or as a topic-like entity, about which the following part of the sentence states:

(56) *[**Amma** tami Arta], tyempo na taki-langi-langit.*
      if 1PL.ABS Arta season GEN.INDF season-RDP-sunshine
      'In our language Arta, (we call it) "dry season".' (arta0003)

(57) *[**Amma** tempo na dègnin taki-dègnin],*
      if season GEN.INDF coldness season-cold

      ma-balin=mi=te: *a* *diding-an* *ta* *don* *na* *bagat.*
      POT-possible=1PL.GEN=only LIG wall-TR OBL.INDF leaf GEN.INDF banana
      In the cold season, we may build a wall with the leaves of banana.' (arta0001)

(58) *[**Amma** biyungut], amma munata i langit, awan ta*
      if night if like.that SG.ABS.DEF sky NEG OBL.INDF

      mantungpa.
      INTR-put.on.fire
      'If it becomes night (In the night), if the sky is like this, we couldn't put on fire.' (arta0100)

If the adverbial phrase with *amma* is used after the adjective predication such as 'A is heavy', the whole sentence may function as a comparative construction. The adverbial phrase is interpreted as introducing the standard of comparison; the construction literally representing 'A is heavy under the relation to B'.

(59) *Mel-la:gin i karagatan=i [**amma** ti aytina].*
      ADJ-light SG.ABS.DEF stone=SPC if SG.OBL.DEF DEM.MED
      '(lit.) This stone is light if compared with that'

(60) *Med-ded-dingatu ti Ramos [**amma** dèn]*
      ADJ-RDP-high SG.OBL.DEF Ramos if 1SG.OBL
      '(lit.) Ramos is very high if compared with me.'

***Maski* 'even if, even though, although'**   *Maski* 'even if, even though, although' is partially overlapped with *amma* in the sense that it indicates conditional meaning. Crucially, however, *maski* (more precisely, the construction *maski p, q*) implies that the relation between *p* and *q* is not a natural path of the causal relation expected by the speaker and hearer, or the unusual relation not registered in their encyclopedic knowledge that is evoked by the situation *p*.

(61)   (Honey is excellent because:)

*[**Maski**   mamanga:ng=ami   aytay],   ki:gad   ti   dèmèdmèng=i,*
even.if   INTR.eat=1PL.ABS   now   up.to   SG.OBL.DEF   morning=SPC

awa:ng=u=tep   ma-bisin.
NEG=1SG.GEN=ANT   POT-hunger

'Even we eat (honey) now, I will not be hungry until tomorrow's morning.' (arta0003)

(62)   *[**Maski**   manga:-paditèng],   mang-ka:rawèg=tep   ta   lattong.*
even.though   STV-disease   INTR-play=ANT   OBL.INDF   outside
'Even if he is sick, he plays outside.'

Maski is used for the event that already occurred, still implying the event *q* is not a natural consequence of the preceding event *p*. In this case, *maski* is followed by *da* to indicate the event *p* is the past event.

(63)   *Tidi   karu:ba=mi,   nang-atèd=tid   ta   baggat   a*
PL.ABS.DEF   neighbor=1PL.GEN   PST.INTR-give=3PL.ABS   OBL.INDF   rice   LIG

na-bèsabèsèssèg   a   baggat.
PST.POT-wet   LIG   rice
'Our neighbors, they gave us very wet rice.' (arta0007)

*N-an'-anu:s-an=mi   [**maski   da**   mebeb-buyu:=di].*
PST-RDP-patient-TR=1PL.GEN   even   because   ADJ.RDP-bad-smelling=POST
'We were patient even though it's bad-smelling.' (arta0007)

***Gindat, ki:gad* 'up to, until'**   *Gindat, ki:gad* 'up to, until' typically represents the extent or end-point in location. For expository convenience, let me first illustrate their usage as

adverbs. The following examples are the ones in which *gindat* is used as an adverb. In (64), it designates the goal of the motion event, and in (65) the length of crack is specified (note the end-point encoded by *gindat=ti* 'up to here' is coordinated with a gesture. The speaker is demonstrating how to make the friction lighter that they used to make fire. See Figure 10.1 and 10.2):

(64)   *D⟨in⟩ima-dima=ku*   **[*gindat***   *ta*   *Maddela].*
        ⟨PST.TR⟩RDP-walk=1SG.GEN   up.to   OBL.INDF   Maddela
        'I walked to Maddela.'

(65)   *Gu:lèk-èn=di*   *a:ya:,*   ***gindat=ti.***
        chop-TR=3PL.GEN   DEM.DIST   up.to=here
        'This is chopped up to here (this point)'

Figure 10.1: 'This is chopped' (chopping gesture)   Figure 10.2: 'up to here' (the depth of crack)

These adverbs are also found in the end-points of a static situation that has no physical motion. Consider the following examples:

(66)   *Illa:yug*   *a:yi:*   **[*gindat***   *ayti].*
        long   DEM.PROX   up.to   here
        'This is long, up to here.' (arta0114)

(67)   (After being asked how many children the two families have:)

        A:na: *ni*   *Singnges,*   **[*gindat***   *ta*   *ta:hulu].*
        children   SG.GEN.DEF   Singes   up.to   OBL.INDF   ten

'Singnges's children, up to ten (i.e. Singnges family has ten children),'

Ana:	*ni*	*Kontawa,*	*[**gindat**	*ta*	*walu].*
child	SG.GEN.DEF	Kontawa	up.to	OBL.INDF	eight

'Kontawa's children, up to eight. (Kontawa family has eight children)' (arta0108)

In (66), the adjective *illa:yug* 'long' co-occurs with *gindat* 'up to'. The co-occurrence inevitably foregrounds the scalar notion of length, and 'here' is construed as the end-point along the scale. In (67), the numerals, which could otherwise be presented alone as 'ten, eight', occur with *gindat* 'up to'. This usage successfully evokes the dynamic process of counting 'one, two, three, four, …', and *gindat X* indicates the fictive end-point of mental counting (see also the discussion of mental scanning and fictive motion (Langacker 1987a: 99–109, 244–267, Talmy 2000: 99–178)).

On the other hand, the following data exemplifies that *gindat* can also indicate the end-point of the temporal development of an event:

(68) | *P⟨in⟩a-bay-an=mi=tèddi* | | *[**gindat** | *ta* | *damadmèng]* |
|---|---|---|---|---|
| ⟨PST⟩CAUS-neglect-TR=1PL.GEN=just | | up.to | OBL.INDF | morning |

'We just let them go until next morning.' (arta0007)

(69) | *[**Gindat**=tay]* | *awan=tep* | *maka-derettyo* | *i* | *Sama:na.* |
|---|---|---|---|---|
| up.to=now | NEG=ANT | POT-straight | SG.ABS.DEF | Samana.bus |

'Until now Samana bus cannot go straight.' (arta0007)

If *gindat/ki:gad* is used for introducing an adverbial clause, the semantic relation between adjoined clauses is similar to this temporal use. Syntactically, when *gindat* is used in the adverbial clause, it is followed by *ta* 'when' or by *a* (ligature):[7]

(70) | *Pal-lègd-èn=tataw* | | *[**gindat** | ***ta*** | *awa:ng=a* | *mas-su:li].* |
|---|---|---|---|---|---|
| PRG-wait-TR=1SG.GEN.2SG.ABS | | up.to | OBL.INDF | NEG=2SG.ABS | INTR-return |

'I will wait for you **until** you come back.'

(71) | *Mam-murab=man=tèn* | | *ta* | *laman* | *ayti* | *talun=i,* |
|---|---|---|---|---|---|
| INTR-hunt=CONTR=1SG.ABS | | OBL.INDF | wild.pig | SG.OBL.DEF | mountain=SPC |

---

[7]Note that when *gindat/ki:gad* introduces a subordinate clause, the clause may have the negator *awan*, as shown above. This optional negation remains to be examined.

'I went hunting wild pigs in the mountain (to feed our children)'

[ki:gad   ***a***   *awan*   *k⟨in⟩⟨um⟩a:man*   *tidi*   *kakka:nak=mi*   *a*

up.to   LIG   NEG   ⟨PST⟩⟨INTR⟩big   PL.ABS.DEF   children=1PL.GEN   LIG

ta'lu.

three

'**until** our three children grew up.' (arta0101)

If the subordinate clause serves as the focus within the sentence, the clause is interpreted as the result of a preceding event.

(72) *Appat*   *a*   *pulu*   *a*   *langit*   *a*   *m⟨in⟩a-bayag*   *i*   *birèng.*
     four   LIG   ten   LIG   day   LIG   ⟨PST⟩POT-long   SG.ABS.DEF   flood

     K⟨in⟩⟨um⟩a:man   *i*   *wagèt*   ***[gindat***   ***ta***   *l⟨in⟩⟨um⟩taw*
     ⟨PST⟩⟨INTR⟩big   SG.ABS.DEF   water   up.to   OBL.INDF   ⟨PST⟩⟨INTR⟩lift

     ta   *abang].*
     OBL.INDF   ark

     'For forty days the flood kept coming on the earth. The water increased, **until (and then)** they lifted the ark.' (Noah, Bible)

(73) *Nan-tuluy-tuluy*   *a*   *k⟨in⟩⟨um⟩a:man*   *i*   *wagèt*   ***[gindat***
     PST.INTR-RDP-continue   LIG   ⟨PST⟩⟨INTR⟩big   SG.ABS.DEF   water   up.to

     a   *nalangpus*   *aytidi*   *magkadidingatu*   *a*   *bukid].*
     LIG   PST.POT-cover   PL.ABS.DEF   high   LIG   mointain

     'They rose greatly on the earth, **and finally** all the high mountains were covered.' (Noah, Bible)

10.2.4 Subordinators of verb origin

Some complement-taking verbs can introduce a subordinate clause with no formal marking, signaled by the intonation contour. This is typically seen in *man* 'it is like' (similarity), and verbs of temporal meaning such as *ma-bayag* 'be long', *ma-balin* 'finish, accomplish', and *ma-sungdu* 'end'. This construction is similar to English participial construction (*Having eaten lunch, I took a nap for a while*). However, the important difference lies in the fact that

in Arta the verbs for introducing a subordinate clause are finite, with a specification of tense and aspect; it is thus more like a coordinate sentence. Consider the following examples (in particular with the literal translations):

(74) [**Na-bayag**   a   tyempo],   pa:ngis-subèg=de: Arta   aydi   Bugkalot.
      PST.POT-long   LIG   time   PRG.RECP-anger=POST   Arta   and   Bugkalot
      'For a long time, Arta and Bugkalot were fighting.'
      (lit.) 'It is a long time; Arta and Buglalot were fighting.' (arta0100)

(75) [**Man**   na   n-i-bi:lin   na   Dios],   n-i:-bu:lun=na
      it.is.like GEN.INDF PST-TR-order GEN.INDF God   PST-TR-together=3SG.GEN

      i   pasassawan attanan a   kla:se: na   animal aydi
      SG.ABS.DEF couple   all   LIG   class   GEN.INDF animal and

      mang-èbèb-bèr.
      INTR-RDP-fly
      'According to what God commanded to him, he (Noah) brought together couples of every kinds of animal and bird.'
      (lit.) 'It is like what God commanded to him; he brought together couples of …' (Noah, Bible)

(76) [**Ma-sungdu**   ayya],   amma t⟨um⟩appra i   langit,
      POT-finish   DEM.DIST   if   ⟨INTR⟩shine SG.ABS.DEF sunshine

      ka:lig-èn=**mi**   sakay y-a:ligi=mi.
      carry-TR=1PL.GEN   then   TR-transfer=1PL.GEN
      'Having finished that, if the sun shines, we carry and transfer (the house).'
      (lit.) 'Have Finished that; if the sun shines, we carry and transfer (the house).' (arta0001)

(77) [**Ma-sungdu**   a   man-di:muy],   m-angay=de:=**tèn**   ta   lattong.
      POT-finish   LIG   INTR-bathing   INTR-go=POST=1SG.ABS   OBL.INDF   outside
      'After I finish taking a bath, I will go out.'
      (lit.) 'Will finish taking a bath; I will go out.'

Note the preceding clauses may lack some grammatical elements, which shows some dependence on the main clause. In sentences (76, 77), the preceding clauses take no person form;

rather it is interpreted as coreferential with the person of the following clauses (indicated in bold). They are thus qualified as dependent clauses (thus described within the section of adverbial clause).

In this section, it was shown that adverbial clauses are introduced by various items such as the subordinator, prepositions, adverbs, and verbs. Each form constitutes adverbial constructions, differing from each other in the possible positions within the whole sentence and relative salience of the clause (i.e., whether it is more backgrounded/given or foregrounded/new).

10.3 Content question and interrogative pronouns

In this section, interrogative pronouns and the constructions in which they can occur are described. Table B.7 shows the set of interrogatives used in Arta:

Table 10.3: Interrogative pronouns in Arta

interrogative form	meaning
a:nu	'what'
adin	'where'
– *adin*	(atemporal situation)
– *adi:ni*	(present/future)
– *adinti*	(past)
sangan a N	'how many/much ...'
tanakan	'when'
ata'ay/ada'ay	'why'
kassandi	'how' (manner)

Among the interrogatives, *kassandi* is the item that is much less frequently used. Questions concerning a manner or means of an action are coded by other strategies such as a deverbal nominalization (*paN-* 'use something to V), and *gami:tèn* 'use something', or implied by context (i.e., a simple interrogative sentence can be understood as a question of the manner of an action). Therefore, the following discussion will be confined to the other six items.

10.3.1   Interrogative sentence

Interrogatives are divided into two types—the one that requires a verb to change its form to make the absolutive argument coreferential with the interrogative pronoun, and the other type that does not. *Tatin*, *a:nu*, *adin*, and *sangan a N* require the verb to change the form so that the interrogative pronoun is coreferential with zero absolutive within the clause. Consider the following examples:

(78)   a. ***Tatin***   *mat-tim*   Ø   *ta*   *binarayan?*

who   INTR-drink   ABS   OBL.INDF   alcohol

'Who will drink alcohol?'

b. ***A:nu***   *ti:m-èn=mu*   Ø   ?

what   drink-TR=2SG.GEN   ABS

'What will you drink?'

c. ***Adi:ni***   *ti:m-an=mu*   Ø   *ta*   *binarayan?*

where   drink-TR=2SG.GEN   ABS   OBL.INDF   alcohol

'Where will you drink alcohol?'

d. ***Sangan***   *a*   *bo:te*   *ti:m-èn=mu*   Ø?

how.many   LIG   bottle   drink-TR=2SG.GEN   ABS

'How many bottles of alcohol will you drink?'

In all the cases, the absolutive case is realized as zero within the clauses and is coreferential with the interrogatives. In other words, appropriate verbal derivations should be selected to conform to the constraint on the relation between the absolutive case and interrogatives. However, *tanakan*, and *ata'ay/ada'ay* do not have such a requirement; in the following cases, the absolutive cases are not coreferential with the interrogatives. Instead, another participant *=taw* (2SG.ABS) is realized as the absolutive.

(79)   a. *Tanakan=taw*   *mat-tim*   *ta*   *binarayan?*

when=2SG.ABS   INTR-drink   OBL.INDF   alcohol

'When will you drink alcohol?'

b. *Ata'ay*   *a*   *mat-tim=taw*   *ta*   *binarayan?*

why   LIG   INTR-drink=2SG.ABS   OBL.INDF   alcohol

'Why will you drink alcohol?'

If an interrogative sentence is a complex sentence with more than one clause involved, it is the predicate of the embedded clause that is required to change the form, as in:

(80) a. *Tatin$_i$* *kabbat=mu* *a* **mat-tim** *Ø$_i$* *ta* *binarayan?*

who want=2SG.GEN LIG INTR-drink ABS OBL.INDF alcohol

'Who do you want to drink alcohol?'

 b. *A:nu$_i$* *kabba:t=mu* *a* **ti:m-èn** *Ø$_i$* *?*

what want=2SG.GEN LIG drink-TR ABS

'What do you want to drink?'

 c. *Sangan* *a* *bo:te$_i$* *kabbat=mu* **ti:m-èn** *Ø$_i$* *?*

how.many LIG bottle want=2SG.GEN drink-TR ABS

'How many bottles of alcohol do you want to drink?'

In these sentences, *ti:m* 'to drink' is realized in different ways to make the interrogative pronouns correspond to the absolutive case within the clauses.

In the above cases, *a:nu* is used to designate unidentified, unspecified objects, which may be translated into 'what' in English. However, *a:nu* can occur in the context in which the object is identified. In the following sentences, the candidates of the reference are linguistically expressed (which would thus correspond to *which* in English):

(81) a. ***A:nu*** *kabbat=mu,* *wagèt* *amma* *kape?*

what want=2SG.GEN water or coffee

'**Which** do you want, water or coffee?'

 b. *Awa:ng=u* *tataw* *amma* ***a:nu*** *men-niyèt* *did* *a* *tallip.*

NEG=1SG.GEN know if what ADJ-sweet 3PL.OBL LIG three

'I do not know **which** is sweet of these three (fruits).'

The question of the degree of some scalar concept, as in 'how much/old/big etc.' is coded by *a:nu* 'what' and nominalized degree words 'much-ness/old-ness/big-ness', as shown in the following examples:

(82)   a.   *A:nu   i   ka-siran=na?*

           what   SG.ABS.DEF   NMZ-old=3SG.GEN

           'What is his/her/its oldness (age)? = How old is s/he/it?'

       b.   *A:nu   i   ka-ka:man=na?*

           what   SG.ABS.DEF   NMZ-big=3SG.GEN

           'What is his/her/its bigness? = How big is s/he/it?'

       c.   *A:nu   i   lala:ki/ka-lala:ki=na?*

           what   SG.ABS.DEF   goodness/NMZ-goodness=3SG.GEN

           'What is his/her/its beauty/niceness? How beautiful/nice is s/he/it?'

Neither *kassandi* 'how' nor *sa:gan* 'how many/much' is used at all.

10.3.2   Indirect question

Interrogative pronouns are not only used in direct questions. They are also applicable to indirect questions in which a clause with an interrogative is embedded into another clause. When the subordinate clause is embedded as an indirect question, the interrogative form cannot be used as a complementizer; the embedded clause must be introduced by *amma/ma* (because of the lack of a proper gloss, *amma/ma* is glossed as 'if', which is far from appropriate):

(83)   a.   *Awa:ng=u   tataw   **ma**   **a:no**   meb-bungku   a   mangga.*

           NEG=1SG.GEN   know   if   what   ADJ-delicous   LIG   mango

           'I do not know which mango is delicious.'

       b.   *Awa:ng=u   tataw   **amma**   **tanakan**   d⟨um⟩igdig.*

           NEG=1SG.GEN   know   if   when   ⟨INTR⟩arrive

           'I do not know when s/he will arrive.'

When the interrogative sentence with no interrogative pronoun is embedded, the clause is also introduced by *amma/ma*. The marker seems to signal that the proposition coded by the subordinate clause is uncertain, with no epistemic commitment to the truth of the proposition. Consider the following examples:

(84) *Awan=mi*   *tataw*   ***amma***   *nap-pati*   *ti*   *Sanuwa:tèn*

NEG=1PL.GEN   know   if   PST.INTR-die   SG.OBL.DEF   Sanuwa:ten

da ...

because

'We do not know whether Sanuwaten died or not because ...' (arta0106)

(85) *Anu:=ku*   *amma* *atti:=siya*   *ta*   *bunbun=ya.*

know=1SG.GEN   if   exist=3SG.ABS   OBL.INDF house=DEM.DIST

'I was wondering if he was there in the house.' (arta0003)

(52) *Unadda=wa,*   *p⟨in⟩a-bbèr=na*   *kalapa:ti* *inta-n=na*

after=whatchamacallit   ⟨PST⟩CAUS-fly=3SG.GEN   dove   see-TR=3SG.GEN

amma   *na-gti:l-an*   *i*   *wagèt.*

if   PST.POT-decrease   SG.ABS.DEF   water

'After that, he sent out a dove to see if the water had receded. (Noah, Bible)

Compare the following examples without *amma*. In these cases, there is an epistemic commitment to the truth of the propositions, although it does not imply that the proposition corresponds to the objective truth value.

(22) *Na-bira:ng=u*   *a*   *taw=te*   *mepep-piya* *ayti* *tapa=y.*

PST.POT-find=1SG.GEN   LIG 2SG.ABS=only ADJ.RDP-good here earth=SPC

'I found you are the only one who is virtuous on earth.' (Noah, Bible)

(86) *Anu:=ku=d*   *me'-'adu:yu* *attanan=na.*

think=1SG.GEN=POST   ADJ-far   place=3SG.GEN

'I thought he was staying far from here.' (arta0003)

10.3.3 Indefinite pronoun

Interrogative pronouns may be used as indefinite pronouns. This is demonstrated in the hypothetical context, frequently co-occurring with *amma* 'if' or *maski* 'even if'.

(87) *Amma* ***tatin*** *i*   *ma-paditèng* *didi*   *kakka:nak=mi*

if   who   SG.ABS.DEF   POT-disease   PL.GEN/OBL.DEF   children=1PL.GEN

a   *ta'lu,*

LIG   three

'If **anyone** of our three children gets sick,'

awan   *ta*   *pang-alap-an=mi*   *ta*   *kuwarto=mi*

NEG   OBL.INDF   NMZ-get-TR=1PL.GEN   OBL.INDF   money=1PL.GEN

'we do not have anything with which to get money'

da   *awan=man*   *ta*   *kuwarto=mi,*

because   NEG=CONTR   OBL.INDF   money=1PL.GEN

'because we have no money'

mam-murab=tèn   *ta*   *laman.*

INTR-hunt=1SG.ABS   OBL.INDF   wild.pig

'so I go hunting for wild pigs.' (arta0101)

(88) ***Maski*** ***adin*** ***a*** ***lugar,***   *atti:=te:=tiddya.*

even   where   LIG   place   exist=only=DEM.DIST

'Those (ghosts) are staying **everywhere**.' (arta0502)

(89) *Awa:ng=u=d*   *kabbat* *g⟨um⟩iruwat*   *a*   *mang-atèd*   *ta*

NEG=1SG.GEN=POST   want   ⟨INTR⟩get.up   LIG   INTR-give   OBL.INDF

maski   ***a:nu.***

even   what

'I will not get up and give you **anything**.' (Jesus' Teaching on Prayer, Bible)

(90) ***Sangan***=*taddi*   *a*   *langit,*   *mas-so:li=d=tèn*   *ti*   *ayta.*

how.many=only   LIG   day   INTR-return=POST=1SG.ABS   SG.OBL.DEF   there

'I ʾ ll come back just after **several/a few** days.'

A non-interrogative form *komporme* (and the reduplicated form *ko:komporme*), which is borrowed from Spanish *comforme*, is also used to express the meaning of 'anything'.

(91) *Baggat*   *i-lugun=mu,*   *baggat,*   ***komporme.***

rice   TR-container=2SG.GEN   rice   any

'We put rice (into the bag). rice, or anything.' (arta0501)

(92) **Komporme** *basta* *a* *m⟨in⟩a-rangu.*

  any   just   LIG   ⟨PST⟩POT-dry

  '(You can use) anything if it is dried.' (arta0501)

10.4 Coordination

10.4.1 Coordination of NPs

When NPs are coordinated, they should be combined with the conjunction *aydi:*; zero coordination is not attested in this type of coordination (cf. see clausal coordination below). In coordinating NPs, *aydi:* occurs after the first NP, immediately followed by the second noun. Prosodically *aydi:* belongs to the second conjunct.

(93) *Amma*   *mangi-wa=itam=ti*   *ta*   *mabaw,*   *ma-ta:ta:ku*   *aytidi*

  if   INTR-do=1+2PL.ABS=here   OBL.INDF   rice   POT-gather   PL.ABS.DEF

  [kusay   ***aydi:***   *lappul]*   *ti*   *lame:sa=y.*

  cat   and   dog   SG.OBL.DEF   board

  'If we put rice here, [cats and dogs] gather around the board.'

(94) *Ngay=tid*   *ngay=tid*   *mang-ali*   *tidi*   *ina=mi*   *ta*

  go=3PL.ABS   go=3PL.ABS   INTR-dig   PL.ABS.DEF   mother=1PL.GEN   OBL.INDF

  giwat   ***aydi:***   *ilus,*

  kind.of.yam   and   purple.yam

  'Our mothers go and dig a kind of yam and purple yam.' (arta0002)

When the NPs have a definite reference, *aydi:* may be accompanied by the determiner, in which case the marker may be realized as *ayde:*.

(95) *Dayyèw-èn=mu*   *[ti*   *ama=mu*   ***aydi:=ti***

  respect-TR=2SG.GEN   SG.ABS.PSN   father=2SG.GEN   and=SG.ABS.PSN

  ina=mu].

  mother=2SG.GEN

  'Respect your father and mother.'

(96) *Ti*   *ayte:ta*   *a*   *langit*   *s⟨in⟩⟨um⟩ay=de:=tid*   *ta*

      SG.OBL.DEF   just.then   LIG   day   ⟨PST⟩⟨INTR⟩ride=POST=3PL.ABS   OBL.INDF

      abang=i

      ark=SPC

      'On that very day, they rode on the ark'

      ti   *Nue*   **aydi:=ti**   *asawa=na,*   **ayde:=tidi**   *ta'lu*

      SG.ABS.PSN   Noah   and=SG.ABS.PSN   spouse=3SG.GEN   and=PL.ABS.DEF   three

      a   *a:na:=di.*   *Sem,*   *Ham*   **aydi:**   *Japet*   **ayde:=tidi**

      LIG   RDP.child=3PL.GEN   Shem   Ham   and   Japheth   and=PL.ABS.DEF

      assawa=di.

      RDP.spouse=3PL.GEN

      'Noah and his wife, and his sons, Shem, Ham and Japheth, together with their wives.
      (Noah, Bible)

When more than two NPs are coordinated, it is preferable for *aydi:* to occur before each of
the conjuncts except the first conjunct as in (97) (compare (96), where *Sem Ham aydi: Japet*
lacks the coordinator between the first and second person names.).

(97) *Man-taraba:ho=ya:mi*   *ta*   *pam-mula-mula=ya:mi*   *ta*   *[pagay*

      INTR-work=1PL.ABS   OBL.INDF   INTR-RDP-plant=1PL.ABS   OBL.INDF   rice

      aydi: *kamo:ti,*   **aydi:**   *galiyang*   **aydi:**   *u:bi].*

      and   sweet.potato   and   taro   and   purple.yam

      'We work in planting rice, sweet potato, taro, and purple yam.' (arta0101)

10.4.2   Coordination of clauses

If an utterance constitutes a single speech act such as an assertion and question, it is un-
derstood as such by signaling it with a particular final intonation contour. An assertive or
information-offering utterance exhibits a higher pitch in the final syllable, with the falling
contours if the syllable has a voiced coda consonant. On the other hand, a polar and content
question (or interrogative sentence) is prosodically signaled by a lower pitch in the final syl-
lable. These intonational signals are not a periphrastic phenomenon, but a defining feature

relevant to the unit of sentence in Arta. Intonational signals are also a crucial key to identifying coordinations; if a given clause is coordinated with another clause, the intonation of the first clause does not exhibit a higher pitch in the final syllable, even if the clause is considered to be (part of) an assertive speech act.

As shown in Table 10.4, there are three types of zero coordinations: sequential-verb construction, tight coordination, and loose coordination, and two marked coordinations with *sakay* and *konta*. They are identified according to the four phonological and syntactic criteria: the possibility of raising bound person forms, whether the absolutive argument is shared among the two predicates involved, the number of intonation units, and the possibility of subordination and topicalization within the second conjunct.

Table 10.4: Types of clausal coordination

	Raising	Obligatoriness of Shared argument	Number of Intonation unit	subordination /topicalization
Zero coordination				
– Sequential verb construction	yes	all the arguments	1	no
– Tight coordination	no	absolutive	1	no
– Loose coordination	no	no	2	no
sakay 'and then'	no	no	≥ 2	yes
konta 'but'	no	no	≥ 2	yes

In this section, each construction is described with special reference to the tightness/looseness of the coordinations.

Sequential verb construction

Sequential verb construction is the coordination in which the motion verbs such as *(ma)ngay* and *(a)ngin* are combined with another predicate. This construction prosodically constitutes a single intonation unit, with no intonation break between the two predicates involved. The motion verb cannot take a distinct argument such as the absolutive argument that semantically represents a moving actor. The argument(s) should be inherited from the second predicate, and thus the case of each argument is fully predicted from the syntactic transitivity of the second predicate. Further, if the arguments include a full NP, they should be placed after the two predicates, but if the arguments include bound person forms, the person forms should attach to the initial predicate (thus shown as raising in Table 1).

(98)   ***Ngay**=tid*   ***mang-alap***   *ta*   *bidi:yu*   *ta*   *talun.*

go=3PL.ABS   INTR-get   OBL.INDF   pandan   OBL.INDF   mountain

'They go and get pandan leaves in the mountain.' (arta0108)

(99)   ***Angin**=mi*   ***inta-n***   *i*   *gèda*   *ni*   *ayu=y,*

go=1PL.GEN   see-TR   SG.ABS.DEF   trunk   SG.GEN.DEF   tree=SPC

atti:=de:=tid=ta.

exist=POST=3PL.ABS=OBL.INDF

'We go and see a tree-trunk, where they (honeybees) are.' (arta0003)

(100)   ***Angin**=mi=tid*   ***pa-sdèp-èn***   *ti*   *bunbun=mi.*

go=1PL.GEN=3PL.ABS   CAUS-enter-TR   SG.OBL.DEF   house=1PL.GEN

'We go and bring them into our house.' (arta0101)

Tight coordination

Tight coordination is another type of clausal coordination, in which the whole constituent
is pronounced in a single intonation contour and the absolutive arguments of both of the
predicates should be co-referential. If the absolutive argument is realized in a full NP, it
immediately follows the first predicate before the second predicate, with the second clause
having no overt person index.

Motion/existence + manner

(101)   *[D⟨in⟩⟨um⟩imwang=di*   *kanakannak=i]*   *[nan-disikle:ta].*

⟨PST⟩⟨INTR⟩go.away=POST   child=SPC   PST.INTR-bicycle

'A child has gone away, riding a bicycle.' (arta0006)

(102)   *Sakay=na*   *p⟨in⟩a-bbèr=na*   *i*   *kalapa:ti.*   *[Awan=di*

then=3SG.GEN   ⟨PST⟩CAUS-fly=3SG.GEN   SG.ABS.DEF   dove   NEG=POST

nas-so:li]   *[in-um-bèr].*

PST.INTR-return   PST-INTR-fly

'Then he let the dove fly. It did not fly back. (lit. Id did not **return flying**.)' (Noah,
Bible)

(103) *[Me'-'a:du   agani:]   [na-ta:ku   ti   bi:yèn=na=y].*
ADJ-many   non-Arta   PST.POT-gather   SG.OBL.DEF   near=3SG.GEN=SPC
'There are many non-Arta gathering near him.' (Sower, Bible)

Chained action

(104) *[Pilak-èn=mi   ay   bugayyung=i]   [i-ta:pal=mi=d=ta].*
tear-TR=1PL.GEN   GAP   bugayyung=SPC   TR-put.onto=1PL.GEN=POST=there
'We tear the bugayyung and put it onto the wound.' (arta0520)

(105) *[P⟨in⟩idut=di   tidi   bunga   na   ayu=y]*
⟨PST⟩pick.up=3PL.GEN   PL.ABS.DEF   fruit   GEN.INDF   tree=SPC
[n-i-lugun=di   tamman   ti   baske:t=i].
PST-TR-container=3PL.GEN   again   SG.OBL.DEF   basket=SPC
'They picked up the fruits and put it into the basket again.' (arta0006)

Semantically, the construction may represent either motion/existence + manner, as in (101–103), or chained actions, as in (104, 105).

Loose coordination

The last type is loose coordination, where the two clauses to be coordinated are less tightly combined. Prosodically the first part of the two adjoined clauses ends with a break, with the two clauses constituting distinctive intonation units. Syntactically, the absolute arguments of the two predicates are not necessarily coreferential. Semantically the construction represents a temporal sequence or cause-and-result:

(106) *Mam-murab=tèn   ta   laman,   i-la:ku=mi   ta   kuwarto.*
INTR-hunt=1SG.ABS   OBL.INDF   wild.pig   TR-sell=1PL.GEN   OBL.INDF   money
'I go hunting for wild pigs, and we exchange it with money (sell it).' (arta0101)

(107) *Angin=mi   inta-n   i   gèda   ni   ayu=y,*
go=1PL.GEN   see-TR   SG.ABS.DEF   trunk   SG.GEN.DEF   tree=SPC
atti:=de:=tid=ta,   mang-gimi:t=ami   ta
exist=POST=3PL.ABS=OBL.INDF   INTR-make=1PL.ABS   OBL.INDF

bunut=mi.

boudle.of.branch=1PL.GEN

'We go and see a tree-trunk, where we can find honeybees, and then, we make a

bundle of branch.' (arta0003)

(108)   *I-kuttad=na*   *i*   *bo:la,*   *me'-'adu:yu*   *angay-an=na.*

TR-kick=3SG.GEN   SG.ABS.DEF   ball   ADJ-far   go-TR=3SG.GEN

'He kicked the ball, so that/then it went far.'

(109)   *p⟨in⟩a-bègbèg=na,*   *nar-rugi*   *a*   *k⟨in⟩⟨um⟩illèk*   *i*

⟨PST⟩CAUS-wind=3SG.GEN   PST.INTR-begin   LIG   ⟨PST⟩⟨INTR⟩small   SG.ABS.DEF

wagèt.

water

'(God) brought about winds, so that the water began to recede. (Noah, Bible)

Remember that complex sentences introduced by such verbs as *masungdu* and *mabalin*
are similar to coordination in that the combining clause is shown by the intonation break
(§ 10.2.4). In Arta, coordination and subordination (particularly adverbial clauses) are struc-
turally close to one another and the two structural categories seem to form a continuum.

Sakay **'and then'**

In clausal coordination, the coordination marker *sakay* 'and then' is also found in the dis-
course. Compared with zero coordination, the two clauses adjoined by *sakay* are more inde-
pendent of each other. The second constituent of coordinations may have a topicalized NP,
as in (111) (shown in bold), or a subordinate clause introduced by *ma* 'if' (shown in bold), as
in (112), which are not warranted in zero coordination.

(110)   *I-lugu-lugun=di*   *ta*   *biyas,*   *sakay=di*   *i-wa*

TR-RDP-container=3PL.GEN   OBL.INDF   bamboo   and.then=3PL.GEN   TR-do

ta   *dut.*

OBL.INDF   fire

'They put (the meat) into the bamboo, and then place it above the fire.' (arta0114)

(111)	*Asawa=ku=ti,*		*awan	kurug	a	med-dingatu.	Apitti=te:.*
	spouse=1SG.GEN=SPC	NEG	really	LIG	ADJ-high		short=only

	***Sakay	abi:=na=y,***		*mer-ra:pis=te:,	killèk=te:.*
	And.then	body=3SG.GEN=SPC		ADJ-thin=only	small=only

	'My husband was not really tall. He was short. And then as for his body, it is thin, and small.' (arta0502)

(112)	*I-lisnad=di=hug*			*ta	dut.	Sakay	**ma***
	TR-cook=3PL.GEN=of.course	OBL.INDF	fire	and.then	if

	ma-sungpu=d,	*inta-n=di=d*		*a	na-lutu=d*
	POT-evaporate=POST	see-TR=3PL.GEN=POST	LIG	PST.POT-cook

	mel-lamèk=de:=ya.
	ADJ-soft=POST=DEM.DIST

	'They cook it above the fire. And then if it has evaporated, they check if that is cooked and softened.' (arta0109)

Sakay may appear in the coordination of NPs, with the functional difference between *aydi:* and *sakay* unknown.

(113)	*Na-serran	[i		barunibun	ayta	diso:no	na	tapa,*
	PST.POT-close	SG.ABS.DEF	spring		there	inside	GEN.INDF	soil

	sakay	*aytidi	ruwa:ngan	na	wagèt	na	dingatu].*
	and.then	PL.ABS.DEF	gate		GEN.INDF	water	GEN.INDF	top

	'The springs of the deep and the floodgates of the heavens were closed.' (Noah, Bible)

Konta 'but'

Another coordinator, *konta*, serves to mark an adversative or contrastive meaning 'but, however'. Again, *konta* allows topicalization to occur within the second constituent of the coordinate construction, whereby contrastive elements are overtly marked.

(114)	*Konda=d=**tay**,	awan=de:=ta		subèg=na.*
	but=POST=now	NEG=POST=OBL.INDF	anger=3SG.GEN

	'But now, he is not fearful.' (arta0100)

(115) *A:yi:*   *kaki:lèk=i,*   *konta*   *a:yi:*   *di:yu,*   *ay*   *kakka:man=ya.*

      DEM.PROX   small=SPC   but   DEM.PROX   honeybee   RDP.big=DEM.DIST

      'This one is small, but as for this honeybee, it is very big.' (arta0003)

As implied in the possibility of topicalization, the two constituents are loosely connected. This is also indicated by the possibility of the insertion of adverbial clauses immediately after the conjunction *konta*:

(116) *Ènsi:na*   *awan=de:ta*   *pasu*   *na*   *abi:=mi.*   *Konta=tay,*

      that.is.why   NEG=POST=OBL.INDF   heat   GEN.INDF   body=1PL.GEN   but=now

      maski ***atti:=taw***   ***ti***   ***munata*** ***bunbun*** *mepeppasu*

      even   exist=2SG.ABS   SG.OBL.DEF   like.that   house   ADJ.RDP-hot

      da   *awan=di*   *ta*   *ayu.*

      because   NEG=POST   OBL.INDF   tree

      'That is why we did not feel hot. But now, even you are in the house like this, it is hot because there are no more trees.' (arta0003)

In this section, five constructions identified as coordination were explored. It was found that each construction differs in terms of the tightness or looseness between the two constituents. The zero coordination may be overlapped with subordination of verb origin, which indicates that subordination and coordination form a continuum in the language.

10.5 Conclusion

This chapter described the structure of complex sentence in Arta. In the first section (10.1), complement clause was defined according to the criteria provided by Dixon (2010), followed by the description of the morphological regularity/irregularity of the complement-taking verbs and the semantic range that complement-taking verbs may cover. The second section (10.2) examined the syntax and semantics (and pragmatics) of adverbial clauses. They are formally classified into the clauses introduced by (i) subordinate conjunctions, (ii) conjunctions of prepositional origin, (iii) conjunctions of adverbial origin, and (iv) conjunctions of complement-taking-verb origin. Each item was described in greater details by the analysis of

the excerpts from discourse. In the next section (10.3), the structure of content question and the usage of interrogative pronouns were briefly examined. Finally in 10.4, coordinations of NPs and clauses were described. NPs were normally coordinated with the conjunction *aydi:*. Clauses are coordinated in five constructions; these constructions differ according to the possibility of raising, the obligatoriness of shared argument(s), the number of intonation units, and the possibility of subordination/topicalization within the second conjunct.

Chapter 11

Conclusion

11.1   Summary of the present study

In this dissertation, a comprehensive description of the Arta language was conducted. As a prelude to the grammatical description, Chapter 1 examined ethnographic and sociolinguistic descriptions of the language and made some speculations about the mechanism of the language switch that occurred after the in-migration of Austronesian people to the Philippine archipelago. In Chapter 2 and Chapter 3, the phonological and morphological aspects of the language were described. In particular, it was shown that mora is an important notion in analyzing the synchronic distribution of long vowels, and identifying the diachronic development of short-long vowel contrast in the language.

Chapter 4 was devoted to the outline of the overall grammatical characteristics of Arta, which include its morphological typology, word order, word classes (content words and function words), and case-marking. Chapter 5 addressed the structure of nominals, examining the five major nominal-relevant categories of noun: person form, demonstrative, nominal marker, and specificity marker. Chapter 6 concerned adjectives and related constructions, such as a partitive construction, relative quantifiers, evaluational quantifiers, and numerals. Chapters 7, 8, and 9 extended our discussion into clause structure. In Chapter 7, after a discussion of the gradient nature of adjunct and argument, I identified intransitive, extended intransitive, transitive, and extended transitive constructions, as well as some noncanonical constructions in which no absolutive argument appears. Absolutive argument was shown

to be a pivot, playing a crucial role in nominalization, relative clauses, and content questions (interrogativization). Chapter 8 explored the morphosyntax and semantics of various verbal affixes. Verbs were sub-classified into dynamic verbs, potentive verbs, and stative verbs, and each verbal affix within those categories was analyzed in finer detail. Chapter 9 examined other aspects of clausal structure, including adverbial modification, the tense-aspect system in Arta, phasal markers, epistemic modality, and negation. Finally, in Chapter 10, complex sentences were analyzed: complement clauses, adverbial clauses, interrogative sentences, and coordination. In what follows, I will mention some contributions of this study to Austronesian linguistics and linguistic theory.

Mora and vowel length   First, in Chapter 2, I analyzed what may be called "stress/accent" phenomena from a moraic perspective.In the study of minor Philippine languages, researchers tend to transcribe and describe the phonetic length of vowels, stressed vowels, or even the declarative final intonation under the rubric of "stress/accent". This study showed the advantages of analyzing vowel length in terms of mora, and I suspect that many of the Negrito languages may have a vowel length system regulated by mora. I hope this study will contribute to a finer-grained analysis of the vowel length or suprasegmental aspect of Philippine languages.

Reconsideration of grammatical system   In this dissertation, I reconsidered some grammatical phenomena, as opposed to making a traditional analysis. First, there has been a long controversy over the nature of case-marking systems in Philippine languages. In typological studies, Schachter's study of Tagalog in the 1970s, and Shibatani's study of Cebuano in the 1980s, particularly emphasized the underdeterminacy of the case-marking system. However, a growing number of studies of the Philippine languages argue that they actually show ergative-absolutive alignment, an analysis supported by the present study. In Arta, unlike Tagalog, Cebuano, and Ilokano, what we call transitive clauses (VAO) and extended intransitive clauses (VSE) are clearly distinguished by the case of both nominal markers and person forms (see Chapter 4). The marking of the E argument is the same as that of adjuncts, distinct from the transitive A argument; thus, the extended intransitive clause is qualified as a transitive clause. Once both transitive and intransitive clauses are clearly distinguishable,

the case-marking system in Arta is clearly identified. Arta has an ergative-absolutive align-ment: the O argument, not the A argument, of the "true" transitive clause in Arta has the same formal marking as the S argument of the intransitive clause. Further analyses of minor languages will reveal a concrete picture of the case-marking system pervasively found in Philippine languages.

Gradience in grammar In this dissertation, it is shown that many of the grammatical categories do not have a clear-cut boundaries, but show a gradient nature, with prototypi-cal and marginal instances found within the category. First, affix, enclitic, and independent word were shown to exhibit a cline, in terms of phonological and morphosyntactic behav-iors. Second, a traditional distinction between (core) argument and adjunct has, arguably, a gradient boundary between them. Third, predicate types have the following hierarchal cline from prototypical verb to adjective: dynamic verb < potentive verb < stative verb < adjec-tive. There are a variety of coordination constructions, but these are described in terms of the tightness/looseness; they are distributed from the tightest coordination (one more like a single-clause sentence; e.g. *(ma)ngay V* 'go V') to the loosest one (i.e. more like two indepen-dent sentences; *konta ...* 'but ...'). Finally, there is a fuzzy boundary between subordination and coordination, the subordinators of verb origin being the marginal between them. Not only did I assert the gradient nature of these categories, but I also explicitly provided param-eters or criteria to measure the relative position of a given instance along the cline in a clear way. This explicit measurement of categorial gradience will be sufficient for reconciling the theoretical validity of language modeling with the clarity of linguistic description.

Grammar in relation to semantics and cognition In this study, the semantic import of various grammatical phenomena was explored. First, the present study provided an exten-sive examination of verbal semantics in Chapter 8. Suffix *-èn*, which is traditionally called "patient/goal focus" or "patient voice" actually has a wide semantic range, which would be better characterized as "unmarked transitive". On the other hand, *-an* serves to form verbs with a low affectedness (moving/giving to a location, action oriented to something, and changing the surface of the object), and *i-* forms a verb with a transferring meaning. The chapter explicitly shows semantic subclasses for each verbal affix, to make it possible to

compare Philippine languages in terms of the semantic ranges of each cognate affix. It is surely important to conduct intra-genetic typology of verbal affixes in Philippine languages to reveal the different semantic range of the cognates of verbal affixes found in them. This method of description is also sound in terms of the usage-based model in which our linguistic knowledge is constituted by relatively low-level (specific) schemata rather than by a bundle of abstract rules and principles.

Second, in many Philippine languages ⟨*in*⟩ is described as a perfective aspect, rather than a past tense. In this study, I argued that ⟨*in*⟩ in Arta signals the past tense, and, furthermore, it is not a relative tense (which is often miscategorized as "aspect"), but shows the behavior of an absolute tense. In Philippine linguistics, there are still a few fine-grained semantic analyses of tense; this is particularly the case in the under-described minor languages. The semantic value of the cognates of ⟨*in*⟩ may differ from language to language, but the present analysis will, hopefully, be a reference point for the semantic analysis of the infix.

Furthermore, this study conducted an analysis of phasal markers (=*tep,* =*pa*, and =*di*). Phasal markers in Arta have a three-way paradigmatic distinction and differ in the way they frame the temporal development of the described event. This is, theoretically, a canonical example to indicate the relationship between language form and the construal/frame it involves. The description here also showed a possible way of identifying and characterizing the frequently-occurring function words found in Philippine languages, and probably in other languages in the world.

Language in context   The background assumption of my analysis is that language is not an abstract system working independently of language use, but that language is an important cognitive resource for our social interaction and communication and is, thus, seriously affected by language use. This perspective is incorporated in my analysis, in that our linguistic knowledge cannot only be measured by an all-or-nothing grammaticality judgment but, rather, should be measured by the relative frequency of occurrences within the discourses in which the constructions are used. It is shown that, although the alternative orderings between adjective and noun are both judged fully grammatical in elicitation, adjective-initial ordering is much preferred to noun-initial ordering in actual language use. Second, this back-

ground assumption is fully introduced in the analysis of the demonstrative. Demonstrative is a deictic category and manifested frequently with a pointing gesture. It is thus difficult to analyze purely by evidence from a linguistic context (or co-text), whereas evidence from physical contexts in social interaction is ideal. In the present analysis, a large number of video clips is shown to identify the actual context in which a particular demonstrative is used. This methodology is particularly significant in the case of lesser-known languages, which are inaccessible to third parties.

11.2   From language to culture: Further issues

The present study is not fully exhaustive, however. In particular, some phenomena are only briefly addressed, or not dealt with in this dissertation, including modality, interjection, and some enclitics. Although modality (particularly epistemic modality) was listed in Chapter 9, further analysis is to be conducted. The enclitics to be described include *=sika*, *=ay* and *=hug*. *=sika* (which may be glossed as "mirative"), signals that the event to be expressed is beyond the speaker's expectation (e.g. *Kakka:man=sika!* (big=MIRATIVE) 'How big it is!'. Both *=ay* and *=hug* signal that the content currently being delivered to the addressee is largely old information. *X=ay* contains old information that should be inferable from the extralinguistic context, as in *Kakka:man='ay* 'It is of course very big, as can be expected'; whereas *X=hug* contains old information which was already delivered in the linguistic context, as in *Kakka:man=hug* 'It is very big, as I said'. Interjections to be described include *o:ni, è:n, o:* 'yes', *mmm* 'yes' (signaling understanding); *awan* 'no', *kay* (expressed when someone said a joke); *hus/os* 'oh no' (expressed when someone said something unacceptable to the current speaker); *akkari:, akkadi:* 'oh no' (expressing a surprise); and *a"u* 'Ouch!'. Both pragmatic enclitics and interjections are interesting in that they encode some important aspects of language use and social interactions. Moreover, a description of social practices and interpersonal interactions will lead to a detailed description of verbal activities and cultural practices.

The collection and description of the lexicon is another task to be continued. This is particularly important because only a few fluent speakers of Arta know the rich vocabulary

of the flora and fauna; the vocabulary should, therefore, be collected and described before the language dies out. Unlike Northeastern-Luzon Negrito groups such as Casiguran Agta and Paranan Agta, who have lived in the coastal area, Arta people have lived alongside the Cagayan River, and near the forested area. This geographical difference has, inevitably, affected their lifestyle and their "wisdom". Accordingly, their whole vocabulary must be different from those of Northeastern-Luzon Negrito groups. The following appendix includes the tentative lexicon I collected, which contains over 1000 roots and their derivatives. A future study will focus on a continuous effort to collect the Arta lexicon, in order to develop a dictionary available to the younger generations of the communities, and elementary schools.

Appendix A

Text

A.1 'Traditional lifestyle' (Monologue)

The following text is a transcription of a monologue produced by Bueno Delia, a female Arta native speaker. She talks about their traditional way of life in Alicia (Isabela province) and Aglipay (Quirino province).

(1) *Ta   dutul   a   langit,   pangattinan=mi   ayta   mo:nayan.*
OBL.INDF first LIG day living.place=1PL.GEN DEM.DIST Cagayan.river
In those days, we used to live along the Cagayan river.

(2) *Saya   pab-bu:-bunbun-an=mi.*
DEM.DIST   PROG-RDP-house-TR=1PL.GEN
'That is where we live.'

(3) *I   pa:ng-atèp=mi   ta   bunbun=mi,   don   na*
SG.ABS.DEF PROG-roof=1PL.GEN OBL.INDF house=1PL.GEN leaf GEN.INDF
bagat.
banana
'The roofing material for our house is leaves of banana.'

(4) *Amma awan ta   don na   bagat, don na   lati.*
if   NEG   OBL.INDF leaf GEN.INDF banana leaf GEN.INDF rattan
'If banana leaves are not available, (we use) leaves of rattan.'

(5) *pa:ng-ala:p-an=mi   ta   arigi=na   a   ayu   ta   talun.*
PROG-get-TR=1PL.GEN   OBL.INDF pillar=3SG.GEN   LIG   wood   OBL.INDF   forest

'We use trees in the forest for pillars.'

(6) *Konta   awan   ma-balin   a   pak-kotkot=mu,   da   sis-si:pang=te:*
but   NEG   POT-possible   LIG   PROG-dig=2SG.GEN   because   RDP-one=only

arigi=na.
pillar=3SG.GEN

'But you cannot fix the house to the ground because we have only one pillar.'

(7) *Pag-gèpèt=mi,   amma   awan   lati,   ay   lanut.*
PRG-tie=1PL.GEN   if   NEG   rattan   filler   vine

'if it is not rattan, we use some vain (to tie pillars with beams).'

(8) *Ma-sungdu   ayya,   amma   t⟨um⟩appra   i   langit,*
POT-finish   DEM.DIST   if   ⟨INTR⟩sunshine/light   SG.ABS.DEF   sun

ka:lig-èn=mi   sakay   y-a:ligi=mi.
lift.up-TR=1PL.GEN   and   TR-transifer=1PL.GEN

'If the sun shines, we lift up and transfer (the house).'

(9) *take:ta   ma-palingèd-an   i   tappra   na   langit=i   ti*
so.that   POT-screen-TR   SG.ABS.DEF   shine   GEN.INDF   sun=SPC   SG.OBL.DEF

diso:no: ni   bunbun=mi.
inside   SG.GEN.DEF   house=1PL.GEN

'So the inside of our house will be screened from sunbeams.'

(10) *Ta   malu:tèp   tamman,   ka:lig-èn=mi   tamman   pa-duyag-èn.*
OBL.INDF   afternoon   again   lift.up=1PL.GEN   again   CAUS-lean-TR

'In the afternoon, we lift up it again and bend the roof.'

(11) *Amma   tempo   na   dègnin,   takidègnin,   ma-balin=mi=te:*
if   weather   GEN.INDF   cold   cold.season   POT-possible=1PL.GEN=only

a   diding-an   ta   don   na   bagat.
LIG   wall-TR   OBL.INDF   leaf   GEN.INDF   banana

'In the cold season, we can make a wall with banana leaves.'

(12) *Maski ta'lu=d a langit, maski ta'lu maski appat,*
even three=POST LIG day even three even four

bali:ng=ami=d a g⟨um⟩inan tamman.
possible=1PL.ABS=POST ⟨INTR⟩leave again

'Even just three or four days after we built a house, we may leave the place.'

(13) *M-anga:y=ami=d ta ta:me:ta=d=mandi a mo:nayan*
INTR-go=1PL.ABS=POST OBL.INDF different=POST=again LIG Cagayan.river

a wagèt.
LIG water

'We move to different place along the Cagayan river again.'

A.2 'The second world war' (Monologue)

The following text is a transcription of a story told by Olanyu Arsenyo, a male Arta native speaker. He heard the story from his father, who had experienced WWII.

(1) *A:duwan   a   apu=ku,*
some   LIG   grand.parent=1SG.GEN
'As for some of my grandparents,'

(2) *nap-pati   a   p⟨in⟩al-palattog-an   na   hapon   aydi:ti   ayta*
PST.INTR-die   LIG   ⟨PST⟩RDP-shoot-TR   GEN.INDF   Japanese   before   there
'they killed by being shot by Japanese a long ago'

(3) *ayta   Agli:pay.*
DEM.DIST   Aglipay
'there in Aglipay (note: Aglipay is a municipality of Quirino province).'

(4) *Mangay=tid   ti   bukid=i   a   wa=y   munata   a*
go=3PL.ABS   SG.OBL.DEF   mountain=SPC   LIG   whatchamacallit   like.that   LIG
bukid.
mountain
'They went into the mountains even though the mountains have a steep slope.'

(5) *Saya   une:-an=di.*
that   climb-TR=3PL.GEN
'That is where they climbed up.'

(6) *Tan=di   ta   wa=y   ka:man=i   a   wagèt.*
see=3PL.GEN   OBL.INDF   whatchamacallit   wide=SPC   LIG   river
'When they look down around the Cagayan river,'

(7) *Me"a:du: a   hapon   ta   ayta.*
plenty   LIG   Japanese   OBL.INDF   there
'There were plenty of Japanese soldiers there!'

(8) *Ay   hapon=di:ti,   pangistoria   ni   ama=ku=y,*
filler   Japan=before   story   SG.GEN.DEF   father=1SG.GEN=SPC
'As for Japanese, according to my father,'

(9) *Aytidi   kaki:lèk=i   a   kakka:nak,   punan=di=ti,*
PL.ABS.DEF   small=SPC   LIG   children   like.that=3PL.GEN=DEM.PROX
'the small children of this height'

(10) *Alap-èn=di,   punan=di=ta   ta   bisuruk.*
get-TR=3PL.GEN   like.that=3PL.GEN=DEM.DIST   OBL.INDF   bolo/saber
'were taken away (from the family) and stabbed by a saber.'

(11) *Attanan   na   pilipi:no   pati   man   dami   a   Arta,*
all   3SG.GEN   Filipino   even   also   1PL.OBL   2SG.ABS   Arta.people
'All of Filipino and even us Negrito people'

(12) *Man-li:sulisu=tid   ti   talutalun=i.*
INTR-hide=3PL.ABS   SG.OBL.DEF   mountains=SPC
'went into the mountains to hide themselves.'

(13) *da   mesessubèg=tid.*
because   afraid=3PL.ABS
'because they are afraid of Japanese soldiers.'

(14) *Ay   n-um-agay=de:=ti   America:no,*
filler   PST-INTR-go/come=POST=DEM.PROX   American
'Then Americans came here,'

(15) *Na-lala:ban=de:=tid.*
POT-fight=POST=3PL.ABS
'and Americans and Japanese fought with each other.'

(16) *Awan=de:=ta   hapon,   awan=de:=ta   America:no,*
NEG=POST=OBL.INDF   Japan   NEG=POST=OBL.INDF   American
'Now both Japanese and Americans left here,'

(17) *Saya   n-um-angay=de: tidi   Pilipi:no=y   aydi:*
so.that   PST-INTR-go/come=POST   PL.ABS.DEF   Filipino=SPC   and

Arta=tidi,   n-um-angay=de:=tid   ti   ayti
Arta=PL.ABS.DEF   PST-INTR-go/come=POST=3PL.ABS   SG.OBL.DEF   here

karagatan=i,   melellawa.

stone=SPC   large

'and Filipinos and Negritos went out from the mountains to the Cagayan plain.'

A.3 'Noah's ark' (Bible translation)

The following text is a translation of the story of 'Noah's ark' in Old Testament in Bible. The translation was conducted by Bueno Delia, a female Arta native speaker. In this session, I elicited Arta texts via an Ilokano version of Bible. In what follows, Arta texts are shown with English and Ilokano translations for this reason.

(1) *Si:ye* *pal-la:gip-an* *ni* *Noe.*
DEM.PROX NMZ-talk-TR SG.GEN.DEF Noah
'This is the story of Noah.' (Daytoy ti pakasaritaan ni Noe.)

(2) *Ta'lu* *a* *ana:na* *a* *gilèngan:* *Sem,* *Ham,* *aydi:* *ti* *Hapet.*
three LIG children LIG male Shem Ham and Japheth
'He had three ons, Shem, Ham, and Japheth.'
(Tallo ti annakna a lalla:ki: da Sem, Ham ken Japet.)

(3) *Ti* *Noe* *mepep-piya* *a* *agani:* *ta*
SG.OBL.DEF Noha ADJ.RDP-good LIG non-Arta.person OBL.INDF
panahun=na=ti.
time=3SG.GEN=SPC
'Noah had no faults and was the only good man of hi time.'
(Ni la Noe ti naimbag a ta:o idi panawenna.)

(4) *Na-to:lay* *ta* *pe:top=na* *ta* *Dios.*
POT.PST-life OBL.INDF fellowshop=3SG.GEN 1+2SG.GEN Dios
'He lived in fellowship with God.' (Nagbiag iti pannakikadkaduana iti Dios.)

(5) *Konta* *nagab-balin* *a* *marakèt* *tidi* *atanan* *a*
but PST.INTR-accomplish LIG bad PL.ABS.DEF all LIG
agani: *aydi:* *arta* *ta* *surakèd* *na* *Dios,* *k⟨in⟩⟨um⟩a:man*
non-Arta and Arta OBL.INDF front GEN.INDF God ⟨PST⟩⟨INTR⟩big
i *marakèt* *ta* *attanan=i* *a* *lugar.*
SG.ABS.DEF bad OBL.INDF place=SPC LIG place
'but everyone else was evil in God's sight, and violence had spread everywhere.'
(Ngem nagbalin a da:kes dagiti amin a tattao iti ima:tang ti Dios ket nagwa:ras ti

kinada:kes iti amin a lugar.)

(6) *N-inta na Dios a memem-maraket=di i mag-gimit*

PST-see GEN.INDF God LIG ADJ.RDP-bad=POST SG.ABS.DEF INTR-do

ti lu:bung=i aydi: marakèt wana bu:hay na agani:

SG.OBL.DEF world=SPC and bad ? life GEN.INDF non-Arta

aydi: arta.

and Arta

'God looked at the world and saw that it was evil, for the people were all living evil lives.' (Nakita ti Dios a dakes ti kasasa:'ad ti lu:bong ken dakes met ti panagbiag dagiti tatta:'o.)

(7) *Punan na Dios ni Noe, ni-kundissio:ng=u=d a*

say GEN.INDF God SG.GEN.DEF Noah PST.TR-decide=1SG.GEN=POST LIG

pily-a:ng=u=d ata-'atanan a agani: aydi: arta.

remove-TR=1SG.GEN=POST RDP-all LIG non-Arta and Arta

'God said to Noah, "I have decided to put an end to all people.'

(Kinuna ti Dios ken ni Noe, "Inkeddengko a puka:wen ti amin a tattao.)

(8) *Da pily-a:ng=u=tid attanan da maski=tèddi ay*

because remove-TR=1SG.GEN=3PL.ABS all because even=only GAP

lu:bung=i pily-a:ng=u=te:.

world=SPC remove-TR=1SG.GEN=only

'I will destroy them completely, because the world is full of their violent deeds.' (Da daelek ida a mamimpinsan ken ti lu:bong.)

(9) *Mang-ala:p=a ta ayu, da mang-gimi:t=a ta*

INTR-get=2SG.ABS OBL.INDF tree because INTR-make=2SG.ABS OBL.INDF

ka:man a abang atti kuwa-kuwarto=na. Atd-inan=mu ta

big LIG ark exist RDP-room=3SG.GEN give-TR=2SG.GEN OBL.INDF

pastran ayta diso:no: aydi ta lattong.

tar there inside and OBL.INDF outside

'Build a boat for yourelf out of good timber; make rooms in it and cover it it with tar

inside and out.' (Mangalaka kadagiti tarika:yo a sedro ket mangara:midka iti dakkel
a da:ong nga adda'an kadagiti kua:rto. Pastaam iti alketran iti uneg ken iti ruar.)

(10) *Gimt-èn=mu   ta:-gatut   a   metro aydi: ta'lu a   pulu a*
make-TR=mu   one-hundred LIG   meter and   three LIG   ten   LIG

metro aydi ta'lo a   metro i   kella:yug, tallip a   pulo
meter and   three LIG meter SG.ABS.DEF NMZ.long three LIG ten

aydi: tallip a   metro i   ka-la:pad=na,   ta:-hulu a
and   two   LIG meter SG.ABS.DEF NMZ-wide=3SG.GEN one-ten LIG

metro aydi: tal'u a   metro ka-dingatu=na.
meter and   three LIG meter NMZ-high=3SG.GEN

'Make it 450 feet long, 75 feet wide, and 45 feet high.' (Aramidem a maysa nga gasut
tallopu:lo ket tallo a metro ti kaatiddog, duapu:lo ket dua a metro ti ka'aka:ba ken
sangapu:lo ket tallo a metro ti kangatona.)

(11) *Atd-inan=mu   ta   atèp na   appat a   pulu aydi: appat*
give-TR=2SG.GEN OBL.INDF roof GEN.INDF four LIG ten   and   four

a   sentimetro ta   ka-dingatu=na   ta   diding.
LIG centimeter OBL.INDF NMZ-high=3SG.GEN OBL.INDF wall

Gimtèn=mu   tal'lu a   pa-da-dagsu-an,   atd-inan=mu
make-TR=2SG.GEN three LIG CAUS-RDP-lie.down-TR give-TR=2SG.GEN

ta   rikèp=na ta   ani:rèn.
OBL.INDF doorway OBL.INDF side

*'Make a roof with 44 centimeter height on the roof. Make three for the boat and
leave a space of 18 inches between the roof and the sides.' (Ikkam iti atep nga uppat
nga pu:lo ket uppat a sentimetro ti ngatngatowanna kadagiti diding. Aramidem a
tallo a kadsa'a:ran ket ikkam iti ri:daw ti sikigan.)

(12) *Pa-ka:man-èng=u   i   wagèt ti   tapa take:ta*
CAUS-big-TR=1SG.GEN SG.ABS.DEF water SG.OBL.DEF earth so.that

ma-pili   attanan. Map-pati attanan a   atti: angès=na
POT-remove all   INTR-die all   LIG exist breath=3SG.GEN

ti	*apaw*	*ni*	*tapa=y.*
SG.OBL.DEF	surface	SG.GEN.DEF	earth=SPC

I am going to bring floodwaters on the earth to destroy all life under the heavens, every creature that has the breath of life in it. Everything on earth will perish. (Layusek ti daga tapno mapu:kaw a:min a parsua:. Matayto amin nga adda biagna iti rabaw ti daga:.)

(13)

Konta	*mebe:bud=tèn=daw,*	*s⟨um⟩a:y=am*	*ta*	*abang.*
but	INTR.RDP-say=1SG.ABS=2SG.OBL	⟨INTR⟩ride=2PL.ABS	OBL.INDF	ark

'But I will establish my covenant with you, and you will enter the ark' (Ngem makitu:lagak kenka:. Lumu:gankayo iti dao:ng)

(14)

—taw,	*ti*	*asawa=mu,*	*aytidi*	*a:na:=mu=y,*
2SG.ABS	SG.ABS.PSN	spouse=2SG.GEN	PL.ABS.DEF	children=2SG.GEN=SPC

ayde:tidi	*assawa*	*didi*	*a:na:=mu=y.*
and.PL.ABS.DEF	RDP.spouse	PL.GEN/OBL.DEF	children=2SG.GEN=SPC

'—you and your sons and your wife and your sons' wives with you.' (sika, ti asa:wam, dagiti annakmo ken dagiti assa:wada.)

(15)

I-bu:lun=mu	*i*	*pasassawan*	*a*	*attanan*	*a*	*kla:se*
TR-together=2SG.GEN	SG.ABS.DEF	couple	LIG	all	LIG	class/kind

a	*animal,*	*aydi:*	*attanan*	*a*	*kla:se*	*na*	*mang-èbèb-bèr,*
LIG	animal	and	all	LIG	class	GEN.INDF	INTR-RDP-fly

awan=mu	*pap-pa:bay-an*	*a*	*map-pati=tid.*
NEG=2SG.GEN	PRG-neglect-TR	LIG	INTR-die=3PL.ABS

'You are to bring into the ark two of every kind of animal, of every kind of bird. Do not allow them to die.' (Iku:yogmo ti sa:ngapagassawa'an ti amin a ki:ta ti anima:l ken ti a:min a ki:ta ti tumataya:b ket di:mo baybay-a:n a matayda.)

(16)

Mang-ala:p=a	*ta*	*attanan*	*a*	*kla:se:*	*na*	*panga:nèn*
INTR-get=2SG.ABS	OBL.INDF	all	LIG	class/kind	GEN.INDF	food

a	*para=te:*	*dam,*	*a:rig-èn=te:*	*did*	*a*
LIG	for=only	2PL.OBL	like/as-TR=only	3PL.OBL	LIG

top=muyu=y.

companion=2PL.GEN=SPC

'You are to take every kind of food that is to be eaten and store it away as food for you and for them." ' (Manga:laka iti a:min a ki:ta ti tarao:n nga agpaay kadakayo, kasta met kadakuada." '

(17) *G⟨in⟩imit   attanan   ni   Noe   i   ni-bi:lin*

PSTdo   all   SG.GEN.DEF   Noah   SG.ABS.DEF   PST.TR-command

na   Dios   dya.

GEN.INDF   God   3SG.OBL

'Noah did everything just as God commanded him.'

(Inara:mid amin ni Noe: ti imbi:lin ti Dios kenkua:na.)

(18) *P⟨in⟩unan   ni   Ya:we   ni   Nue.*

⟨PST⟩say   SG.GEN.DEF   Yahweh   SG.GEN.DEF   Noah

'The Lord then said to Noah' (Kinuna ni Yahweh ken ni Noe)

(19) *S⟨um⟩dèp=am   a   si:pang   a   pamilia   ta   abang.*

⟨INTR⟩enter=2PL.ABS   LIG   one   LIG   family   OBL.INDF   ark

'Go into the ark, you and your whole family'

(Sumrekkayo a sa:ngafamiliaan iti daong.)

(20) *Na-bera:ng=u   a   taw=te: mepep-piya   ayti   tapa=y.*

PST.POT-find=1SG.GEN   LIG   2SG.ABS=only   ADJ.RDP-good   here   earth=SPC

'I have found you righteous in this generation.'

(Nasara:kak a sika la:eng ti nalinteg ditoy lubong.)

(21) *Mangi-bu:lu:ng=a   ta   pitu   a   pasassawan   ta   attanan*

INTR-together=2SG.ABS   OBL.INDF   seven   LIG   couple/pair   OBL.INDF   all

a   kla:se: na   manga:-to:lay   ti   talun=i   a

LIG   class/kind   GEN.INDF   STV-live   SG.OBL.DEF   forest=SPC   LIG

mange:-bilang   a   med-dalus   aydi: ta   si:pang   a   pa:ris   a

STV-consider   LIG   ADJ-clean   and   OBL.INDF   one   LIG   pair   LIG

awan   mel-li:nis.

NEG   ADJ-clean

'Take with you seven pairs of every kind of clean animal, a male and its mate, and one pair of every kind of unclean animal, a male and its mate.'

(Mangiku:yogka iti pito a pagassawa:'an iti amin a ki:ta ti anima:l a maibi:lang a nadalu:s ken sangapa:ris iti amin a saan a maibi:lang a nadalus.)

(22)   *Mangi-bu:lu:ng=a   ta   pitu   a   pa:ris   ta   attanan   a*

       INTR-together=2SG.ABS   OBL.INDF   seven   LIG   pair   OBL.INDF   all   LIG

       kla:se: a   mang-èbèb-bèr.

       class/kind   LIG   INTR-RDP-fly

       'and also seven pairs of every kind of bird, male and female,'

       (Mangiku:yogka met iti pito a pa:ris ti amin a ki:ta ti tumatayab.)

(23)   *Gimt-èn=mu   a:yi: take:ta   mebeb-bayag   i   attanan   a*

       do-TR=2SG.GEN   DEM.PROX   so.that   ADJ.RDP-long   SG.ABS.DEF   all   LIG

       ma-to:lay   aydi   mang-èbèb-bèr

       POT-live   and   INTR-RDP-fly

       'Do this to keep their various kinds alive,'

       (Arami:dem daytoy tapno matagina:yon ti amin a ki:ta ti animal,)

(24)   *take:ta   um-a:du=mande:=tid   ayti   apaw   ni   tapa=y.*

       so.that   INTR-many=again=3PL.ABS   here   surface   SG.GEN.DEF   soil=SPC

       'so that they will increase again on the earth.'

       (ken tumatayab ket umadu:danto manen iti rabaw ti daga.)

(25)   *Pitu   a   langit   gindat   aytay,   pa-pu:nèd-èng=u   ta*

       seven   LIG   day   up.to   now   CAUS-rain-TR=1SG.GEN   OBL.INDF

       meb-bayag   gindat   ta   korenta   a   langit   aydi: biyungèt

       ADJ-long   up.to   OBL.INDF   forty   LIG   day   and   night

       'Seven days from now I will send rain on the earth for forty days and forty nights,'

       (Pito: nga aldaw mani:pud ita, pagtudo'ek nga agpa:'ut iti korenta nga aldaw ken rabii)

(26) *ke:ta*   *ma-pili*   *attanan*   *a*   *manga:-to:lay*   *a*   *g⟨in⟩imi:t=u."*

so.that   POT-remove   all   LIG   STV-live   LIG   ⟨PST⟩make=1SG.GEN

'and I will wipe from the face of the earth every living creature I have made."

(tapno mapu:kaw ti amin a sibibiag a parsua:")

(27) *G⟨in⟩imit*   *attanan*   *ni*   *Nue*   *i*   *ni-bi:lin*

⟨PST⟩make   all   SG.GEN.DEF   Noah   SG.ABS.DEF   PST.TR-command

ni   *Ya:wi.*

SG.GEN.DEF   Yahweh

'And Noah did all that the Lord commanded him.'

(Ket inara:mid ni Noe ti amin nga imbi:lin ni Yahweh.)

(28) *ènnèm*   *a*   *gatut*   *i*   *dagun*   *ni*   *Nue*   *ta*

six   LIG   hundred   SG.ABS.DEF   year/age   SG.GEN.DEF   Noah   OBL.INDF

b⟨in⟩⟨um⟩irèng   *ta*   *tapa=y.*

⟨PST⟩⟨INTR⟩floodwater   OBL.INDF   soil=SPC

'Noah was six hundred years old when the floodwaters came on the earth.'

(Agtawen ni Noe: iti emmem a gasut idi malayus ti daga.)

(29) *S⟨in⟩⟨um⟩ay=hug=tid*   *ta*   *abang*   *a*   *top=na*

⟨PST⟩⟨INTR⟩ride=then=3PL.ABS   OBL.INDF   ark   LIG   companion=3SG.GEN

asawa=na,   *ayde:=tidi*   *a:na:=na=y,*   *ayde:=tidi*

spouse=3SG.GEN   and=PL.ABS.DEF   children=3SG.GEN=SPC   and=PL.ABS.DEF

asawa   *ni*   *a:na:=na=tidi,*   *take:ta*   *me:-lisi=tid*

spouse   SG.GEN.DEF   children=3SG.GEN=SPC   so.that   POT-escape=3PL.ABS

ta   *birèng.*

OBL.INDF   flood

'And Noah and his sons and his wife and his sons ' wives entered the ark to escape the waters of the flood.' (Naglu:gan ngarud iti daong a kaduana ti asa:wana, dagiti annakna ken dagiti assa:wada tapno malisianda ti layu:s.)

(30) *Man*   *na*   *ni-bi:lin*   *na*   *Dios,*   *ni:-bu:lun=na*

as.if   GEN.INDF   PST.TR-command   GEN.INDF   God   PST.TR-together=3SG.GEN

i	*pasassawan*	*attanan*	*a*	*kla:se:*	*na*	*animal*	*aydi*
SG.ABS.DEF	couple	all	LIG	class/kind	GEN.INDF	animal	and

mangèbèbbèr,	*mine:règèp=tid*	*med-dalus*	*ata*	*awan.*
bird	consider=3PL.ABS	ADJ-clean	and	NEG

'As God had commanded Noah, pairs of clean and unclean animals, of birds were brought into the ark.' (Kas imbilin ti Dios, inku:yogna ti pagassawaan ti amin a kita ti animal ken tumatayab, maibi:langda man a nadalus wenno saan.)

(31) | *D⟨in⟩⟨um⟩igdig* | *i* | *birèng* | *ta* | *pitu* | *a* | *langit* |
|---|---|---|---|---|---|---|
| ⟨PST⟩⟨INTR⟩arrive | SG.ABS.DEF | floodwater | OBL.INDF | seven | LIG | day |

aydi	*pitu*	*a*	*biyungèt.*
and	seven	LIG	night

'And after the seven days the floodwaters came on the earth.'
(Dimteng ti layus kalpasan ti pito nga ladaw.)

(32) | *Atti:=di* | *dagun=na* | *ènnèm* | *a* | *gasut.* | *Atti:* | *me:kata:hulu* |
|---|---|---|---|---|---|---|
| exist=POST | year=3SG.GEN | six | LIG | hundread | exist | tenth |

aydi	*pitu*	*a*	*langit*	*ta*	*me:katallip*	*a*	*bulan,*
and	seven	LIG	day	OBL.INDF	second	LIG	month

'In the six hundredth year of Noah's life, on the seventeenth day of the second month,—'
(Agtawe:nen ni Noe iti emmem a gasut. Iti maika-sangapu:lo-ket-pitu nga laldaw ti maikadua a bu:lan,)

(33) | *P⟨in⟩undu* | *atanan* | *a* | *barunibun* | *ta* | *ka:man* | *a* | *digit* | *ta* |
|---|---|---|---|---|---|---|---|---|
| ⟨PST⟩burst | all | LIG | spring | OBL.INDF | big | LIG | sea | OBL.INDF |

diso:no:	*na*	*tapa,*	*m⟨in⟩a-pily-an*	*attanan*	*a*
inside	GEN.INDF	soil	⟨PST⟩POT-remove-TR	all	LIG

pa-la-latto:ng-an	*na*	*barunibun*	*i*	*wagèt*	*na*
CAUS-RDP-outside-TR	GEN.INDF	spring	SG.ABS.DEF	water	GEN.INDF

dingato.
heaven

'all the springs of the great deep burst forth, and the floodgates of the heavens were opened.' (pimsuak ti amin nga ubbog ti dakkel a ta'a:w iti uneg ti daga, naluktan dagiti amin a pagruwaran ti danum ti tanga:tang.)

(34)

P⟨in⟩⟨um⟩u:nèd	*ta*	*la:gum*	*na*	*diso:no:*	*na*	*appat*	*a*
⟨PST⟩⟨INTR⟩rain	OBL.INDF	during	GEN.INDF	inside	GEN.INDF	four	LIG

pulo	*a*	*langit*	*aydi:*	*biyungèt.*
ten	LIG	day	and	night

'And rain fell on the earth forty days and forty nights.'

(ket nagtudo iti u:nos ti uppat nga pu:lo nga aldaw ken rabii.)

(35)

Ti	*ayte:ta*	*a*	*langit*	*s⟨in⟩⟨um⟩ay=de:=tid*
SG.OBL.DEF	only.DEM.DIST	LIG	day	⟨PST⟩⟨INTR⟩ride=POST=3PL.ABS

ta	*abang=i.*	*Ti*	*Nue*	*aydi*	*ti*	*asawa=na,*
OBL.INDF	ark=SPC	SG.ABS.PSN	Noah	and	SG.ABS.PSN	spouse=3SG.GEN

ayde:=tidi	*ta'lu*	*a*	*a:na:=di.*	*Sem,*	*Ham*	*aydi:*	*Japet*
and=PL.ABS.DEF	three	LIG	children=3PL.GEN	Shem	Ham	and	Japheth

ayde:=tidi	*assawa=di.*
and=PL.ABS.DEF	spouse=3PL.GEN

'On that very day Noah and his sons, Shem, Ham and Japheth, together with his wife and the wives of his three sons, entered the ark.'

(Iti dayta met la nga aldaw, limmugan ni Noe ken ti asa:wana iti daong. Kaduada dagiti tallo nga annakda—da Sem, Ham ken Japet ken dagiti assa:wada.)

(36)

S⟨in⟩⟨um⟩ay	*attanan*	*a*	*klase:*	*na*	*animal,*	*me"amu*
⟨PST⟩⟨INTR⟩ride	all	LIG	class/kind	GEN.INDF	animal	ADJ-kind

aydi:	*me"anting,*	*aytidi*	*mang-a:ra:ragiyag*	*sakay*	*aytidi*
and	ADJ-fear	PL.ABS.DEF	INTR-creep	and	PL.ABS.DEF

mang-ka:bangkabang=i	*aydi*	*kla:se*	*a*	*atanan*	*a*	*mangabèbbèr.*
INTR-crawl=SPC	and	class/kind	LIG	all	LIG	bird

'All kinds of animal, regardless of whether they are kind or fearful, whether they are creeping, or crawling, and all kinds of bird rode on the ark.'

(Limmu:gan met ti amin a kita ti animal, naa:mo ken naa:tap, dagiti agkarkarayam ken dagiti agkarkara:dap ken amin a ki:ta ti tumatayab.)

(37) *Ni-bi:lin*   *na*   *Dios,*   *pasasawan=tid*   *kalakala:se*
      PST.TR-command   GEN.INDF   God   spouse=3PL.ABS class/kind   LIG

      a   *manga:-to:lay*   *a*   *g⟨in⟩imit*   *na*   *Dios,*   *ni-bu:lun*
      STV-live   LIG   ⟨PST⟩   make   GEN.INDF   God   PST.TR-together

      ni   *Noe*   *ta*   *abang.*
      SG.GEN.DEF   Noah   OBL.INDF   ark

      'As God had commanded Noah, pairs of all creatures that have the breath of life in them came to Noah and entered the ark.'

      (Kas imbi:lin ti Dios, sangapagassawa:'an ti tunggal ki:ta ti sibibiag a parsua ti inku:yog ni Noe iti daong.)

(38) *Unnadda*   *na-sungdu,*   *r⟨in⟩ikip-an=di*   *ni*   *Ya:we*   *ay*
      after   PST.POT-finish   ⟨PST⟩shut-TR=POST   SG.GEN.DEF   Yahweh   GAP

      ruwa:ngan   *ni*   *abang=i.*
      door/gate   SG.GEN.DEF   ark=SPC

      'Then the Lord shut the gate of the ark.' (Kalpasanna, rinikpan ni Yahweh ti rua:ngan ti daong.)

(39) *Appat*   *a*   *pulu*   *a*   *langit*   *a*   *m⟨in⟩a-bayag*   *i*   *birèng.*
      four   LIG   ten   LIG   day   LIG   ⟨PST⟩POT-long   SG.ABS.DEF   flood

      ' For forty days the flood kept coming on the earth.'
      (Uppat a pulo nga aldaw a nagpa:ut ti layus.)

(40) *K⟨in⟩⟨um⟩a:man*   *i*   *wagèt*   *gindat*   *ta*   *l⟨in⟩⟨um⟩taw*
      ⟨PST⟩⟨INTR⟩big   SG.ABS.DEF   water   up.to   OBL.INDF   ⟨PST⟩⟨INTR⟩float

      ta   *abang.*
      OBL.INDF   ark

      'and as the waters increased they lifted the ark high above the earth.'
      (Dimmakkel ti danum agingga a timpaw ti daong.)

(41) *Gindat ta mang-kaka:-ka:man i wagèt,*

up.to   OBL.INDF   INTR-RDP-big   SG.ABS.DEF   water

mine:-bulud=di i abang.

⟨PST⟩POT-float=POST   SG.ABS.DEF   ark

'The waters rose and increased greatly on the earth, and the ark floated on the surface of the water.'

(Idi umada:lem nga umada:lem, nayan-a:nud ti daong.)

(42) *Nan-tuluy-tuluy a k⟨in⟩⟨um⟩a:man i wagèt gindat a*

PST.INTR-RDP-continue   LIG   ⟨PST⟩⟨INTR⟩big   SG.ABS.DEF   water   up.to   LIG

na-langpus aytidi magka-da-dingatu a bukid.

PST.POT-cover   PL.ABS.DEF   ?-RDP-high   LIG   mountain

'They rose greatly on the earth, and all the high mountains under the entire heavens were covered.' (Nagtultu:loy a dimmakkel ti danum agingga a nati:nep dagiti kangatowan a bantay.)

(43) *K⟨in⟩⟨um⟩a:man a k⟨in⟩⟨um⟩a:man gindat ta na-langpus*

⟨PST⟩⟨INTR⟩big   LIG   ⟨PST⟩⟨INTR⟩big   up.to   OBL.INDF   PST.POT-cover

i wagèt ta pitu a kilometro ta toktok

SG.ABS.DEF   water   OBL.INDF   seven   LIG   kilometer   OBL.INDF   peak

didi bukid=i.

PL.GEN/OBL.DEF   mountain=SPC

'The waters rose and covered the mountains to a depth of more than seven kilometer' (Immada:lem nga immada:lem ket ngimma:to ti danum iti pito a metro iti labes ti tuktok dagiti bantay.)

(44) *Nap-pati atanan a manga:-to:lay ta apaw na tapa.*

PST.INTR-die   all   LIG   POT-live   OBL.INDF   surface   GEN.INDF   soil

'Every living thing that moved on land perished'

(Natay amin a nabiag iti rabaw ti daga)

(45) *—tidi attanan tidi animal=i, ayde:=tidi ma:nu:=i,*

PL.ABS.DEF   all   PL.ABS.DEF   animal=SPC   and=PL.ABS.DEF   bird=SPC

ayde:=tidi   *arta*   *aydi*   *agani:.*

and=PL.ABS.DEF   Arta   and   non-Arta

'—birds, livestock, wild animals, all the creatures that swarm over the earth,'

(dagiti tumatayab, dagiti animal ken amin a tattao.)

(46)   *Nap-pati*   *atanan*   *a*   *atti*   *angès=na*   *ayti*   *tapa=y.*

PST.INTR-die   all   LIG   exist   breath=3SG.GEN   DEM.PROX   earth=SPC

'Everything on dry land that had the breath of life in its nostrils died.'

(Natay amin nga adda a:ngesna ditoy daga.)

(47)   *P⟨in⟩iliy-an*   *atanan*   *ni*   *Ya:we*   *atanan*   *a*   *manga:-to:lay*

⟨PST⟩remove-TR   all   SG.GEN.DEF   Yahweh   all   LIG   INTR-live

ti   *apaw*   *ni*   *tapa=y.*   *arta,*   *aydi*   *agani:,*   *aydi*

SG.OBL.DEF   surface   SG.GEN.DEF   soil=SPC   Arta   and   non-Arta   and

animal   *ayde:tidi*   *mangèbèbbèr=i.*

animal   and=PL.ABS.DEF   bird=SPC

'Every living thing on the face of the earth was wiped out: people and animals and the birds.' (Pinu:kaw ni Yahweh ti amin a sibibiag ditoy daga—tao, animal ken tumatayab,)

(48)   *Mep-piya=d*   *ti*   *Noe*   *ayde:=tidi*   *atti:*   *ti*

ADJ-good=POST   SG.ABS.PSN   Noah   and=PL.ABS.DEF   exist   SG.OBL.DEF

abang=i.

ark=SPC

'Only Noah was left, and those with him in the ark.'

(malaksid ni Noe ken dagiti kakaduana iti daong.)

(49)   *Awan*   *m⟨in⟩a-gtil*   *i*   *wagèt=i*   *ta*   *u:nus*   *na*

NEG   ⟨PST⟩POT-recede   SG.ABS.DEF   water=SPC   OBL.INDF   during   GEN.INDF

ta:-gatut   *a*   *langit*   *aydi*   *lima*   *a*   *hulu*   *a*   *langit.*

one-hundread   LIG   day   and   five   LIG   ten   LIG   day

'The waters flooded the earth for a hundred and fifty days.'

(Saan a nagimba:'as ti danum iti uneg ti sanga-gasut ket lima-pulo nga aldaw.)

(50)   *Awan*   *na-lipatan*   *na*   *Dios*   *ni*   *Noe,*   *ayde:=tidi*

      NEG   PST.POT-forget   GEN.INDF   God   SG.GEN.DEF   Noah   and=PL.ABS.DEF

      animal=i   *a*   *top=na*   *ayta*   *abang.*

      animal=SPC   LIG   companion=3SG.GEN   there   ark

      'But God remembered Noah and all the wild animals and the livestock that were with him in the ark,'

      (Saan a nalipa:tan ti Dios ni Noe ken dagiti amin nga animal a kaduana iti da'ong.)

(51)   *p⟨in⟩a-bègbèg=na*   *nar-rugi*   *a*   *k⟨in⟩⟨um⟩illèk*   *i*

      ⟨PST⟩CAUS-wind=3SG.GEN   PST.INTR-begin   LIG   ⟨PST⟩⟨INTR⟩small   SG.ABS.DEF

      wagèt.

      water

      'and he sent a wind over the earth, and the waters receded.'

      (Pinaga:nginna ket nangrugi a bimmassit ti danum.)

(52)   *Na-serran*   *i*   *barunibun*   *ayta*   *diso:no:*   *na*   *tapa,*

      PSTPOT-close   SG.ABS.DEF   spring   DEM.DIST   inside   GEN.INDF   earth

      sakay   *aytidi*   *ruwa:ngan*   *na*   *wagèt*   *na*   *dingatu.*

      and   PL.ABS.DEF   gate   GEN.INDF   water   GEN.INDF   heaven

      G⟨in⟩⟨um⟩i:nèk   *i*   *pu:nèd.*

      ⟨PST⟩⟨INTR⟩stop   SG.ABS.DEF   rain

      'Now the springs of the deep and the floodgates of the heavens had been closed, and the rain had stopped falling from the sky.'

      (Narikpan dagiti ubbog iti uneg ti daga ken dagiti rua:ngan ti danum iti tanga:tang. Nagsardeng ti tu:do,)

(53)   *Na-se:-sennut*   *a*   *m⟨in⟩a-gti:l-an*   *i*   *wagèt*   *ta*

      PST.INTR-RDP-gradual   LIG   ⟨PST⟩POT-recede-TR   SG.ABS.DEF   water   OBL.INDF

      diso:no: *na*   *ta:-gatut*   *a*   *langit*   *aydi:*   *lima*   *a*   *pulu*   *a*

      inside   GEN.INDF   one-hundred   LIG   day   and   five   LIG   five   LIG

      langit.

      day

'The water receded steadily from the earth. At the end of the hundred and fifty days the water had gone down,' (ket nain-i:nut a nagimba:'as ti danum iti u:nos ti sanga-gasut ket limapulo nga aldaw.)

(54) | *Ta* | *me:kata:hulu* | *aydi* | *pitu* | *a* | *langit* | *ta* | *me:kapitu* | *a* |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| OBL.INDF | tenth | and | seven | LIG | day | OBL.INDF | seventh | LIG |

bulan,	*m⟨in⟩e:-sadsad*	*i*	*abang*	*ta*	*bukibukid*	*na*
month	⟨PST⟩POT-rest.set	SG.ABS.DEF	ark	OBL.INDF	mountain	GEN.INDF

Ara:rat.
Ararat

'and on the seventeenth day of the seventh month the ark came to rest on the mountains of Ararat.' (Iti maika-17 nga aldaw iti maikapito a bu:lan, naisadsad ti daong iti kabambanta:yan ti Ara:rat.)

(55) | *Nan-dare-darettyo* | *a* | *k⟨in⟩⟨um⟩illèk* | *i* | *wagèt,* | *ta* |
| --- | --- | --- | --- | --- | --- |
| PST.INTR-RDP-straight | LIG | ⟨PST⟩⟨INTR⟩small | SG.ABS.DEF | water | OBL.INDF |

dutul	*a*	*langit*	*ta*	*me:kata:hulu*	*a*	*bulan,*	*p⟨in⟩⟨um⟩e:ta*
first	LIG	day	OBL.INDF	tenth	LIG	month	⟨PST⟩⟨INTR⟩show

tuktuk	*didi*	*bukid=i.*
peak	PL.GEN/OBL.DEF	mountain=SPC

'The waters continued to recede until the tenth month, and on the first day of the tenth month the tops of the mountains became visible.' (Nagtuloy a bimmaba ti danum ket iti umuna nga aldaw ti maika-10 a bu:lan, nagparang ti tuktok dagiti bantay.)

(56) | *Ta* | *na-sungdu* | *i* | *appat* | *a* | *hulu* | *a* | *langit,* |
| --- | --- | --- | --- | --- | --- | --- | --- |
| OBL.INDF | PSTPOT-end | SG.ABS.DEF | four | LIG | ten | LIG | day |

b⟨in⟩ukkat-an	*ni*	*Nuwe*	*i*	*ta:wa*	*na*	*abang.*
⟨PST⟩open-TR	SG.GEN.DEF	Noah	SG.ABS.DEF	window	GEN.INDF	ark

'After forty days Noah opened a window he had made in the ark' (Kalpasan ti uppat nga pu:lo nga aldaw, nangilukat ni Noe iti maysa a ta:wa ti daong)

(57)   *L⟨in⟩agsiw-an=na*   *si:pang*   *a*   *wakwak.*

⟨PST⟩let.out-TR=3SG.GEN   one   LIG   crow

'and sent out a raven,' (ket nangibu:los iti uwak.)

(58)   *Awan*   *s⟨in⟩⟨um⟩u:li*   *i*   *wakwak*   *konta*   *in-um-bèr*   *a*

NEG   ⟨PST⟩⟨INTR⟩return   SG.ABS.DEF   crow   but   PST-INTR-fly   LIG

gindat   *ta*   *l⟨in⟩e:but=na*   *in-inta=na*   *amma*   *awan=di*

up.to   OBL.INDF   ⟨PST⟩around=3SG.GEN   PST-see=3SG.GEN   if   NEG=POST

ta   *wagèt.*

OBL.INDF   water

'and it kept flying back and forth until the water had dried up from the earth.' Saan a nagsubli ti wak ngem nagtayab a naglawlawlaw agingga iti awanen ti danum.)

(59)   *Unadda=wa*   *p⟨in⟩a-bbèr=na*   *kalapa:ti*   *intan=na*   *amma*

after=that   ⟨PST⟩CAUS-fly=3SG.GEN   dove   see.TR=3SG.GEN   if

na-gti:l-an   *i*   *wagèt.*

PST.POT-recede-TR   SG.ABS.DEF   water

'Then he sent out a dove to see if the water had receded.' (Kabayatanna, nangipatayab ni Noe iti kalapa:ti tapno kitaenna no imba:'asen ti danum.)

(60)   *Konta*   *na-langpus=tep*   *i*   *tapa*   *ta*   *wagèt,*   *awan*

but   PST.POT-cover=ANT   SG.ABS.DEF   earth   OBL.INDF   water   NEG

ta   *me:ta*   *i*   *kalapa:ti*   *a*   *dagpu:-an=na.*

OBL.INDF   POT.see   SG.ABS.DEF   dove   LIG   land-TR=3SG.GEN

'But the dove could find nowhere to perch because there was water over all the surface of the earth.' (Ngem gapu ta nati:nep pay laeng ti daga, awan ti nasarakan ti kalapati a pagdissoanna.)

(61)   *S⟨in⟩⟨um⟩u:li*   *ta*   *abang,*   *in-iggam-an*   *ni*   *Noe*   *sakay*

⟨PST⟩⟨INTR⟩return   OBL.INDF   ark   PST-hold-TR   SG.GEN.DEF   Noah   and

ni-so:li=na   *ta*   *diso:no:.*

PST.TR-return=3SG.GEN   OBL.INDF   inside

'It returned to the ark. He took it and brought it back to himself in the ark.'

(Nagsubli iti daong ket tiniliw ni Noe sana insubli iti uneg.)

(62)   *P⟨in⟩a-sale:gèd*   *ni*   *Nue*   *i*   *pitu*   *a*   *langit,*   *sakay*
       ⟨PST⟩CAUS-wait   SG.GEN.DEF   Noah   SG.ABS.DEF   seven   LIG   day   and

       n-alap=na=d=mandi   *kalapa:ti*   *linègsiw-an=na=d=mandi.*
       PST-get=3SG.GEN=POST=again   dove   ⟨PST⟩let.free-TR=3SG.GEN=POST=again

       'He waited seven more days and again sent out the dove from the ark.'

       (Pinala:bas ni Noe ti pito nga aldaw sana manen imbu:los ti kalapa:ti.)

(63)   *Ta*   *r⟨in⟩⟨um⟩ingdèm,*   *nas-su:li=dya*   *kalapa:ti.*
       OBL.INDF   ⟨PST⟩⟨INTR⟩dark   PST.INTR-come.back=3SG.OBL   dove

       'The dove returned to him in the evening.'

       (Iti sumipnget, nagsubli kenkuana ti kalapa:ti.)

(64)   *Atti*   *sari:wa*   *a*   *don*   *na*   *uli:bo*   *ayta*   *labi*   *na*
       exist   green   LIG   leaf   GEN.INDF   olive   there   mouth   GEN.INDF

       kalapa:ti.
       dove

       'There in its beak was a freshly plucked olive leaf!'

       (Adda nalangto a bulong ti oli:bo iti sippit ti kalapa:ti.)

(65)   *Ènsi:na*   *naka-tataw-an*   *ni*   *Noe*   *a*   *d⟨in⟩⟨um⟩ibbi*
       so.that   PST.POT-know-TR   SG.GEN.DEF   Noah   LIG   ⟨PST⟩⟨INTR⟩below

       i   *wagèt.*
       SG.ABS.DEF   water

       'So that Noah knew that the water had receded.'

       (Daytoy ti nakaammoan ni Noe a bimmaban ti danum.)

(66)   *P⟨in⟩a-sale:gèd=na=mandi*   *i*   *pitu*   *a*   *langit,*
       ⟨PST⟩CAUS-pass.by=3SG.GEN=again   SG.ABS.DEF   seven   LIG   day

       sakay=na   *p⟨in⟩a-bbèr=na*   *i*   *kalapa:ti.*   *Awan=di*
       and=3SG.GEN   ⟨PST⟩CAUS-fly=3SG.GEN   SG.ABS.DEF   dove   NEG=POST

       nas-su:li   *in-um-bèr.*
       PST.INTR-return   PST-INTR-fly

'He waited seven more days and sent the dove out again, but it did not return to him any longer.'

(Pinala:basna manen ti pito nga aldaw sa:na impatayab ti kalapa:ti. Saanen a nagsubli ti tumatayab.)

(67)
Atti:=di	*dagun*	*ni*	*Nue*	*ènnèm*	*a*	*gatut*	*aydi:*
exist=POST	year	SG.GEN.DEF	Noah	six	LIG	hundred	and

si:pang;	*ta*	*dutul*	*a*	*langit*	*ta*	*dutul*	*a*	*bulan,*
one	OBL.INDF	first	LIG	day	OBL.INDF	first	LIG	month

p⟨in⟩ily-an	*ni*	*Noe*	*i*	*atèp*	*na*	*abang..*
⟨PST⟩remove-TR	SG.GEN.DEF	Noah	SG.ABS.DEF	roof	GEN.INDF	ark

'In the first day of the first month of Noah's six hundred and first year, Noah removed the covering from the ark.'

(Agtawen idin ni Noe ti innem nga gasut ket maysa. Iti umuna nga aldaw ti umuna a bulan, inikkat ni Noe ti atep ti daong, inwarasna ti panagkitana ket nakitana nga agmagmagan ti daga.)

(68)
Paw-wa:nangwang=na	*i*	*mata=na,*	*n-inta=na*
PRG-cast=3SG.GEN	SG.ABS.DEF	eye=3SG.GEN	PST-see=3SG.GEN

memem-madi=d	*i*	*tapa.*
ADJ.RDP-dry=POST	SG.ABS.DEF	soil

'He looked around, and found the soil completely dried.'

(69)
P⟨in⟩unan	*na*	*Dios*	*ni*	*Nue,*
⟨PST⟩say	GEN.INDF	God	SG.GEN.DEF	Noah

'God said to Noah,' (Kinuna ti Dios ken ni Noe,)

(70)
Mal-latto:ng=am=di	*a*	*passa:sawa*	*pati*	*tidi*
INTR-outside=2PL.ABS=POST	LIG	couple	even	PL.ABS.DEF

a:na:=mu=y	*ayde:=tidi*	*assawa=di.*
children=2SG.GEN=SPC	and=PL.ABS.DEF	spouse=3PL.GEN

' "Come out of the ark, you and your wife and your sons and their wives.'

("Rummuarkayon nga agassa:wa agraman dagiti annakmo ken dagiti assa:wada.)

(71)   *Pa-latto:ng-an=mu=d*   *attanan*   *tidi*   *mangèbè-bbèr=i*   *sakay*

       CAUS-outside-TR=2SG.GEN=POST   all   PL.ABS.DEF   INTR.RDP-fly=SPC   and

       aytidi   *animal=i,*

       PL.ABS.DEF   animal=SPC

       'Bring out every kind of living creature that is with you—the birds, the animals'

       (Paruarem met dagiti amin a tumatayab ken animal;)

(72)   *Pa-bay-an=mu*   *a*   *um-a:du=tid,*   *take:ta*

       CAUS-leave-TR=2SG.GEN   LIG   INTR-many=3PL.ABS   so.that

       um-a:du=tid   *ta*   *apaw*   *na*   *tapa.*

       INTR-many=3PL.ABS   OBL.INDF   surface   GEN.INDF   earth

       'so they can multiply on the earth and be fruitful and increase in number on the

       earth." ' (Bayam nga umadu:da tapno agwarasda iti rabaw ti daga.")

(73)   *L⟨in⟩⟨um⟩attong*   *ti*   *Nue*   *ta*   *abang,*   *pati*

       ⟨PST⟩⟨INTR⟩outside   SG.ABS.PSN   Noah   OBL.INDF   ark   even

       asawa=na,   *pati*   *tidi*   *a:na:=di,*   *aydi:*   *assawa=di.*

       spouse=3SG.GEN   even   PL.ABS.DEF   children=3PL.GEN   and   spouse=3PL.GEN

       'So Noah came out, together with his sons and his wife and his sons' wives.' (Rimmuar

       ngarud iti daong ni Noe, ti asawana, dagiti annakda ken dagiti assawada.)

(74)   *L⟨in⟩⟨um⟩attong=tid*   *a*   *attanan*   *tidi*   *animal=i,*

       ⟨PST⟩⟨INTR⟩outside=3PL.ABS   LIG   all   PL.ABS.DEF   animal=SPC

       ayde:=tidi   *mangèbè-bbèr=i*

       and=PL.ABS.DEF   INTR.RDP-fly=SPC

       'All the animals and all the birds came out of the ark'

       (Rimmuar met dagiti amin nga animal ken tumatayab.)

(75)   *Nang-gimit*   *ti*   *Nue*   *ta*   *sinanbuka:gan.*

       PST.INTR-make   SG.ABS.PSN   Noah   OBL.INDF   alter

       'Noah made a alter,' (Nangba:ngon ni Noe iti altar a maipaay ken ni Yahweh.)

(76)   *M⟨in⟩ang-alap*   *ta*   *ansasi:pang*   *a*   *meded-dalus*   *a*   *animal*

       ⟨PST⟩INTR-get   OBL.INDF   each.one   LIG   ADJ.RDP-clean   LIG   animal

aydi:	mangèbè-bbèr	sakay=na	d⟨in⟩u:tung-an=na		ta
and	INTR.RDP-fly	and=3SG.GEN	⟨PST⟩burn.hair-TR=3SG.GEN		OBL.INDF

bi:yèn	na	altar	a	uman	na	ny-a:tèd=na.
near	GEN.INDF	alter	LIG	like	GEN.INDF	PST.TR-get=3SG.GEN

‘taking some of all the clean animals and clean birds, he sacrificed burnt offerings on it.’ (Nangala iti saggaysa kadagiti maibi:lang a nadalus nga animal ken tumatayab sana pinuoran dagitoy iti altar a kas da:ton.)

(77)

M⟨in⟩a-angut	ni	Nue	meses-salub	a	angut,
⟨PST⟩POT-smell	SG.GEN.DEF	Noah	ADJ.RDP-fragrant	LIG	smell

‘The Load smelled the pleasing aroma,’

(Nalang-ab ni Yahweh ti nabanglo nga ayamu:’om ti sakrifisio)

(78)

p⟨in⟩nan=na	ta	no:not=na :
⟨PST⟩say=3SG.GEN	OBL.INDF	mind=3SG.GEN

‘and said in his heart;’ (ket kinunana iti na:kemna,)

(79)

“Awa:ng=u	y-atmur	i	tapa	meg-gahu	ta	pag-gimt-an
NEG=1SG.GEN	TR-curse	SG.ABS.DEF	soil	ADJ-cause	OBL.INDF	PRG-do-TR

na	Arta.
GEN.INDF	people

‘Never again will I curse the ground because of humans,’

(Pulos a diakton ilunod ti daga gapu iti aramid ti tao.)

(80)

Tata:w=u	a	marakèt	i	angès=na
know=1SG.GEN	LIG	bad	SG.OBL.DEF	personality/nature=3SG.GEN

gindat	ta	killèk=na.
up.to	OBL.INDF	childhood=3SG.GEN

‘(even though) the human heart is evil from childhood.’

(Ammok a da:kes ti panu:notna mani:pud kinaubingna.)

(81)

Awa:ng=u=d	pap-perdi-n	i	angès	na	attanan
NEG=1SG.GEN=POST	PRG-destroy-TR	SG.ABS.DEF	breath	GEN.INDF	all

a atti: angès=na.

LIG exist breath=3SG.GEN

'And never again will I destroy all living creatures,'

(Diakton dadaelen ti aniaman nga adda biagna)

(82) *umma na g⟨in⟩imi:t=u ta dutul.*

as.if GEN.INDF ⟨PST⟩do=1SG.GEN before

'as I have done.' (a kas iti inaramidko.)

(83) *Atti:=de:di tyempo na pammula, aydi tyempo na*

exist=will time GEN.INDF seeding and time GEN.INDF

pagga:ni,

harvesting

'seedtime and harvest will not cease,'

(addanto latta tiempo ti panagmula ken tiempo ti panagapit)

(84) *Atti:=de:di panawen na dagnin, aydi panawen na pasu,*

exist=will weather GEN.INDF cold and weather GEN.INDF hot

'cold and heat will not,' (addanto latta panawen ti lam-ek ken panawen ti pu:dot,)

(85) *tyempo na tag'araw, aydi tyempo na pu:nèd,*

time GEN.INDF drought and time GEN.INDF rain

'dry season and rainy season,' (panawen ti kalgaw ken panawen ti tudtudo.)

(86) *Atti:=de:di langit, aydi biyungèt,*

exist=will day and night

'and day and night.' (Addanto latta aldaw ken rabii.")

(87) *B⟨in⟩endisi'o:n-an ni Apo Dios ti Noe aytidi*

⟨PST⟩bless-TR SG.GEN.DEF God SG.ABS.PSN Noah PL.ABS.DEF

a:na:=na=y.

childen=3SG.GEN=SPC

'The God blessed Noah and his children,'

(Binendisionan ti Dios ni Noe ken dagiti annakna.)

(88) *K⟨in⟩unan=na,*

⟨PST⟩say=3SG.GEN

'He said,' (Kinunana,)

(89) *Mang-nga:na:=yam*   *ta*   *me"a:du,*

INTR-bear.child=2PL.ABS   OBL.INDF   many

'Give birth to many children' ("Aganakkayo iti adu)

(90) *take:ta* *me'e'-'a:du*   *a:na:=muyu*   *ta*   *attanan*   *a*   *su:luk*

so.that   ADJ.RDP-many   children=2PL.GEN   OBL.INDF   all   LIG   part

ni   *tapa=y.*

SG.GEN.DEF   ground=SPC

'so that you will have plenty of children in all areas of the earth.'

(tapno agwa:ras dagiti kaputo:tanyo iti amin a paset ti daga.)

(91) *Aytay,*   *ma-balin=muyu*   *a*   *an-èn*   *aytay,*   *uman*   *didi*

now   POT-possible=2PL.GEN   LIG   eat-TR   now   just.as   PL.GEN/OBL.DEF

mula=y   *amma*   *mel-lagu*   *a*   *mula.*

plant=SPC   if   ADJ-green   LIG   plant

'Now you can eat everything such as green plants.

(Ita, mabalinyo a kanen dagitoy, kasta met dagiti nalangto a mula.)

(92) *Y-a:tèd=u*   *aytidi:*   *a*   *anèn=muyu.*

TR-give=1SG.GEN   DEM.PROX   LIG   eat-TR=2PL.GEN

'I will give you these kinds of food.'

(Itedko amin daditoy a tara'onyo.)

(93) *Atti:*   *ta:me:ta*   *awan=muyu*   *an-èn,*

exist   different   NEG=2PL.GEN   eat-TR

'But there is another thing that you cannot eat:'

(Adda laeng ba:nag a saanyo a kanen)

(94) *I*   *bubuy*   *a*   *atti:=tep*   *ma'lèm=na,*   *i*   *angès*   *a*

SG.ABS.DEF   meat   LIG   exist=ANT   blood=3SG.GEN   SG.ABS.DEF   life   LIG

atti   ma'lèm.

exist   blood

'meat that has its lifeblood still in it.'

(ti karne nga adda pay laeng da:rana; ngamin, ti biag adda iti da:ra.)

(95) *Amma   atti: mam-a-pati   ta   arta,   pa-pati:-ng=u*

if   exist   INTR-CAUS-die   OBL.INDF   person   CAUS-die-TR=1SG.GEN

tamman,   maski   ta   animal,   pa-pati:-ng=u   tamman.

again   even   OBL.INDF   animal   CAUS-die-TR=1SG.GEN   again

'If there is someone/something that kills people, I will kill it. I will kill it even it is an

animal.' (No adda mangpatay iti tao, patayek met, uray ti animal.)

(96) *Pa-pati:-ng=u=d=man   a   mam-a-pati=ta   a*

CAUS-die-TR=1SG.GEN=POST=CONTR   LIG   INTR-CAUS-die=DEM.DIST   LIG

pare:hu=na.

same=3SG.GEN

'I will kill the murderer if it is a human.'

(Patayek met ti siasinoman a mangpatay iti pa:dana a tao.)

(97) *Mepep-piya   ma   me'-'a:du   a:na:=muyu   take:ta*

ADJ-good   if   ADJ-plenty   children=2PL.GEN   so.that

m-atti:=de:=tid   tidi   a:na:=muyuy   ta   attanan

INTR-exist=POST=3PL.ABS   PL.ABS.DEF   children=2PL.GEN=SPC   OBL.INDF   all

a   su:luk   na   tapa.

LIG   part   GEN.INDF   ground

'It is great if your children increase in number in every place on earth.'

("Masa:pul nga adu ti annakyo tapno agnaedto dagiti kaputotanyo iti amin a paset ti

daga.")

(98) *P⟨in⟩an   na   Dios   ni   Noe   ayde:=didi*

⟨PST⟩say   GEN.INDF   God   SG.GEN.DEF   Noah   and=PL.GEN/OBL.DEF

a:na:=na=y.

children=3SG.GEN=SPC

'God said to Noah and his children,'

(Kinuna ti Dios ken ni Noe ken kadagiti annakna,)

(99) *Aytay,   maki-tara:tu=d=tèn=dam   sakay   tidi*

now   INTR-contract=POST=1SG.ABS=2PL.OBL   and   PL.ABS.DEF

a:na:=mu=y,   sakay   tidi   atti: angès=na

children=2SG.GEN=SPC   and   PL.ABS.DEF   exist   life=3SG.GEN

'I establish my covenant with you, your children, and all creatures.' ("Ita:, mak-itu:lagakon kadakayo ken kadagiti kaputu:tanyo ken kadagiti amin nga adda biagna)

(100) *Si:yèy   pamam-bu:bu:d-an=tam.*

DEM.PROX   PROG-RDP.said-TR=1+2PL.GEN

'This is our covenant:'

(Daytoy ti pagtutula:gantayo:)

(101) *Ipa-gassi:ng=u   i   i-kari=ku=d*

TR.CAUS-contract=1SG.GEN   SG.ABS.DEF   TR-promise=1SG.GEN=POST

awa:ng=u=d   pili-an   attanan   a   atti   angès=na.

NEG=1SG.GEN=POST   remove-TR   all   LIG   exist   life=3SG.GEN

'I will promise never to destroy all life again.'

(Ikarik a saankonton a puka:wen ti amin a sibibiag)

(102) *Awan=de:di   ta   birèng   aydi: ka:man   a   wagèt   a*

NEG=future   OBL.INDF   flood   and   big   LIG   water   LIG

mam-a-pati   ta   attanan   a   atti: angès=na.

INTR-CAUS-die   OBL.INDF   all   LIG   exist   life=3SG.GEN

'Never again will there be a flood to destroy all life.'

(awanton ti layus a mangdada:el iti daga.)

(103) *Sayna   i   pang-inta-n=muyu   ta   meb-bayag   a*

DEM.MED   SG.ABS.DEF   NMZ-see-TR=2PL.GEN   OBL.INDF   ADJ-long.time   LIG

ni-kari=ku   dam   aydi: attanan   a   atti: angès=na.

PST.TR-promise=1SG.GEN   2PL.OBL   and   all   LIG   exist   life=3SG.GEN

'This is the sign of the covenant I am making between me and you and every living

creature with you'

(Kas pakakitaan iti agnanayon a tu:lagko kadakayo ken iti amin nga adda biagna,)

(104)　*I-wa=ku*　　　　　*bulala:yaw*　*ta*　　　*kunèm.*

　　　　TR-do=1SG.GEN　rainbow　　OBL.INDF　cloud

　　　　'I will set my rainbow in the clouds.'

　　　　(ikabilko ti bullala:yawko iti u:lep.)

(105)　*Sayna*　　　*i*　　　　　*pa:ng-intan=muyu*　　*ta*　　　　*ni-kari=ku*

　　　　DEM.MED　SG.ABS.DEF　PRG-see-TR=2PL.GEN　OBL.INDF　PST.TR-promise=1SG.GEN

　　　　ti　　　　　*tapa=y.*

　　　　SG.OBL.DEF　ground=SPC

　　　　'it will be the sign of the covenant between me and the earth.'

　　　　(Daytoy ti tanda ti pannakitu:lagko iti lu:bong.)

(106)　*Basta*　　　*atti:*　*kunèm*　*ayta*　　　*dingatu*　*p⟨um⟩e:ta*　*i*

　　　　whenever　exist　cloud　DEM.DIST　heaven　⟨INTR⟩show　SG.ABS.DEF

　　　　bulala:yaw,

　　　　rainbow

　　　　'Whenever I bring clouds over the earth and the rainbow appears in the clouds,'

　　　　(Tunggal adda u:lep iti tanga:tang ket agparang ti bullala:yaw,)

(107)　*na:na:b-èng=u=d=di*　　　　　　　*ni-bu:d=u=ti*

　　　　recall-TR=1SG.GEN=POST=future　PST.TR-say=1SG.GEN=SPC

　　　　ni-kari=ku　　　　　　　　　*dam,*　　　*sakay*　*tidi*　　　*animal=i,*

　　　　PST.TR-promise=1SG.GEN　2PL.OBL　and　　PL.ABS.DEF　animal=SPC

　　　　'I will remember my covenant between me and you and all living creatures of every

　　　　kind' (laglagipekto ti karik kadakayo ken kadagiti animal)

(108)　*awan=de:di*　*ta*　　　*birèng*　*a*　*mangi:-bulud*　*tidi*　　　*atanan*　*a*

　　　　NEG=future　OBL.INDF　flood　LIG　INTR-destroy　PL.ABS.DEF　all　　LIG

　　　　p⟨in⟩ara:t=u.

　　　　⟨PST⟩create=1SG.GEN

　　　　'Never again will the waters become a flood to destroy all life.'

(awanton ti layus a mangpu:kaw kadagiti amin a parsua.)

(109) *Amma*   *p⟨um⟩e:ta*   *bulala:yaw*   *ta*   *kunèm,*

if   ⟨INTR⟩show   rainbow   OBL.INDF   cloud

'Whenever the rainbow appears in the clouds,'

(No agparang ti bullala:yaw iti u:lep,)

(110) *na:na:b-èng=u=d*   *ni-bu:d=u=ti*   *a*   *mebeb-bayag*

recall-TR=1SG.GEN=POST   PST.TR-say=1SG.GEN=SPC   LIG   ADJ.RDP-long.time

a   *ni-kari=ku*   *dam*   *attanan*   *a*   *manga:-to:lay* *a*

LIG   PST.TR-promise=1SG.GEN   2PL.OBL   all   LIG   STV-live   LIG

p⟨in⟩ara:t=u   *ta*   *apaw*   *na*   *tapa.*

⟨PST⟩create=1SG.GEN   OBL.INDF   surface   GEN.INDF   soil

'I will see it and remember the everlasting covenant between God and all living crea-
tures of every kind on the earth." '

(maki:takto ket malagipko ti agnana:yon a pannakitulagko kadagiti amin a sibibiag
a parsua iti daga.)

(111) *Si:yèy*   *pa:ng-inta-n*   *ta*   *kari=ku=dam*   *attanan*   *a*

DEM.PROX   NMZ-see-TR   OBL.INDF   promise=1SG.GEN=2PL.OBL   all   LIG

p⟨in⟩ara:t=u   *a*   *atti:*   *angès=na.*

⟨PST⟩create=1SG.GEN   LIG   exist   life=3SG.GEN

'This is the sign of the covenant I have established between me and all life on the
earth.' (Daytoy ti pagilasi:nan ti tu:lagko kadagiti amin a sibibiag a parsua.)

Appendix B

Lexicon

Lexicon is configured as a root-based dictionary, in which all the derived lexical items are listed under their root word entries. Note that this lexicon does not include person forms, demonstratives, nominal markers, specificity markers, verbal affixes, which were summarized in **Appendix D**. This is configured with Fieldworks Language Explorer (SIL International), exported via Pathway and OpenOffice. Abbreviations used in the lexicon are shown below:

(word class)		(semantic relation)	
adj	adjective	***ant:***	antonym
adv	adverb	***cal:***	calendar relation
coord	coordinator	***cf.***	compare
intrg	interrogative pronoun	***gen:***	generic relation
interj	interjection	***pt/wh:***	part-whole relation
n	noun	***spec:***	specific relation
num	numeral	***syn:***	synonym
phs	phasal marker (enclitic)		
pot.v	potentive verb	(misc.)	
stat.v	stative verb	fr. var.	free variation
subord	subordinator		
vi, vt	intransitive, transitive verb		

A a

a *lig Ay waget=i a meppasu* hot water

a:du *n* many, much *mi''a:du a wakwak* many crows der. a:duwan

me''a:du *adj* many, much

uma:du *vi* increase the amount of something, become a lot of *take:ta uma:du=man=de:=tid ayti apaw ni tapa=y.* so that their population will again increase in this world.

a:duwan some, other *a:duwan a agani: nangeàdèm, i a:duwan=i, matatim=tid.* some people were sleeping; the others were drinking. *syn:* **ka:ruwan**.

a:gèw *n* ginger

a:gid *n* a need

ma:gid *vi* request

a:gidèn *vt* need something

manga:gid *vi* need

panga:gidèn *n* what someone needs

a:i:na

a:nu *intrg* what *A:nu kabbat=mu?* What do you want? *Awa:ng=u tataw ma a:nu mepeppiya.* I do not know what/which is good.

a:nus *n*

me''a:nus *adj* kind

a:ti:ng *n* hearing

a:ti:ngen *vt* hear *Panga:ti:ngen=mi i lagip=di.* I hear their voices. *Na:ti:ng=u.* I heard it.

maka:ting *pot.v* can hear

aba *n* mat *Manggimit ta aba.* They weave a mat. ["aba" is one of the most prominent cultural products seen in Arta, which is made from "bidi:yu" and weaved by Arta women. They sell it to non-Arta people to buy groceries such as rice and clothes.]

aba'abba *n* kind of basketry technique, crossed weave

abaga:tan *n* south *ant:* **dibiliw**. PAn *SabaRat (south wind?)

abal *n* beetle

abang *n* boat *Manggimi:t=a ta ka:man a abang* Make a big boat (ark).

abbit *n* a cloth for carrying a baby

abbi:tèn *vt* carry a baby with a cloth

abi: *n* body *Awan ka:man i abi:=na=y.* His body is not big.

abu *n* ash *syn:* **dupug**.

abut *n* hole *Nattannag=di ti abut=ti.* It has fallen into that hole. *abut na talinga* earhole, lug-hole

addèp *n* extinguish

addèpèn extinguish (fire)

adigi *n* housepost, pillar arigi in Ibanag

adin *intrg* where

adi:ni *intrg* where (present)

adin-ti *intrg* where (past) *Adin-ti attanan=mu=y.* Where were you? Where are you from?

adu:yu *n* far, distant

me''adu:yu *adj* far, distant *Me''adu:yu angayan=na.* It goes far (from here).

timmadu:yu *stat.v* stay distant from

umadu:yu *vi* go far away

adung *n* nose

agani: *n* person (non-Negrito) *ant:* **arta 3**.

aggani: *n* pl.

agi *n* **1)** tradtional clothes of Arta wored by women. *ant:* **pulot**. **2)** clothes in general *Pabbamba:l=ami didi agi=mi=ti.* We were washing our clothes (there). *syn:* **baruwa:si**.

Agta 1) Casiguran Agta, Nagtipunan Agta people, or their language **2)** Negrito in general including Arta people/language

agte, agtay *n* liver

ahu *interj* ouch *Ahu, makayebyeb=di:=ten.* Ouch, I'm about to pee.

aka cf. teka (Bintulu), ongka (Siang) *n* elder sibling *syn:* **kakka**.

mina:ka *n* late older sibling

akkadi *interj* ouch

akkup cf. akkup (Yogad) *n*

akkupèn *vt* scoop with both hands, collect

al'u *n* mortar, grinder

alad *n* wing

alad na pangal *n* feather of arrow

alallayan *n* parent, great-grandparent

alap *n* get

alapèn *vt* hold, seize *Inapa:p=u i attanan a pattu:rek.* I seized all of the pens.

ma'alap *pot.v* can get, obtain

mangalap *vi* get *Awan=tid mangalap ta dut* They do not get/collect firewood.

alat *n* basket for fishing

ali *n* dig

aliyan *vt* dig *Aliyan didi ina=mi=ti.* Our late mothers dug them (taro, yam).

mangali *vi* dig (taro, yam, etc.) *Mangali tidi ina=mi=ti ta galiyang.* Our late mothers dig kind of taro. (Anthropology Note: In traditional Arta culture, it is women who dig taro, yam, and root crops (hunting is conducted by men).)

aligusgus *n* fingerprint

alilyo:gèn *n* kind of ghost crying "rerorerorero..." *gen:* **be:kut**. cf. Casiguran Dumagat 'kind of bird, said to indicate bad luck if it crosses your path

alistu *adj* quick, swift; short in time,

alummanay *cf:* **dure:dure:**, **miyu:miyu:**. *n* a kind of cicada, which is relatively big (as big as a big toe) and lives in a forested area. The scientific name is not identified yet.

ama *cf:* **amèng**. *n* father *Lagipèn ni ama=ku=y.* My father says it.

amma₂ *n* pl.

amèng *cf:* **ama**. *n* father (in vocative use)

amma₁ *subord* if

amu *n*

me''amu *adj* kind

an *n* to eat

anèn *vt* eat something

ipan *vt* feed, have someone eat *Awan ta ipa:ngodiya* I have nothing to feed him.

mamangan *vi* eat *Mmanga:ngitam=di.* Let's eat.

pa:nan *vt* feed someone

panga:nèn *n* 1) food 2) be eating

=an *adv* hearsay *Ninta=na, atti:=yan minampe:si ta sapa:ng=u.* She saw it; it seems that there was something who whipped on my buttocks.

ana: *n* (someone's) child *ana: ni Singes* Singes's child

ka''ana: *n* childhood

yana: *vt* give birth to a child

a:na: *n* pl.

ana:haw < Tag. *n* a kind of tall palm, Livistona rotundifolia. < Tag.

andi *n* thing *Andi=muyu=y.* This is yours.

angarigan *vt* necessary

angay *n* go to, move to

angayan *vt* go to *Me''adu:yu angayan=na.* It goes far (from here.)

mangay *vi* go *Mangay ta Maddela.* S/he will go to Maddela.

yangay *vt* bring something

pa'angay *vt* let/make someone go somewhere *Pina'anga:y=u pinapangiskwela.* I made him to go to school.

angès *n* 1) breath 2) life *Appi:rit i angès=na=y.* His/her life was short. 3) personality, character *Marakèt i angès=na.* S/he has a bad personality

maka'a:ngès *pot.v* can breathe

angut *n* scent, smell *Atti panga:ngutangu.* I have some smell.

angutan *vt* kiss *Angut-an=tataw ma kabba:t=mu* I'll kiss you if you like.

angutèn *vt* smell *Nangu:tu i binara:yan.* I smelled the wine. *Panga:gutangu i atuk=i.*

mangi''anga:ngut *vi* (they) kiss (each other) *Pa:ngi''anga:ngut tid.* They are kissing each other.

mangi''angut *vi* kiss each other

ankel *n* uncle

ansisit *n* kind of small ghost *gen:* **be:kut**.

anting *n* fear

manganting *stat.v* afraid, fearful *Manganting=tid ta arta.* They were afraid of Arta people.

me''anting *adj* afraid, fearful

antipa:ra *n* goggle

mangantipa:ra *vi* catch fish (with a goggle) *A:duwan, mangantipa:ra=tid ta igit.* Others went catching eels.

antu *adv* particle that expresses reproof or emphasis *Bangat=man=antu ta komporme a ulit na ayu.* It is quire clear that not all kinds of the bark are good. *Pi:pi:piyan=mu antu mallagip ta lagip na Arta.* You should really improve your language proficiency of Arta.

anu: *vt* think *Anu:=ku=d a me''adu:yu attanan=na.* I thought he is staying distant from here.

apaw *n* surface *apaw na tapa* the surface of the earth

apdu *n* gallbladder

api:dit *n* kind of berry (bugnay)

apili:du *n* family name

apirit *adj* short

pa'apiri:tèn *vt* shorten

apitti *adj* short in height

apappitti *adj* short *Apappitti siya.* He/She is very short.

appat *num* four

apsut *n* bitter

me''apsut *adj* bitter

apu *n* grandparent, grandchild

appu *n* pl.

ara:pa *n* joking

ara:ra:pa *cf:* **ka:di:muy.** *n* friend *Ara:ra:pa=na=d i Bugkalot.* Bugkalot people become their friends.

mangi''ara:ra:pa *stat.v* become friends, get reconciled *Nangi'ara:ra:pa=d=tid.* They got reconciled.

arabis *n* cross, across

arabisèn *vt* cross somewhere *Arabisèn i rangtay.* cross the bridge

umarabis *vi* cross *Umarabis=itam=di killèk=di i wagèt.* Let's cross (the river) if

the water has receded.

aragaw (**rakaw**) *n* chest

arang *n* gills (of fish)

ararru *n* cough *makaararru=ten.* I'm about to cough.

arat *n* biting

aratèn *vt* bite

arawat *n* catch, get, capture, obtain

yarawat *v* hand, give *Iyarawat=mu=den i labbey.* Hand me the basket.

maarawatan *pot.v* can understand *Awa:ngu maarawatan.* I cannot understand.

arbi *n* kindness

ararbiyan *vt* do a kindness to

arèp *n* sheath for bolo

ari:na (**hari:na**) *n* flour

arigi *n* post, pillar

aromenta *n* thing

arta *n* **1)** (in a narrower sense) the ethnolinguistic group of Arta *lagip na Arta* the Arta language *syn:* **edilod**, **taga-Disubu**. **2)** (obsolete) twenty **3)** Negrito in general including Casiguran Agta and Nagtipunan Agta and other Negrito groups. *ant:* **agani:**.

arta aydi: agani: *n* all the people (all the humankind)

aruti'it *n* house rizard

asawa *n* spouse, husband, wife *Awan=tep=tèn ta asawa.* I do not have a spose (husband/wife) yet.

asawan *vt* marry, get married to

mangasawa *vi* marry, get married *Kabba:t=u mangasawa.* I want to get married.

mangi''asawa *vi* marry *Mangi''asawa=d=tid aytay a dagun.* They will get married this year.

pasassawan *n* husband and wife, a married couple

assawa *n* pl.

asbiw *n* to yawn

manga:sasbiw *vi* be yawning

mangasbiw *vi*

asin *n* salt

me''asin *adj* salty

asinan *vt* season something with salt *Amma masungpu=d, rika:duwan=di=d ta asin, asinan=di=d.* If it is boiled, we add soeasoning (to the pot); add salt into it.

asub *n* sweat

asuk (**atuk**) *n* smoke

me''asuk *adj* smoky

umasuk *vi* smoke

ata *n* raw

ma:ta *pot.v* raw, uncooked (e.g. fish)

ata'ay *intrg* why *Ata'ay a umangay=taw ta Maddela?* Why will you go to Maddela?

atèd *n* give *Iyatad=u=daw a:yi: munata.* I'll give you this

atdinan *vt* give someone (something)

mangatèd *vi* give

ya:tèd give

atèp *n* roof *atèp na bunbun* the roof of a house [Traditionally, the roof of their houses were thatched with "lati" (see the entry "lati"), and if they do not find it, leaves of banana are used. Nowadays, however, they often cover the roof with plastic sheet.]

atmur *n*

yatmur *vt* curse

attanan *n* **1)** place *Saya attanan=mi.* That is our (living) place. **2)** all *Nalu:tu=d i attanan ni yakkan=di aydi mabaw* They cooked all of their viands and rice.

atti: *vi* exist *Atti: ta Sinabagan.* [They] were in Sinabagan. *Atti asawa=mu.?* Do you have a husband/wife? *Atti angès=na.* It has a life. In Arta, this existential verb expresses various situations which would be expressed by a possessive construction with "have".

mangatti: *vi* live

pangattinan *n* living place

attung cf. attung (Yogad) *n* mortar

aturangan *n* spose's parent, child's spose

awan *neg* Negation marker *Ay sirit na toolay mibbuyu, kunta, sirit ni baakey, awan mibbuyu.* The feces of people are bad-smelling, but cow's are not bad-smelling.

awid *n* draw a bow, shoot with an arrow

maka'awid *pot.v* can draw a bow *Awan=de:=tèn maka'awid meddègès a:yi:,* I cannot draw a bow any longer; this (my arm) is painful.

awidèn *vt* shoot with an arrow

ay a versatile particle, signalling that the information provided before and after the particle has some gap (or discontinuity) in the flow of information. (glossed as GAP). *adv* **1)** It may serve to introduce a relatively new topic into the discourse *Ay kusay, atti ti diso:no: na timba.* A for the cat, it is staying inside a bucket. *Ay wangar=i mambu:lubulus a minarapu ti meddingatu a talun.* That stream flows from that high mountain. **2)** signal the beginning of the comment (or pragmatic focus) *Amma awan lati, ay lanut.* If lati (rattan) is not available, (we use) lanut

=ay *cf:* **=hug**. *adv* of course (indicating that information delivered by the current utterance is not new, which can be inferred by context.) *Me''a:du=ay.* There were many ghosts, of course. *A: Saya bebbungku? B: O:ni=ay. Mebbungku=ay.* A: Is it delicous? B: Yes of course. It is of course delicous.

ayde:yi *coord* and

aydi: *coord* and *arta aydi: agani:, aydi: animal* Negrito, non-Negrito and animals This conjunction is used primarily to coordinate nouns, whereas clausal coordination is marked with an intonation, with no explicit forms. Sequential temporality 'and then' may be marked by "sakay".

ayu *n* tree *Pa:ngala:pan=mi=ta arigi=na a ayu ta talun.* We were getting trees for making posts in the mountains.

ayuayuwan *n* forest

ayuayu *n* pl.

ayu:pan *vt* blow at fire

ayunud

ma:yunud *vi* break *Mina:yunud i bunbun=i.*

B b

ba:ka *n* cow

ba:kal *n* grid for toasting and grilling

ba:kèw *n* grain, corn

ba:lag *n* **1)** meat, flesh *ba:lag na laman* meat of wild pig **2)** muscle *ba:lag ni barasu=mu=y* mascle of your upper arm

  ba:ba:lag *n* pl.

ba:sa *n* read

  iba:sa *vt* read for someone *Iba:sa=ku daw a:yi:.* I will read this for you.

  makaba:sa *pot.v* can read, literate *Awa:ng=ami makaba:sa ta letra.* We cannot read letters.

ba'it *n* inbetween, gap, interval *Atti ba'it a awan=tep maka'angay ta Disubu.* Since there was a buffer zone, they could not come to Disubu.

babakat *n* middle-aged or aged woman ***ant:* dupu:.**

  mababakat *pot.v* getting old (used for females)

  babba:bakat *n* pl.

badu:ya *n* cake

bagat *n* banana *don na bagat* banana leaf ***spec:* tundan, dèmilig, lakatan.**

bagèl *n* thickness

  mebbagèl *adj* thick

baggat < Yogad *n* husked rice *Nangatèd=tid ta baggat* They gave (us) husked rice.

bagrut *n* pulling

  bagrutèn *vt* pull *Binagru:tu i gimut na keddet.* I pulled the root of the grass.

bakèd *n* headband

bakka *n* crushing

  ba:bakkan *vt* crush repeatedly

  bakkan *vt* crush *Bakka:ng=u=d i bo:te.* I will crush the bottle.

bal'ung *n* well

bali'ot'ot *n* bait

balin *n* possible *Maski ta'lo=d a langit=mi, bali:ng=ami=d a guminan tamman.* Even after three days, we can leave the place again.

  magabbalin *vi* become *Nagabbalin a marakèt tidi atanan a agani: aydi arta* All non-Arta and Arta people became bad (evil).

  mabalin *pot.v* can, be able to *Awan mabalin a pakkotkot=mu* You cannot dig (a hole).

baling *n* leech

balitungèg *n* kind of worm

baliya:naw *n* kind of snake, poisonous

ballan *vt* do not want *Ballan=mu i bagat=i.* Don't you want this banana? *Balla:ng=u.* I do not want it.

  pabballan *vt* hate

bambal cf. bambal (Yogad) *n* washing clothes

  bambalan *vt* wash laundry

  binambalan *n* what is already washed *Idiso:no:=mu i binambalan=i baka mabasèssèg.* Bring inside what you washed; it may become wet.

  mambambambal *vi* is washing *Mambambambal=ten aytay.* I'm washing clothes.

  pabbambalèn *vt* is washing (clothes) *Pabbambalèn=na i baruwasi=ku=y.* S/He is washing my clothes.

bangal *cf:* **nguntu, sangru.** *n* back tooth, molar tooth

bangat *neg* different from, incorrect *Bangat ta arta, agani:.* He is not a Negrito, but non-Negrito.

bangaw *n* gap, large opening *Atti bangaw=na.* The teeth has a gap

bangga *n* collide

  banga'an *vt* bump into

  mangibbangga *vi* collide with each other

bangkèd *n* back of a bolo

bangkuk *n* kind of catfish

bangus *n* kind of milkfish

bansing *n* flintstone [Note that the Arta people did not use it so frequently to light a fire; rather they used to use a dry wood stick and vine termed ulas. See ulas]

banuwet *n* bait for fishing

bara *n* lung

barasu *n* arm

bari:nèd *n* flour (from rice)

barunibun *n* spring, fountain

baruwa:si *n* clothes *Ibila:g=u i baruwasi=ku.* I will hung my clothes under the sun (to dry it). *syn:* **agi 2**.

  mambaruwa:si *vi* put on my clothes

  ba:barowa:si *n* pl.

basasassag *n* wet

basket *n* basket

basta *adv* at least

batak *n* breaking

  mabatak *vi* break

batikuling *n* gizzard

batu:ta Sp. conductor's baton *n* walking stick, cane

bay *n* neglect

  bayan *vt* leave, let something be *Bayan=mu=te: maddu:yug=i.* Do not care about those who are wandering around.

  pabay neglect; leave something as it is

  mapabayan *pot.v* unintentionally neglect *Amma mapabayan, mappati=ay.* (When s/he is bitten by a poisonous snake) If s/he unintentionally neglects it, s/he will of course die.

  pabayan *vt* 1) neglect *Pinabayan=mi=tèddi gindat ta damagmèng* We just neglected until the following morning. 2) let someone as s/he is, allow (may take a complement clause) *Awan=mu pappa:bayan a mappati=tid.* You do not let them die.

bayag *n* long (in time), late

  mabayag *vi* 1) late *Nabayag a minalwag ta dèmèdmèng=ti* He woke up late in this morning. 2) long (time) *Nabayag a tyempo, pa:ngissubèg de:Arta aydi Bugkalot.* Arta and Bugkalot were battling with each other for a long time.

  mebbayag *adj* long in time, being late *Papu:nèdèng=u ta mebbayag* I will bring about rain for a long time.

bayakèt *n* handbag for putting ingredients of the betel quid

be:kut *n* ghost in general *spec:* **ansisit**, **karangèt**, **mangidukès**, **alilyo:gèn**.

bebbe: *n* 1) aunt (used for both vocative and referential uses) *Pe:be:bud=mu ni bebbe:=mu.* Ask your aunt about it. 2) oen-generation-higher woman

  bebbebbe: *n* pl.

bèdbèd *n* winding, wrapping, bandling

  bèdbèdan *vt* wrap something with, bandage, coil around something;

  ibèdbèd *vt* wind, wrap, bandle

bègbèg *n* wind *Natomba ayu=y ta meddigsèn a bègbèg.* The tree fell down by strong winds (typhoon).

  bumègbèg *vi* the wind blows (once) *Ma bumègbèg iggaman=mi i tolda.* If the wind blows, we hold the tent.

  mebbègbèg *adj* windy *mebbègbèg aytay.* It is windy today.

bèrèd *n* throwing

  bèrèbèrèdan *vt* throw

  ibèrèbèrèd *vt* throw repeatedly

  ibèrèd *vt* throw

  manbèrèd *vi* throw

bèrèk *n* piglet

bernat *n* wide *syn:* **la:pad**.

  bernatèn *vt* widen, open something *Pabberna:tèn=na* Open his hand

  mebbernat *adj* wide *Mebebbernat i agi a iwa=di ti ayti.* The cloth is so wide that they put it here.

bèsbès *n* wrap, bundle

  pabbèsbès *n* wrapping

bi:lat *n* python

bi:lèg *n* necklace

bi:lin cf. bi:lin (Ilokano) *n* to order, command

  ibi:lin *vt* order, command *Inibi:lin na Dios dya.* The God command him to do so.

bi:sal *n* bangle decorating upper arms

bidi:yu *n* screw palm, pandan

bidut *cf:* **uriyab**. *n* deer *Mangalap=tid ta bidut.* They will go hunting for deer.

bilang *n* number

bilangan *vt* count

mabbilang *vi* count

bilèg *n* fast

mebbileg *adj* fast

binara:yan *n* wine, liquar *Matatim=tid ta binarayan.* They are drinking.

binglès *n* mold

mabinglès *pot.v* have mold

bini *n* seed

binila:dèn *n* Lobed river mullet (a freshwater mullet)

bino:la *n* thread

bira: *n* search, look for

biran *vt* find

mabbirabira: *vi* look for

mabiran *pot.v* find *Nabera:ngu a taw=te mepeppiya ayti tapa=y.* I have found that only you are righteous on earth.

biraw *n* kind of silver grass, used for making the shaft of arrows

birèng *n* flood

bumirèng *vi* become a floodwater

biringaw *n* a kind of fly

bisa *n* wet

ibisa *vt* put into water to soak

mabisa *pot.v* become wet

bisag *n* to be broken

mabisag *pot.v* be broken *Nabisag i bo:ti* The bottle was broken.

bisagèn *vt* break something

ibisag *vt* throw to be broken

bisay *n* bow busug (Agta)

bisin *n* hunger

mabisin *pot.v* become hungry *Mabisi:ng=a=d?* Have you become hungry?

manga:bisin *vt* be hungry

bissay *n* kind of tree useful for making bows

bisuruk *n* hatchet, chopper *pt:* **putan**.

bitèngkilèg *n* ankle

bittsin *n* kind of artificial seasoning such as Ajinomoto and Majic Sarap

bituka *n* stomach

bitun *n* star

mebbitun *adj* starry (sky)

sirit na bitun *n* shooting star

biya:he: *n* journey

mambiya:he: *vi* be on a journey

biyal *n* stick (in general)

biyas *n* kind of bamboo, highland bamboo (Anthropology note: In the culture of Arta, this kind of bamboo used to be used for cooking viand and rice. Even now, they sometimes cook with bamboo, enjoying the good-smelling of bamboo.) Ilk. bu:lu

biyèn *n* near *biyèn ni bunbun=mi* near our house

bumiyèn *vi* come nearer

mabbiyèn *vi* come near

biyungèt *n* night (in a wider sense, this concept is contrastive with ``daytime''; in a narrower sense, it is contrastive with ``morning'' and ``afternoon'') *Ano anèn=mu ti biyungèt=i?* What will you cook for dinner? *Mepeppiya a biyungèt=muyu.* Good evening. **cal: langit**, **malu:tep**, **biyungèt**.

mabiyungètan *pot.v* stay up late

bo:te *n* bottle

bu:hay *n* life, lifestyle

bu:le:s *n* naked

bu:le:san *vt* remove the clothes of someone

bu:lun *n* be together

e:bu:lunan *vt* accompany *Tatin e:bu:lunan=mu a mamurab?* With whom will you go hunting?

me:bu:lun *vi* accompany *Me:bu:lu:ng=a dèn?* Will you come with me?

ibu:lun *vt* make people together, bring someone with another

mangibu:lun *vi* bring together *Mangibu:lu:nga ta pitu a pasassawan ta attanan a kla:se* You should bring seven couples of all species.

mebbu:lun *vi* follow

bu:nguwan *n* heel

bu:ras *n* harvest, crop

bu:ru *adj* young, new

bu:bu:ru brand new

bu:wèt *n* rabbit [Rabbit is one of the major sources of protein in the Arta diet. Other sources of protein include wild animals such as wild pig, monkey, and deer, and freshwater fishes such as eel, catfish, and milkfish.]

bubbu: *n* spilling, dropping

> **bubbuan** *vt* wash hair

> **mange:bubbu:** *vi* is falling, leaking, escaping (e.g. water) *Hay! Mange:bubbu kape:=ku=y.* Ouch. My coffee is leaking.

> **me:bubbu:** *pot.v* fall, drop, leak (e.g. water) *Me:bubbu: wagèt=na.* The water will escape from there.

bubuy *n* (domesticated) pig

bud *n* saying

> **mangibbud** *vi* talk with each other

> **pamambu:bu:dan** *n* promise, covenant

> **pe:be:bud** *vt* ask

> **ibud** *vd* tell *Ibud=mu didi to:p=mu=y a Bugkalot.* Tell it to your Bugkalot fellows.

bugay *cf:* **tabug₂**, **murab**. *n* hunting (solitary hunting with a dog)

> **mambugay** *vi* conduct solitary hunt

bugit *n* circumcised *ant:* **suput**.

> **bugitèn** *vt* circumcise (Anthropology Note: In the Arta culture, children undergo circumcision at the age of three.)

> **mabugit** *pot.v* be circumcised

buka:gan *n* woman, female *Malala:ki a buka:gan.* a beautiful girl *Buka:gan i ku:rèk=i.* This chicken is female.

> **bukka:gan** *n* pl.

bukbuk *n* decayed tooth

> **nabukbuk** *pot.v* being decayed

bukèl *n* seed, nuts *bukel na pagay* the seed of rice

> **sibbukèl** *adj* round *sibbukèl a bulan* full moon

bukèt *n* rat

bukid *cf:* **talun**. *n* mountain

> **bukibukid** *n* pl.

buku *n* joints (of bamboo); knucle,node

bukubuku *n* pl.

bula:ti *n* earthwarm

bulalla:yaw *n* rainbow

bulan *n* **1)** moon *sibbukèl a bulan* full moon **2)** month *tallip a bulan* two months

buli *n* **1)** buttock **2)** tail Agta; kiweg

bulig *n* bunch (of banana)

bulu₁ *n* widow

bulu₂ *n* kind of bamboo

bulud *n*

> **ibulud** *vt* throw in a current

> **me:bulud** *pot.v* drift with a current

bunbun *n* house [Traditional houses are a small hut built in two or three days. It is composed of three or four poles with a roof thatched by "lati" and a floor made of bamboo, sometimes with a wall of banana leaves when it is a cold season.]

> **pabbubbunbunan** *n* housing place

> **bu:bunbun** *n* pl.

bunga *n* fruit *Pinidut=di tidi bunga na ayu.* They harvested the fruits.

> **mambunga** *vi* bear fruits

bungaw *n* **1)** small bird **2)** testicle

bungku *n* tasty

> **mebbungku** *adj* delicious

bunglalu *n* one-legged, or one leg shorter than the other

bungor *n* mosquito *Mangèbèbbèr bungor=i.* Mosquitos are flying.

> **takibungor** *n* the season when we have mosquitos

bunsud *n* transfer trees at the bottom of the mountains

> **pabbunsud** *n* transferring trees at the bottom of the mountains

bunu:gan *n* a traditional faith healer, which old men and women were engaged in

burasi *n* kind of freshwater fish [Burasi is an edible fish, morphologically similar to carp with many fine bones inside the flesh. Arta people as well as other Philippine people catch it in the river to eat it.]

buribur *n* making noise

> **buribu:rèn** *vt* bother someone to make noise

buriburikètkèt *n* give someone a tickle

　pabburiburikètkèt *n* tickling

burog *n* monkey [Monkey has been a major source of protein as well as wild pig ("laman") and deer ("bidut").]

butuy *n* calf

buwansi:na *n* kind of bamboo

buybuy *n* a perennial grass plant (tiger grass) (Anthropology note: This is commonly used for making a bloom.)

buyu: *n* bad-smelling, esp. decayed smells and feces.

　manga:buyubuyu: *pot.v* bad-smelling

　mebbuyu: *adj* be bad-smelling *Nan'anu:san=mi maski da mebebbuyu:=di.* We were patient even though it was already bad-smelling.

D d

da *subord* because *Meddègès i ulu=ku=y da napaditèng=tèn.* I have a headache because I am sick. *Awan=mi=d ta:tataw i e:nan=mi da mererringdam=di talun.* We don't know where to go because it was very dark in the mountain.

da:gus *adv* soon

　daguda:gus *adv* immediately

da:kèb *n* stoop (with old age)

　tidda:kèb *stat.v* stoop (with old age)

da:ya *n* east

dagat *n* sand

dagayday *vi* line

　mandagadagayday *vi* line

dagèsu lie

daget *n* sewing

　mandaget *vi* saw *Mandaget=tèn ta barowasi=ku.* I will sew my clothes.

　pandaget *n* sewing kit

　dage:tèn *vt* sew

　maddaget *vi* sew

dagpu: *n*

　dagpu:wan *vt* land v

dagsu (dugsu) *n* lying

　maddagsu *vi* lie down

　dummagsu *vi* lie down

　mandadagsu *vi* be lying

　padagsun *vt* lay something down *Konta bangat ta padagsun=mu.* But you do not lay it down.

padagsuwan *n* put something horizontal on somewhere

tiddagsu *stat.v* lie *TIddagsu i agani:.* The person is lying.

dagun *n* year *Sa:ngan i gadun=mu?* How old are you? *Meddedagnin aytay a dagun* It is very cold this year.

dala:yap *n* kind of citras

dalag *n* snake-head

dalus *n* cleaning

damla *n* notice

　madamla *pot.v* become aware of

damut *n* stingy

　meddamut *adj* stingy

dangmuwang *n* pass away

　dinangmuwang *n* late parent. Literal meaning is those who passed away. *dinangmuwang=mu=ti* your late parent(s)

dantak *n* tasteless

　meddantak *adj* tasteless

dapan *n* bottom of the foot

dapar *n* forehead

dapug *n* **1)** Carabao, water buffaro (Bubalus bubalis) **2)** Tamarao, Mindoro dwarf buffalo (Bubalus mindorensis) *Pinapati=hug na dapug.* They were, you know, killed by tamaraos. [When they lived in Alicia near Echuage in the province of Isabella, they were frequently attached by tamaraw, which may kill Arta people.]

darèngdarèng *n* uvula

dasa:g *cf:* **lisngad**. *n* cooking rice

  mandasag *vi* cook rice

dasar *n* put

  idasar *vt* put onto *Nidasar=na i kottsa:la.* She put a spoon.

datag *n* insect

datar *n* bamboo floor Agta; datag

dawa *n* ear of grain

dayang *n* dance *syn:* **sa:la**.

  paddayangdayang *n* dancing

dayèg *n* fat, grease

  meddayèg *adj* fat

=de:di *cf:* **=de:ti**, **=di:ti**. *adv* in the future

dè:gi *n* band for carrying a basket

de:kèt PMP dikèt, Ilk. dèkkèt, Yog. dikkat *n* **1)** sticky one **2)** glutinous rice

=de:ti *cf:* **=de:di**, **=di:ti**. *adv* recently, a while ago

degdeg *n* edge *degdeg na wangar* along the river

dègès *n* **1)** pain *Pagi:nèkèn na uru i dègès na ulu.* This medicine will stop your pain. **2)** being spicy, hot

  meddègès *adj* 1) painful *Meddègès i ulu=ku=y da napaditèng=tèn.* I have a headache because I have a high fever. 2) loud *Meddègsèn i gabbin=na.* His/Her sneeze is loud. 3) spicy, hot *Meddègès i yakkan=tam=i.* Our viand is spicy.

dèggèt *n* seriousness

  dumèggèt *vi* become worse, more serious

dègnin cf. moddognin (Southern Alta) *cf:* **lamna**. *n* **1)** cold (temprature) **2)** a cold (sickness)

  manga:dègnin *stat.v* feel cold

  meddègnin *adj* cold (temprature)

  takidègnin *n* cold season *cal:* **takilangit**, **takipu:nèd**, **takidègnin**.

deldel *n* lick *Dinelde:lan na kusay i pingan=ya* A cat licked that plate.

  delde:lan *vt* lick

dèlèg cf. dalag (Ilk. Tag.) *n* a kind of mudfish

dèlèm (fr. var. **diklèm**) *n* cloud *syn:* **kunèm**, **diklèm**.

dèmèdmèng *n* dawn, early morning; twilight, early evening (referring to time during the sunrise and sunset) *Nabayag a minalwag ta dèmèdmèng=ti.* He woke up late in this morning.

  ti dèmèdmèng=i *adv* tomorrow

dèmilig *n* kind of banana *gen:* **bagat**.

dèpa *n* kind of tink bug

  meddèpa *adj* have smell of stinkbug *Meddèpa i da:ngaw=ti.* The stinkbug smells (of stinkbug).

dèpig *n* bowstring

derettyo *n* straight

  makaderettyo *pot.v* can go straight

dèttun *n* heavy

  meddèttun *adj* heavy *meddèttun a karagatan* heavy stone

dètun *n* fall down

  dumtun *vi* fall down

dèyyèw *n* honor

  dèyyèwèn *vt* honor *Ama=mi, paddèyyèwèn=mi ti ngadin=mu* Father, hallowed be your name

di:muy *v* bath *Mandi:muy=tep=tèn ba:gu=ten lumattong.* I will take a bath before getting out.

  mandi:muy *vi* take a bath

  pandi:muy *n* sorp or other items to use when taking a bath

di:ras *n* make a brief stop at, drop by

  dumi:ras *vi* make a brief stop at, drop in at

di:ru *n* soup

=di:ti *cf:* **=de:di**, **=de:ti**. *adv* before, long ago

dibbi *n* below, under, bottom

  dumibbi *vi* recede, become to the low level (e.g. water level)

  meddibbi *adj* low, short

dibiliw *n* north *ant:* **abaga:tan**.

didi pl.erg/gen/obl

diding *n* wall *Ay diding na bunbun, don na bagat.* As for the wall of houses, banana leaves (are used). [The houses of Arta do not always have a wall, but they may have particularly in the cold season.]*syn:* **gisèd**.

didingan *vt* make walls around the house *Didingan=di i bounbun=di.* They will make walls around their house.

mandiding *vi* make wall *Tatin nandiding ti bunbun=i?* Who built this house?

digat *n* **1)** difficulty, being difficult **2)** poverty

mandigadi:gat *vi* suffer

meddigat *adj* 1) difficult *Mansa:la=tèn ta meddigat a sa:la.* I will perform a difficult dance. 2) poor *Meddigat i bu:hay=mi.* Our life is poor.

digdig *n* arrival *Tanakan i digdig=mu?* When is your arrival? (i.e. when did you arrive? or when will you arrive?)

digdigan *vt* arrive at

dumigdig *vi* 1) reach, arrive *Dinumigdig i birèng ta pitu a langit.* After the seven days came the floodwaters. 2) next *aytay dumigdig a bulan* next month

digit *n* sea

digsèn *n* power *digsèn na bagyu* the strength of a typhoon, strong typhoon

meddigsèn *adj* strong, rough, powerful

dila *n* tongue

dima *n* walking

makadima *pot.v* can walk

diddiman *n* road, path *Merru:nèg i diddiman=i.* The road is muddy.

dimadiman *vt* reach *Dinimadima=ku gindat ta Maddela.* I walked to Maddela. *Kabba:tu dimadimaen gindat ta Maddela.* I want to walk to Maddela.

maddima *vi* walk

mandima *vi* walk around *Mandimad=ten ta bunbun=mi.* I'm walking around in the house.

dimlag *n* brightness

dumimlag *vi* become bright, clear up *kana:yon=te: mampapu:nèd, mamitta dumimlag.* It is always raining; only sometimes it clears up. *syn:* **lumangit**.

meddimlag *adj* 1) bright *Meddimlag i langit.* The sky is bright (because it is sunny) 2) clear, evident, sure *Awan meddimlag i singbi:t=u.* I am not sure, certain of my answer.

dingatu *n* above, top, up

meddingatu *adj* high, tall *Meddingatu i ayu=y.* The tree is tall. *meddingatu a talun* high mountains

dumingatu *vi* become high *Dinumingatu=d i langit.* The sun has become high.

kadingatu *n* depth

dingding *n* heat

idingding *vt* heat

dinglèp *n* oil *syn:* **langis**.

meddinglèp *adj* oily *Meddinglèp i paper.* The paper is oily.

dinsu:n *n* stab

dinsu:nan *vt* stab

mandinsun *vt* stab

disikle:ta *n* bicycle

Disimungal (**Disu:mungal**) *n* one of the Barangays in the municipality of Nagtipunan, Quirino Province. There are some Negrito communities there.

diso:no: *n* inside *diso:no: na bunbun* inside of a house

meddiso:no: *adj* deep, have large room inside

dumiso:no: *vt* go inside

idiso:no: *vt* bring something inside *Idiso:no:=mu i binambalmu=ti baka mabasèssèg.* Put the laundry (what are already washed and are hung outside) inside the house; it may become wet.

maddiso:no: *vi* go deeply

ditaw *n* outside *syn:* **lattong**.

diwi *n* lamentation

pa:niwidiwi *n* to lament, to cry for a dead

do:yan (**da:yun**) *n* hammock

don *n* leaf *don na bagat* banana leaf *Narangu i don na ayu=y.* Leaves of the tree withered.

du:da *n* a cry of a wild pig or domesticated pig

mangu:du:da *vi* (A wild pig or domesticated pig) cry

du:tung *n* removing hair on the fire

du:tungan *vt* remove animal hair on the fire *Du:tungan=mu ta dut.* Clean the wild pig on the fire. (Anthropology Note: For Arta

people, the most common way for removing the hair of animals which they hunted is to burn it on the fire and scrape it out. This is applied for wild pigs, deer, monkeys, rabbits and chickens.)

  madu:tungan *pot.v* be cleaned on the fire

du:yug *n* wander, roam

  madduyug *vi* wander, go around

  makadu:du:yug₁ *pot.v* fond of wandering *Makadu:du:yug i arta.* Arta people are found of wandering around.

  makadu:du:yug₂ *pot.v* be always wandering around, be nomadic

  mandu:du:yug *vt* wander, roam around

dudun *n* grasshopper

dukug *n* bow the head

  tiddukug *stat.v* being bowing the head

dupu: *n* old man [The avarage life span in Arta is much shorter than those in developed countries. Thus the "old" men and women refer to those over around forty, who would not be "old" in an outsider's perspective. This is also the case in "babakat" (old woman).]*ant:* **babakat**.

dadduppu: *n* pl.

dupug *n* ashes *syn:* **abu**.

dupuran *n* hearth, cooking stove

dure:dure: *cf:* **alummanay**, **miyu:miyu:**. *n* a kind of cicada, small cicada [This is an onomatopeic word. Arta people say that this cicada cries [dure:dure:].]

dut *n* **1)** fire *du:t=i* the fire **2)** firewood *Mangalap=ta ta dut ayta talun.* Let's get firewood in the mountains.

dutul *n* first

  dutulun *vt* first *Dutulun=mu a ga:gèlgèlèn ni a:yi: natèngi:.* First of all, cut this vegitables.

  maddutul *vi* do first *Maddutul de:ta yumèbyèb=pa=tèn.* First of all, I will just urinate there. *syn:* **mandu:tuldutul**.

  mandu:tuldutul *vi* do first *Mandu:tuldutul=ita mangkape:.* We drink coffee first of all. *syn:* **maddutul**.

  ta dutul (a langit) *adv* in those days *Ta dutul a langit, awan ta cape.* In those days, we did not have coffee.

duyug *n* shell bowl of coconut

E e

e:n *n* going, move

  e:nan *vt* go to somewhere *Adi:ni e:nan=mu?* Where will you go? (This expression is used as a greeting to the people who are going to somewhere.)

èbbèr *n* to fly

  ibèr *vt* bring something by flying

  makabbèr *pot.v* can fly

  umbèr *vi* fly to somewhere *Umbèr tidi manu:=wi ayta ayu=y.* The birds will fly back to the tree.

  mangabèbbèr *vi* fly

èbbut *n*

  mabbutan *pot.v* have punched *Nabbutan=na i tabla.* He has punched the board.

  èbbutan *vt* punch *Imbabbutan=na=d i agani.* He punched the person.

Nabbutan=na i tabla.

èblu:n *n* cure

  èblu:nèn *vt* cure *Éblu:nèn ni bunu:gan=i i paditèng=mu.* The faith healer will cure your desease.

èbut *n* punching

edilod *n* Arta people (literally `people from downstream) This noun is a term unambiguously referring to the Arta people distinguished from Caisguran Agta, or other Negrito groups. *syn:* **arta 1**, **taga-Disubu**.

èggèm *n* divide

  yèggèm *vt* share, divide

èlèd *n*

  umlèd *vi* set *Inumled=di pasu=y.* The sun has set.

èlla *n* laughing

  mangèlla *vi* laugh

mangèllèlla *vi* laugh

ènnèm *num* six

ènsi:na *subord* so that

G g

ga:tas *n* milk

gada (**gèda**) *n* **1)** trunk, stem *gèda didi ayu=y* trunks of the trees **2)** ancestor *Ay gada=di, minarapu ta Casiguran.* Their ancestors came from Casiguran.

gaddang *n* fat of animal

gaddu *n* half

  gaddun *vt* break into two parts

  kagaddu *n* half

gadèn *n* shooting with arrow

  garadènèn *vt* shoot with arrow

  manggadèn *vi* shoot with arrow

gadgad *n* grate with grater

  gadgadan *vt* grate with grater

gahu *n* cause, reason

  meggahu *adj* because, because of

galiyang *n* kind of taro

gambang *n* kettle

gami:t *n* tool

  gami:tèn *vt* use

gapu *cf:* **rapu**. *n* from, out of

  gapu ta *subord* since, because

  mo:gapu *pot.v* about, concerning

garasit *n*

gassin *n*

  ipagassin *vt* contract with

gata *n* milk *gata na i:yug* coconut milk

gatut *adj* hundred

  ta:-gatut *n* one hundred

gaya:man *n* centipede

gayang *n* lance, spear

  gayangèn *vt* spear

gèbbi:nan (fr. var. **gebbebbinan**) *n* sneeze

gèlgèl *n* to cut

  ga:gèlgèlèn *vt* cut with the knife moved reapeatedly

gèlgèlèn *vt* cut *Dutulun=mu a ga:gèlgèlèn ni a:yi: natèngi:.* FIrst of all, cut vegitables.

gépét *n* tie

  gèptan *vt* tie to somewhere

gètil *n*

  magti:lan *pot.v* recede

gi:nèk *n* to stop, give up

  maggi:nèk *vi* stop something

  gumi:nèk *vi* stop, give up something *Ginumi:nèk i pu:nèd.* The rain stopped.

  pagi:nèkèn stop someone's doing something *Pinagi:nèk=u i (pal)lagip=na.* I stopped his talking.

gi:rèng *n* turn, spin

  igi:rèng *vt* throw to spin

  maggi:rèng *vi* turn

giddan *n* simultaneously

  manggi:giddan *vi* do something together

gikes *n* belt, band

gikit *n* raft

gilèng *n* penis

gilèngan *n* man

  gillèngan *n* pl.

gilgil *n* to rub gently

  gilgilèn *vt* rub gently

gimit *n* making, doing

  gimitèn *vt* make, do *A:nu paggimitèn=mu?* What are you doing/making?

  manggimit *vi* 1) make, weave *Mangimit tidi babakat=i ta aba.* The women will make a mat. 2) do

gimut *n* root *syn:* **ramut**.

ginaddyang *cf:* **sabilan**. *n* head of lance

ginan *n* to leave

  magginan *vi* leave somewhere

guminan *vi* leave *Maski ta'lo=d a langit=mi, bali:ng=ami=d a guminan tamman.* Even after three days, we can leave (the place) again.

gindat *adv* gindat *syn:* **ki:gad**.

gindat ta to (refers to the goal of motion event)

gipit *n* small, narrow

  meggipit *adj* small, narrow (space)

girèk *n*

  meggirèk *adj* dirty, mess

giruwat *n* rise

  gumiruwat *vi* rise

gisèd *n* wall of house *syn:* **diding**.

  gisdan *n* fence of house

gisgis *n* pounding

  gisgisan *vt* pound

gissa *n* one (of)

gitèk *n* areola of nipple

gitèl *n* itchiness

  meggitèl *adj* itchy

gitgit *n* scratching

gittud *n*

maggittud *vi* stop *Naggittud=di i pu:nèd=i.* The rain has stopped.

go:lèng *n* orphan

god *n* betel leaf

gu:lak *n* crack

  gu:lakèn *vt* crack *Gu:lakèn=di=d i biyas=i.* They will crack the bamboo.

gu:rugud *n* running

  gumurugud *vi* run to *Ginumurugud=ten gindat ta Maddela.* I ran to Maddela.

  makagurugud *pot.v* can run

  manggu:rugud *vi* run

gunting *n* scissors

gupung *n* cut off

  gupungèn *n* cut off, chop off, trim away of

  magupung *pot.v* be cut off, trimmed away

gusing *n*

  minagusingan *pot.v* (the tooth is) chipped

gusu:, gusuk *n* stomach

guwe:ter *n*

  tigguwe:ter *stat.v* be goitered

guyo:d *n* pulling

  guyo:den *vt* pull

  guyodguyo:dèn *n*

H h

hambag < English *n* handbag

hèwhèw *interj* barking sound of dogs, bowwow

=hug *cf:* **=ay**. *adv* **1)** second position enclitic indicating that the statement of the utterance delivered with the enclitic is already given (old) in linguistic context. *A: A:no i lala:ki=na? B: Mememmalala:ki=hug.* A: How nice/good is it? B: It is really nice/good, as I said before. *A: Sa:ngan a pamilia? B: Ta:gatut=hug!* A: How many families were there? B: One hundread, as I said. **2)** indicating that the speaker agrees on the preceding statement utterred by another speaker *A: Meppasu aytay a langit. B: O:ni=hug.* A: It is hot today. B: Yes (it is really hot).

hulu *num* ten

  ta:'hulu *num* ten

hus *cf:* **kay**. *interj* an interjection expressing that the speaker disagrees with the statement of the preceding utterance

I i

=i (specificity)

i:lug *n* egg

i:nur *n* egg

i:pis *n* plecopteran, stonefly

i:pu'i:puna:ngan *n* tornade *Punan=di atti i:pu'i:puna:ngan* They said that we had a turnade (at that night).

i:yan *n* fish

i:yug *n* coconut

   ka'iyo:gan *n* coconut grove

ibeng (talinga) *n* ear id. sirit na ibèng (see under sirit)

ibu:tan take off (clothes) borrowed from Agta

idèm *vi* sleeping

   make:dèm *cf:* **meppurèd**, **me:dèm**. *pot.v* sleepy

   paka'idè'idèm *pot.v* keep on sleeping

   mangi:dem *vi* is sleeping

   me:dèm *cf:* **meppurèd**, **make:dèm**. *pot.v* sleepy, referring to the state while not sleeping *me:dem=de:=ten.* I am sleepy (thus I want to sleep).

idut *n* pinch, pick up

   idutèn *vt* pick up (with a hand, fingers)

iggam *n* hold, seize

   iggaman *vt* hold, seize *Iniggaman ni Je:sus i lima na buka:gan* Jesus held a woman's hand.

igit *n* eel

illa:yug *adj* long (size)

   kella:yug *n* length

   pella:yugèn *vt* lengthen

ilu:t *n* massage

   ilut'ilu:tèn *vt* give massage to

   pangi:lu:tèn *n* massage

ima:rit *n* nagim'ima:rit *Pa:ngima:rit=tèn ta natèng.* Nagim'ima:rit ak ti utung.

imayas *n* slow in action

   me''imayas *adj* slow in action

ina *cf:* **inèng**. *n* mother

inda:yun cf. inda:yun (Ilk.) *n* hammock

inèng *cf:* **ina**. *n* mother (in vocative use)

ingngarigan *adv* for example

innaman (inaman) 1) *n* taste **2)** *vt* to taste *Innaman=di amma usto.* They taste it if it is good.

innan *n* ?clearness

   me''innan *adj* clear, transparent *Mi''innan i waget=i.* The river is clear.

inrès *v* rotten *Inrès i yakkan=mi.* Our viand is rotten.

inta *n* looking

   intan₁ *vt* look at, see *Intan=mu=ya.* Look at that (dist).

   ipa'inta show *Impa'inta=na ni Delia bubuy=na=y.* She showed Delia her pigs.

   ite:ta *vt* see, experience

   make:ta *pot.v* can see *Tidi daddu:pu:=ti, make:ta ta ansisit.* The old men could see small ghosts.

   manginta *vi* look, see

   me:ta can see

   minta *vi* see

   pa:ngintan *n* sign, contract

intan₂ *vt* look at *Ninta=ku abi:ku ti armin=i.* I looked at myself in the mirror.

ipda *n* stepping on, treading

   ipdaen *vt* step on

   ipdapdaen *vt* step on repeatedly *Nipdapda=ku=d i datag.* I stepped on the insect again and again.

ipèl *n* kind of posonous snake, having a green skin

ipus *n* **1)** tail of animal **2)** attail fin of fish

iraw (irèw) *n* snake

isala:k *v* save

isbu *n* urination

isullut *vt* wear

ita:lun *n* ?a kind of bird

itèl *n* swallow

   itlèn *vt* swallow

iyyer (fr. var. i:yer) *n* coughing

K k

ka:baw *n* dementia

pakka:baw *vi* have dementia

ka:da- every

ka:dalangit everyday

ka:di:muy *cf:* **ara:ra:pa**. *n* best friend

ka:ga:gaw (**kana:yun**) *adv* always, eveyday

ka:lig *n*

ika:lig *vt* carry, transfer

ka:ligèn *vt* lift up, carry (something which is not light) *Ka:ligèn=mu=nen i tuttud=na=y.* Please carry his chair.

ka:lud *adj* young (fruit)

ka:man *adj* big

kaka:man *n* bigness

kakkaman very big

kuma:man *vi* become big

ka:man a waget *n* river

ka:puy *n*

mekka:puy *adj* unskilfull, inexpert

ka:rawèg *n* play

mangikkarawèg *vi* play together *Mangikkarakarawèg=tid maski memeppu:nèd=i.* They were playing together even it is raining.

me:ka:rawèg *vi* play with someone

ka:rawgan *vt* play with, get into mischief *Awan=mu pakka:rawgan.* Do not get int omischeif (to the dog).

mangka:rawèg *vi* play

ka:ruwan *rel.q* some, other *syn:* **a:duwan**.

ka:su (Sp. hacer caso) *n* mind, care

ika:ka:su *vt* pay attention to, mind

ka:wanan *n* right

ka:wangan *n* waist

ka'ila:ngan *vt* need

kaba:yu *n* horse

kabang *n*

kumabangkabang *vi* crowl

mangka:bangkabang *vi* crowl

kabbat *vt* want, like *Kabbat=mu i kape?* Do you want coffee? *Kabba:t=u mangay ta*

Santiago. I want to go to Santiago.

kakkabbat *vt* love, eager to

makangkabbat *vi* like, want

kabkab *n* hugging, touching

kabkaban *vt* hug, touch

kabung *n*

tikkabung *stat.v* be hunchbacked

kadèt *n* grass, weed

kadèkadèt *n* a large amount of weed, weedy area

kadig *n* falsehood

mekkadig *adj* fibber, liar

kadut *n* knife

kagid *n* leftover, residue, remainder

kagtut, egtut, agtut (**egtut**; **agtut**) *n* startled to be investigated

kagtutèn *vt* surprise someone *Kinagtut=ku*

me:kagtut *pot.v* be surprised

mine:kagtut *vi* was surprised

ni'egtut surprised

kahon *n* box

kakka *n* elder {brother, sister} *syn:* **aka**.

kakkap *n* try, attempt

kakkapan *vt* try, attempt

kalansay *n* skeleton

kalaw *n* hornbill

kalèskès *n* gullet, esophagus

kalidduwa *n* shadow

kalla:ngit shouting

kumalla:ngit *vi* shout

kamali *n* mistake

kamandagna *n* kind of snake, poisonous *syn:* **tuna**.

kamkam *n* close, hold

kamkaman *vt* hold, close one's hand *Pakkamkaman=na* He is closing his hand.

kammèding *n* kind of snake, poisonous

kamo:ting ka:huy (fr. var. **ka:huy**) *n* sweet potato

kamu:ti *n* sweet potato

kanakannak *cf:* **ulitaw**, **madit**. *n* child (referring to the people those who do not show primary sexual characteristics, including babies) id. watèt na kanakannak (see under wagèt)

  kakka:nak *n* pl.

kandi:ru, kande:ru *n* pot

kangka *n* coconut leaf (sprouting)

kangsyun *n* song, singing

  makakansyun *pot.v* can sing

kanig *n* worrying

  mankanig *vi* worry

kape: < Sp. cafe *n* coffee

  mamkape: *vi* drink coffee

kara:man *n* instep

karabukub *n* throat, trachea (windpipe)

karagatan *n* stone

  karakaragatan₂ *n* pl.

karakaragatan₁ *n* ?stony

karangèt *n* kind of ghost *gen:* **be:kut**. Ilk. paga'nu

karga *n* container

kari *n* agreement, contract, treaty *Si:yèy pa:ngintan ta kari=ku dam* This is a sing of my promise t you all.

karpa *n* crusian carp

karsa:da *n* road

  ka:karsa:da *n* pl.

kartibkartib *n* longhorn beetle

karu:s *n* to soften bidi:yu leaf by bamboo

  karu:san *vt* soften bidi:yu leaf by bamboo

kasape:gu *n* match

kasing *n* rough

  mekkasing *adj* rough

kasiru:la *n* pan

katigit *n* left

  mampakatigid *vi* turn left

katting? half

  kakkatting *adj* half *Kakkatting aytay bulan=i.* The moon is half now.

katuntayag *n* bait

kawanan *n* right

mampakawanan *vi* turn right

kay *cf:* **hus**. *interj* an interjection that is utterred as a response to a joke, showing that the speaker recognizes the preceding utterance is a joke rather than a serious statement

kayèng *n* lazyness

  mekkayèng *adj* lazy

kayud *n* sexual intercourse

  mangka:yudkayud *vi* have sexual intercourse

ke:num *n* drunk, intoxicated

  make:num *pot.v* be drunk, intoxicated

keddet *n* grass

  mekkèdèt *adj* weedy

kèpèt *n* mold *Kinumpèt i yakkan=mi.* Our viand became rotten.

  kumpèt *vi* mold

kèra *n* a cry of small monkey

  mangkèrakèra *vi* (a monkey) is crying *Mangkèrakèra i kaki:lèk=i a burog.* A small monkey is crying.

kerepkep *n* to hold, seize

kèris *n* semen

kèrrèd *n* rub

kètug *n*

  mekkètug *adj* hard

ki:bu *n* to mix

ki:gad *adv* up to, until *syn:* **gindat**.

kiday (kiray) *n* eyebrow

kidni *n* kidney

killèk (kittèk; kissèk) *adj* small, a small amount of

  kaki:lèk *n* small size, smallness

  pakaki:lèkèn *vt* make something smaller, thinner *Pakakillèkèn=di bidi:yu.* They make bidi:yu leaves thinner.

kirug *n* roast

  mankirug *vi* roast (e.g. corn, beans)

kiskis *n* scale of fish

  kiskisan *vt* remove scales of *Kiskisan=di i i:yan.* They will remove scales of the fish.

kiwa:r *n* washing (rice)

kiwa:ran *vt* wash (rice)

komporme *adv* any

  ko:komporme *n* any, whatever

konan *vt* direct quotation

konta *coord* but

korkor *n* hunger, the sound of stomach's growling

  makorkor *pot.v* hungry

  manga:korkor *vi* be hungry, have a sound of stomach's growling

kotkot *n* hitting sound

ku:rek *n* chicken

  ku:ku:rèk *n* pl.

ku:tak ?

  manku:tak *vi* a cry of chickens

kubbang *n* skin

kugun *n* cogon grass, (Imperata cylindrica)

kuku: *n* **1)** nail of finger **2)** hoof of herbivore

kulangut *n* dried mucus

kulibangbang *n* butterfly

kunèm *n* cloud *syn:* **dèlèm**, **diklèm**.

kurimatmat *n* eyelashes

kurkur *n* dig coconut meat out of the shell

kurku:ran *vt* dig coconut meat out of the shell

kurug 1) *n* belief **2)** *adv* surely, really

  kurugèn *vt* believe

  pa:ngurug *n* belief

kurusu *n* diarrhea

  pakkurusu *vi* diarrhea, having diarrhea

kusay *cf:* **tittak**. *n* cat

kuttad *n* kick

  ikuttad *vt* kick *Nikutta:d-u a:yi:.* I kicked this one.

  kuttadan *vt* kick *Kuttada:ngu=d i karagatan=i.* I kick the stone.

  pa:ngiku:kuttad *vi* kick each other

  pe:kukuttad *v* kick

kuwarto$_1$ *n* room

  kuwakuwarto *n* pl.

kuwarto$_2$ *n* money

kuyad *n* to struggle, to chill

  kumuyadkuyad *vi* struggle, chill *Kinumuyadkuyad=di.* It has come to struggle.

kuyung *cf:* **silit**. *n* large intestine

L l

la:gin *n* light (weight)

  mella:gin light (weight) *Milla:gin ayu=na=y.* The tree is light.

la:ki *n* cleverness?

la:ku *n* sell

  ila:ku *vt* sell *A:nu palla:ku=mu? Palla:ku=tèn ta i:yan.* What are you selling? I am selling fish. *Ila:ku=mi ta kuwarto.* We sell it for money.

la:ngin *n* sadness, loneliness

  manga:la:ngin *n* feel sad, miss someone

  mangilla:ngin *vi* miss each other

la:pad cf. la:pad (Ilk.) *n* width *syn:* **bernat**.

  kala:pad *n* width

  mella:pad *adj* wide

la:sa *n* taste *Ustu i la:sa=na ni di:ru=y.* The taste of the soup is good.

la:sèm *n*

  mella:sèm *adj* sour

la:sun *n* poison

la:ud *n* west

labba *n* basket

labi *n* mouth

ladisèn *vt* crush lice

lagip *n* voice, language, speech

  lagipen *vt* speak *Lagipangu i lagip na Arta.* I speak Arta.

  makalagip *pot.v* can speak

  mallagip *vi* talk, cry *Mallagip i kusay.* The cat is crying.

  palla:gipan *n* story, a story which someone told

lagilagip *n* pl.

lagpèt *n* hard-working

    mellagpèt *adj* industrious

lagtud *n* jumping

    mallagtud *vi* jump

    mallalagtud *vi* jump repeatedly

lagu *n*

    mellagu *adj* green, fresh (plant, vegitable)

laka *n*

    mellaka *adj* easy, cheap

lakatan *n* kind of banana known as Lakatan bananas *gen:* **bagat**.

lakay *n* uncle

laman *n* wild pig

lamèk *n* softness

    mallamèk *vi* become softer *Mallamèk=di i tapa=y.* The soil becomes soft.

    mellamèk *adj* soft, tender *Mellamèk=di a:ya.* That (meat) has become tender.

lamna *cf:* **dègnin**. *n* cold, cool (object)

    lumamna *vi* become cold, cool

    mellamna *adj* cool, cold (object)

lamun *n* grass

    ilamun *vt* mow, cut (grass)

langat *n*

    ilangat *vt* heat, broil above the fire

langis *n* oil *Awan ta langis na sensu.* The chain saw is short of oil. *syn:* **dinglèp**.

langit *n* day *cal:* **langit**, **malu:tep**, **biyungèt**.

    lumangit *vi* clear up *syn:* **dumimlag**.

    mallangit *vi* shine

    takilangit *n* dry season *cal:* **takilangit**, **takipu:nèd**, **takidègnin**.

langpus *n* to fill up, stuff, cram; plug up, close up, block (a hole); cover; bury.

    manglangpus *vi* cover *aytidi tubèltubèlan a mula a kakka:man minanglangpus=did*

lanut *n* vine (general term)

    lanulanut *n* pl.

lappul *n* dog

    lallappul *n* pl.

laptit *n* soft

    mellaptit *adj* soft

lasèn *n* root crop

lasuk *n* hole

lati *n* rattan

lattong *n* outside *syn:* **ditaw**.

    mangilattong *vi* bring outside *Tatin nangilattong ti aba?* Who brought the mat outside?

    tillattong *stat.v* be out, beyond *Tillattong i kamera=mu=y.* Your camera is out (of the bag).

    ilattong *vt* bring something outside *Ilatto:ngu a:yi.* I'll put this outside.

    lumattong *vi* go outside

lattug *n* shoot with an arrow

    lattugan? *vt* shoot with arrow

lawa *n* wideness

    mellawa *adj* wide

layat *n* large (space)

    mellayat *adj* large (space)

le:but *n* around

    ile:but i mata look around

lèblèb *n* soak

    ilèblèb *vt* soak *Nilèblèb=na ta wagèt.* S/he soaked it into the water.

lègèd *n*

    lègdèn *vt* wait for

    mallègèd *vi* wait *Mallègèd=a! Awa:ng=a=tep.* Wait! Do not do yet.

lègpis *n* thinness

    mellègpis *adj* thin

lègsiw *n*

    lègsiwan *vt* let free, release *linègsiwan=na=d=mandi i kalapa:ti.* He released the dove again.

lèknes *n* remove the bark of a tree

    lèkne:sèn *vt* remove (the bark of a tree) *Pallèkne:sèn=di i ulit ni ayu=y.* They are removing the bark of the tree.

lelle: *n* **1)** uncle (used for both vocative and referential uses) **2)** one-generation higher man

lènap *cf:* **pu:nèd**. *n* shower
lengdit *n* cutting board
lètaw *n*
  lumtaw *vi* float up
  taltaw *n* float
  mallataltaw *vi* be floating
lètèg *n* swell
  lumtèg *vi* swell
lètu *n* missing tooth
  maltu *pot.v* (tooth) is missing
  minaltu *pot.v* gap-toothed, (the tooth is) missing
li:nis *n* clean
  melli:nis *adj* clean
li:sa *n* nit (egg) of louse
lig *n* neck *syn:* **tangèd**.
likod *n* ladle
lima **1)** *n* arm, hand **2)** *num* five
limès *n* drown, sink
  malimès *pot.v* be drown
  manga:limès *stat.v* be sinking
limugmug *n* gargling
linès *n* touch on
  linsèn *vt* touch on *Linsèng=u i pulug=na=y.* I will touch her/his hair.
  manli:neslines *vi* beat
lingèt *n* sweat
lingnga *n* sesami
lipat *n* opposite
  malilpatan *pot.v* forget
lisi *n*
  ilisi *vt* get something away from something, escape something from
  me:lisi *pot.v* can be escaped from
lisnad (dial. var. **lisngad**) *n* cook viand
  manlisnad *vi* cook viand
  ilisnad *vt* put something into the fire
liwat *n* sin
  makaliwat *pot.v* commit a sin unintentionally *Pako:man=mi aytidi nakaliwat dami.* We will forgive those who committed sins towards us.

pakaliwatan *n* something to cause someone to commit a sin
  liwaliwat *n* pl.
lu:la *n* call
  lu:lan *vt* call
lu:tèp *n*
  nalalu:lutpan *pot.v* cloudy
lub *n*
  mallub *vi* cook (with bamboo) *Mallub=tid ta biyas.* They cook with bamboos.
lubi'as *n* bean
lubid *n* **1)** rope **2)** line used for single line fishing
  lubid na pusèd *n* umbilical cord
lubin *n* nest
lugar *n* place, location
lugun *n* container
  ilugun *vt* put into a container
lukut *n* fold (clothes)
  lukutèn *vt* fold (clothes) *Palluku:tangu agi=ku=y.* I am folding my clothes.
lungsud *n* putting into
  ilu:lungsud *vt* put something into
lupuy *n* fatigue
  malupuy *n* become tired
  mellupuy *adj* being tired *Melellupuy=tep=tèn.* I am still being tired.
lusip *n* nail
luta *n* soil, land, ground
lutu *n* cooked, soften, ripen
  mallutu *vi* cook, heat
  malutu *pot.v* to be cooked, soften, ripen *Minalutu=d i manga=y.* The mango is already ripen.
luwa *n* tear
luwab *n* **1)** under *syn:* **sidung**. **2)** space under house
luwag *n* awaking
  luwagèn *vt* awake, wake up someone
  malluwag *vi* wake up
luyèng *n* sadness
  manga:luyang *vi* grieve
  melluyang *adj* sad

M m

Ma:sug *n* place.name

ma'is *n* corn

  ma:ma'is *n* pl.

ma'lèm *n* blood

  mamma'lem *vi* bleed

mabaw *n* cooked rice

Maddela *n* Maddela

  mampaMaddela *vi* go to Maddela

madi *n* dry

  mamadi *n* be dried

madit cf. madíʔit (Northern Alta) *cf:* **kanakannak**, **ulitaw**. *n* unmarried woman, female teenager *minababakat a madit* unmarried old woman

  maddit *n* pl.

malala:ki *cf:* **meppiya**. *adj* nice, beautiful, good

malallay *n* grandparent, grandchild

malla:ki *adj* **1)** good, nice **2)** smart, clever, wise *Malla:ki i nu:nut=mu.* You are wise/smart.

malu:tep *n* afternoon *cal:* **langit**, **malu:tep**, **biyungèt**.

mamba:ru *vi* wear

mamin- *vi* do X times

  mamitta *vi* once

=man *adv* contrastive marker. (this particle signals that one element within the clause or sentence is mentioned contrastively with another entity.) *Awa:ng=u tataw. Ama=ku=ti, saya=man tataw.* I do not know (the war). But as for my late father, he knew it. *Ati:ngèn=muyu a ati:ngèn=muyu, awan=muyu=d=man maarawatan.* However you hear, you cannot understand it. *Apu=ku=y a:yi:. Ana:=ku=y, ti Mulu. A:yi:, panga:nakèng=u=d=man.* This is my grandchild; this is my child, Mulu, and this one is my son in law.

mana:rig *n* kind of wood

=mandi *adv* again *take:ta uma:du=man=de:=tid ayti apaw ni tapa=y.*

so that their population will again increase in the world

mangan *n* eating

  pa:manganan *n* eating place

mangasassub *vi* be.perspiring

mange: pormanteau prefix consisting of manga: and i- prefixes.

mangidukès *n* kind of ghost *gen:* **be:kut**.

mangku:takkutak *vi* ? *Mangku:takkutak i ku:rèk.* ?

manguriyab *vi* (Deer) cry *Manguriyab i bidut ta beeew!* The deer are crying "beeew"

manmanu cf. manmanu (Ilk.) *adv* seldom, very few

manu: *n* bird

  ma:nu: *n* pl.

mapdit *pot.v* be blind *ay agani: a minapdit* the person who are/were blind

mappuned *vi* rain *Kabba:tna mappuned.*

marakèt *adj* bad

  mememmarakèt *adj* very bad

marang *n* ember, small fire

marti:nis *n* crested myna (Acridotheres cristatellus)

maski *adv* even *Maski manga:paditèng, mangka:rawèg=tep ta lattong.* Although he was sick, he was playing outside.

masungpu *pot.v* boil

mata *n* eye id. ile:but i mata (see under le:but)

  matataddyur *vi* stand up

matris *n* uterus

me:kap (fr. var. **mek'ap**) *n* make up

me:ke:ku *adv* for a while *Me:ke:ku=te.* Just for a while (frequently used expression meaning "wait for a while" or "later")

me:nakadda for example

me'eng'angsu *adj* smell urine

melda gold crusian

meybara:wèng *vi* to land, be transferred onto the ground

migat *n* breakfast

=mina *adv* expressing a hypothetical situation *Ilagip=di=mina ta Arta.* I wish that they would speak Arta.

minabbimbi *n* late aunt

minaddili *n* late uncle

minangisangan *pot.v* with decayed teeth *Minangisangan i kanakannak=i.* The child has a decayed tooth. *syn:* **nilèb**.

mine:sappuar *pot.v* be scattered

miyu:miyu: *cf:* **dure:dure:**, **alummanay**. *n* a kind of cicada living in a populated area. [This is an onomatopeic word. Arta people say that this cicada cries [miyu:miyu:].]

mo:nayan (**ko:nayan**; **o:nayan**) *n* Cagayan river

  emo:nayan *n* Cagayan people

monoy *n* ? kind of animal called mutit in Ilk.

mu:ra *n* unripe coconut

mu:sang cf. mu:sang (Ilk., Tag) *n* wild cat, civet cat

mudit *n* cheek, face

mula *n* cultivated, domesticated plant

  mammula *vi* plant

  mammulamula *vi* plant (by multiple agents)

  mulamula *n* pl.

munoy *n* Philippine squirrel

murab *cf:* **tabug₂**, **bugay**. *n* solitary hunting without a dog

  mammurab *vi* conduct solitary hunting

muta *n* dirt in eye

N n

na:na:b *n* to remember

  na:na:bèn *vt* remember

naddyusan *adj* holy, Godly (Ilk. naddyusan)

nakan ?eat

  pa:nakanan *n* pan

nalantan loiter, linger

  pa:nalantan *vi* be loitering, lingering around

naluwag nakari-ing

namumab *n* cloud

  minnamunab *adj* cloudy

nangka *n* jackfruit

natannag *pot.v* matannag

natèng *n* vegetable

naydi *interj* okay, yes

=nen *adv* please (politeness marker) *Mattaddyo:r=a=nen.* Please stand up. *Tan=ta=nen=ya.* Shall we look at that?

nga lig

ngadin *n* name

ngèrab *n* cry of a monkey

  mangangrab *vi* (A monkey) is crying

ngetnget *n* chewing

  mangngètngèt *vi* chew

ngetngeten *vt* chew

ngippèn *n* tooth

  ngi:ngippèn *n* pl.

ngiyaw *n* mew

  mangngi:yawngiyaw *vi* miaow, meow

nguntu *cf:* **bangal**, **sangru**. *n* front tooth

ngurabiyat *n* harelip

  tingnguribiyat *stat.v* have harelip

ngureb

  mangngureb *vi* bite into *Mangngureb i babakat=i ta mangga.*

  ngure:ban *vt* bite into *Pangngure:ban=na i mangga.* She is biting into the manggo.

ni:ni cleaning

nilèb *n* with decayed teeth *syn:* **minangisangan**.

  minangilèb *pot.v* with decayed teeth

niyèt *n* honey

  menniyèt *adj* sweet

no:not *n* heart, mind *no:no:t=u* my mind *Atti: no:not=mu.* You are smart (lit. your brain exists)

nusu *n* lime powder

O o

o: *interj* yes

o:ni *interj* yes *Tataw=mu ti lelle: Karas? O:ni, tata:w=u.* Do you know Karas? Yes, I know him.

o:rat *n* time

P p

=p *adv* very soon?

=pa *cf:* =tep. *phs* just, for a while *Yumèbyèb=pa=tèn.* I am just going to urinate.

pa-...-èn *n > vt* causative form with -èn suffix der. pella:yugèn (see under illa:yug)

pa:ngalimugmug *vi* gargle

pa:ngiC- reciprocal

  pa:ngibarbared *vi* throw

  pa:ngiku:kuttad *vi* kick each other

pa:tag *n* steep

  meppa:tag *adj* steep

pa:tu *n* duck

pa:yung *n* umbrella

paba:'or *n* fishing rod

pabbèg *n* beam of the house

paddalus *vi* clean (room) *Paddalus ti bunbun=ni.* He is cleaning his house.

paddam *n* lend

  paddaman *vt* lend to someone *Ara:ra:pa, paddaman=mu=nen=tèn ta ta'lo a tina:pay.* Friend, lend me three loaves of bread.

padit *adj* blind

paditèng *n* desease

  manga:paditèng *stat.v* be sick

  mapaditèng *pot.v* be sick

pagay *n* paddy

pages? *n* happiness?

  manga:pagès *vi* be interested, rejoice

pakaway *n* outriger

pakèr *n* squeeze, wring

  pakran squeeze, wring

pakèt *n* spouse

  mangippakèt *vi* marry

pako:man *vt* forgive *Pako:man=mu=a:mi aytidi liwaliwat=mi.* Firgive us our sins.

pakpak-èn *vt Pappakpakèn=na baruwasi=di.* ?

pakul *n* spoon

pala:pa *n* lupak na

palab'ug *n* trap

palad *n* palm

palda *n* skart

paluga *cf:* takkèn. *n* paddle (of canue)

paluk beating

  palukèn *vt* beat

pam- *vi* ipfv.af

pamilia *n* family

panabas (pana:bas) *n* grass cutter (kind of chopper)

panahun *n* era, time, *Ti Noe mepeppiya a agani: ta panahunnati.* Noah was a good man of his time. (possibly from Tagalog)

panga:dinan *vt* calling, naming

panga:nakèn *n* son-in-law, daughter-in-law

pangal *n* arrow id. alad na pangal (see under alad)

pangisbuan *n* toilet

panni:ki *n* bat

pannu *n* full

pantalun *n* pants

  mampantalun *vi* wear a pant

pantug *n* ovaries

papel *n* paper

pappara *vi* be hoarse

pappu:galan *n* something used to wipe

paradasag *n* cooking

paragpag *n* upper ribs Ilk. paragpag

parakad *n* squat

tipparakad *stat.v* be squatting

parat *n* make

paratèn *vt* make, create

parayuk *n* cooking pan

pare:has *adj* the same

pasensi *n* patience

mampasepasensi *vi* be patient *Mampasepasensi=taw.* Please be patient.

pasensian *vt* torelate

pasiran *n* ashame

pasu *n* sun, hot *Malalattung=di pasu=y.* The sun is rising.

mangipasu *vi* put on fire to heat

ipasu *vt* put on fire and heat

mappasu *vi* become hot

meppasu *adj* hot

pata:tas (patatas) *n* potato

pataradtad *vt* drive someone away

pati₁ *v* die

mamapati *vi* kill *Tatin namapati?* Who killed (him/her)?

mappati *vi* die *Mappati attanan a atti angèsna* All the creatures will die.

papatin *vt* kill *Awa:nga pammapati.* Do not kill.

pati₂ *adv* even

pati:ti:na *n* mother and child(ren)

patit *n* eyebrowed thrush (Turdus obscurus)

patta:ka *vi* (they) are siblings

pattadtu:daw push

pattatu:baw push

pattatuttudan push

pe: *n* paC-, i-

pe:nas *n* sharpen

pe:nasan *n* sharpening stone

pe:t *n* bitter

mapet *adj* bitter

pègkat *n*

pègkatan *vt* paste, paint on

pègpèg *n* trembling, shaking by fear

mapapa:pègpèg *pot.v* make someone tremble by fear

perdi *n* destroyed

maperdi *pot.v* be destroyed, broken, ruined *Nape:perdi karsa:da=y.* The road was destroyed (e.g. by the typhoon)

pètpèt *n* hold,, seize

pètpètan *vt* hold

pi:gar cf. pi:gar (Ilk.) *n* fin of fish

pi:piyan *vt* **1)** repair, improve *Pi:piyan=ta i bunbun=mu=y.* Shall we repair your house? **2)** fix, put away

pi:yèk *n* chick

pi:pi:yèk *n* chicks

pikkèt *n*

meppikkèt *adj* sticky

pilèk *n* tear, split

mapilèk *pot.v* be torn

pilèkèn *vt* to tear, split into strips *Pilakèn=di=d (bidi:yu).* They split/tear bidi:yu leaves.

pili *n* taking off

mapili *pot.v* be driven away, disappear *Mapili attanan a marakèt.* All the evel people will disappear.

pilyan *vt* **1)** take off (clothes) **2)** destroy, remove, wipe off *Pinilyan ni Noe i atèp na abang.* Noah removed the roof of the ark.

pina:nès *n* wrist band made of a line of beaded string or cloth

pappinangsan, pappinansan *n* wrist

pi:pi *n* repairing, curing

pappi:pya *n* cure

pappi:pyan cure

pisil

pisilèn *vt* pick up (something powdered or grained) *Pappi:silèn=na i asin.* S/he is picking up salt.

pissay *n* tear

mapissay *pot.v* be torn

pissayèn *vt* tear

pitèng *n* flea

pitu *num* seven

piya *n* good, nice

meppiya *cf:* **malala:ki**. *adj* good, nice *Mepeppiya i langit aytay.* It is a nice day (weather) today.

papi:piyan *vt* heal, cure

piyèk *n* chick, the cry of chicks

mampi:yèkpiyèk *vi* (a chick) cheeps *Mampi:yèkpiyèk i kaki:lèk=i a ku:rèk.* A small chicken (chick) is cheeping.

pokpok *n* hit, pat

pokpo:kan *vt* hit, pat

pu:gal *n* wiping

pu:kis *n* cut hair

pu:kisèn *vt* cut hair

pu:nèd *cf:* **lènap**. *n* rain

mampupu:pu:nèd *vi* be raining

mampapu:ned *vi* raing

mappapu:ned *vi* rain

papu:nèdèn *vt* make it rain *Papu:nèdèngu ta mebbayag gindat ta korenta a langit aydi biyungèt* I will bring rain for a long time for forty days and nights. (Noah)

pumu:nèd *vi* rain *Isugnud na Dios a pumu:nèd.* God gave up giving rain.

takipu:nèd *n* rainy season *cal:* **takilangit, takipu:nèd, takidègnin**.

pu:pu:nèd *n* heavy rain

pudèng *n* nipple

pugal *n* cleaning

pugalan *vt* clean

pugèt *n* curl

pukèl *n* thigh

pukul *n* having single/neither arm, finger

napukulan *pot.v* armless, fingerless

Pulang Lupa *n* place name

pulas *n* wiping

punasan *vt* wipe

pulbus *n* flower

puling *n*

mapuling *pot.v* have dirt in one's eyes

pullaw *n* white *Addinan=mu=tèn ta pullaw a papel.* Give me white paper.

meppullaw *adj* white

pulot *n* g-string *ant:* **agi 1**.

pulopulot *n* diaper

pultak *n* bald

napultakan, minapultakan *pot.v* have become bald

mapultakan *pot.v* become bald

pulug *n* **1)** hair **2)** feather

pulugpulugan hairy

pume:ta *vi* show oneself

punan *vt* like, as it were, say (introduce an iconic verbal, nonverbal expression, such as a direct speech and iconic gesture) *Punan di Bugkalot=i "Awa:ng=ita=d pa:ngissubèg"* One Bugkalot said, "shall we stop fighting with each other?"

pungan *n* pillow

pura: *n* white hair

mampura: *vi* white hair is growing

purèd *n* asleep

meppurèd *cf:* **me:dèm**, **make:dèm**. *adj* sleepy (referring to the state while sleeping) *Mepeppurèd=de:=tèn.* I am very sleepy.

puri:sa *n* the sound of wild pigs with a high pitch ve:::: especially when they are caught

mampu:ripuri:sa *vi* bark veeee by a wild pig

puruk *n* village

pusèd *n* navel

pusin *n*

pusinèn *vt* break (stick-like object) into two piecess

pusu *n* heart *Manli:nèslinès i pusu=ku=y.* My heart is beating.

pusu:nèn *n* bladder

putan *n* handle of bolo *wh:* **bisuruk**.

putèd *n* cripple

maputèd *pot.v* be crippled

R r

ra:pug *n* jump

marra:pug *vi* jump

ra:say *n* thinness

merra:say *adj* thin (wood, stick, etc.)

radu *n* fat, obesity

tirradu *stat.v* be fat, have obesity

rakèd *n* banyan tree

ramarama *n* finger

rambutan *n* palluwat fruit

ramut *n* root *syn:* **urat 2**; *syn:* **gimut**.

rangtay *n* bridge *syn:* **talèytèy**.

rangu *n* dry

marangu *pot.v* be dried *Narangu ay si:li.* The (leaves of) pappers are dried.

narangu *pot.v* withered

rapu *cf:* **gapu**. *n* be.from

irapu *vt* bring something from *Nirapu=na ta bukid.* S/he brought them from the forest.

marapu *pot.v* come from *Narapu=tid ta Manila.* They came from Manila.

marapuwan *pot.v* come from *(Adi:ni) narapuwan=mu?* Where are you from?

rarru *n* yawning

makarrarru *pot.v* be always yawning

ratang *n* buying

iratang *vt* buy *Inirata:ngu a:yi:.* I bought this.

marratang *vi* buy

re:git *n*

ire:git *vt* look at, peep at

ribu *num* thousand

rigèt *n* tickle

manga:rigèt *stat.v* be tickled

rignèt *n* dust *Pampu:la:lu ti rignet=ti.* I wiped off the dust.

merrignèt *adj* dirty, dusty

rika:du cf. Ilk. rika:du *n* ingredient

rika:duwan *vt* add ingredients to something

rikip *n* shut, close

rikipan *vt* shut, close *Rinikipan=di ni Ya:we ay ruwa:ngan ni abang=i.* Yahweh shut the door of the ark.

ringdèm *n* darkness

rumingdèm *vi* become dark

merringdèm *adj* dark

ru:nèg *n*

merru:nèg *adj* muddy

rud *n* calf

rugi *n* beginning

irugi *vt* begin to do

mangirugi *vi* begin *Mangirugi=itam ta lagip.* Let's begin to talk.

marugi *pot.v* have begin *Narugi ta alas dos i meddigsèn a bègbèg.* The typhoon began at 2 o'clock.

rukup *n* weakness

merrukup *adj* weak *Mererrukup i bunbun=mi.* Our house is weak.

rungtut *n*

manga:rungtut *pot.v* rotten

marungtut *pot.v* rotten

ruwa:ngan *n* gate, door

S s

sa:bit *n* hook

sa:bitan *vt* hook onto something

isa:bit *vt* hook something

sa:bung *n* flower, blossom Agta: bulaklak

sa:ku *n* sack < sack (Eng)

sa:la *n* dance *syn:* **dayang**.

mansa:la *vi* dance

massa:la *vi* dance

sa:li *n* exchanging

sa:lut *n* hold in one's arms

sa:lutèn *vt* hold someone in one's arms (especially a baby)

sa:ngan *intrg* how many, how much

mamin-sa:ngan *intrg* how many times

sa:y *n* to ride

massay *vi* use a ride *Kabba:t=u massay ti tarak=i.* I want to ride on the car.

pasa:yèn *vt* drive for someone *Pasa:yèn=mu=tèn.* Drive for me.

sa:yan *vt* ride on something

sumay *vi* ride on *Gapu ta me''a:du agani: nata:ko ti bi:yèn=na=y ginuminan sinumay ta abang minata:ko.* Since a lot of people gathered around him, he left to ride on a boat.

sa'ambat *n* greet, meet

sabilan *cf:* **ginaddyang**. spear (lance) for fishing

sabili *n* shoulder

sabit *n* pubes

sabut *n* hair (of pubes or penis)

sadsad *n*

isadsad *vt* bring (ship) alongside

me:sadsad *pot.v* be brought alongside

sadul *n* bumblebee

sagèm *n* ant

sagnit *n* lower ribs

sakay *coord* and then *Sinumay ta abang sakay tinumuttud.* He rode on a boat and sat down.

salang *n* jaw

salapad *n* shoulder

saldit *n* pinch

sale:gèd *n*

pasale:gèdèn *vt* wait for (time passing)

sumale:gèd *vi* pass by

sali change, exchange

saliyan *vt* change, exchange *Saliya:ngu i baruwasi=ku=y.* I will change my clothes.

saliget

makisaliget *vt* walk with

salub *n* nice-smelling

messalub *adj* nice-smelling *Mesessalub i angut=na=y.* Its smell is very nice.

sampul *n*

isampul *vt* bring (food) into the mouth

sangdir *n* lean

pasangdiran *vt* lean something on something

sanggup *n* sucking

mansanggup *vi* suck

sangru *cf:* **nguntu**, **bangal**. *n* 1) tusk, fung, horn 2) canine tooth

sangsangrun *vt* attack someone with horn *Me''a:du: sina:sangru na dapug.* Many people were attacked by carabaws with their horns.

sapa:tus *n* shoes

sapang *n* 1) back (body) 2) *sapang na lima* the back of the hand 3) back (direction)

passapangan *n* backwards

sappu *n* boil

mansappu *vi* boil

sar'ay *n* cluster *si:pang a sar'ay a bunga=na* a cluster of fruits

sarangsang *n* slope in the mountain, hillside

sumarangsang *vi* climb the mountain

sari:wa *adj* green, fresh (plant, leaf)

sarming *n* mirror

se:rad *n* to close

ise:rad *vt* close something (e.g. door)

mine:se:rad *pot.v* (something) has already been closed

sèdèp *n* to enter, go into

sumdèp *vi* enter, go into *Sumdèp-am a si:pang a pamilia ta abang.* You, one family, enter the Ark.

sèlsèl *n* shove, push into

isèlsèl *vt* shove, push something into *Isèlsèl=u ta hamba:g=u=y.* I will shove it into my bag.

sennut *n*

mase:sennut *pot.v* steady, gradual

sèpsèp *n* suck (up)

sèpsèpèn *vt* suck (up) (e.g. soup)

sèssèp *n* gnat

si:ngin *n* twin

si:pang *num* one

  sissi:pang *num* only one

si:yèt *n* a cry of ghosts heard in the mountain

sibèt *n* strongness

  messibèt *adj* strong, powerful

sibu *n* blow

  sibuwan *vt* blow

sidung *n* under *syn:* **luwab 1**.

sigalilyu *n* tabacco

sigid *n* burn

  masigid *pot.v* be burn

  sigidèn *vt* burn out

=sika *adv* **1)** oh!, unexpectedly (mirative marker that indicates that the speaker has experienced something unexpected. The statement with the mirative marker is understood as a reaction to the sponteneous experience.) *Kakka:man=sika!* How big it is! *Atti=sika ti bi:yén=tam=i.* He is unexpectedly staying near us. *Pakkape:=sika=tep=taw!* You are still drinking coffee! **2)** really, truly (indicating a subjective evaluation toward an object) *Mesessubèg=sika i hapon.* Japanese were really feaful (during World War II).

sikat *n* town

siku *n* elbow

silit *cf:* **kuyung**. *n* small intestine

sinèy *n* intestines

singbit *n* answer

  isingbit *vt* answer that ...

singkul *adj* paralyzed in hands; deformed in the armbone

singur *n* strong-smell

  messingur *adj* have a sharp, pungent smell (e.g. alcohol)

sinsilyu *n* change

siran *adj* old

sirit *n* feces

  massirit *vt* empty his/her bowels *Mangay=ten massirit.* I'll go to empty his/her bowels.

  pass:ritan *n* anus

  sumirit *vi* go to excrete

  sirit na ibèng *n* earwax

sistèng *n* check, test

  sistingèn *vt* check, test

siya weeping

  makassi:siya *pot.v* be always crying, be a crybaby

  sumiya *vi* begin to cry, weep

  makasiyasiya *pot.v* weeping and weeping (sa:ngit a sa:ngit)

  mansi:ya *vi* weep

so:li *n* move back

  makaso:so:li *pot.v* often return

  masso:li *vi* go back, return *Masso:li=d=tèn=ti.* I will come back here.

  iso:li *vt* return something

  sumo:li *vi* return, come back

su:luk *n* part, area, section, region *attanan a su:luk ni tapa=y* all areas of the earth

subèg *n* anger

  makasubeg *pot.v* be angry

  makasubesubeg *pot.v* be angry

  mangissubeg *vi* quarrel with each other *Nangissubeg=tid mi:gapu ta kwartu.* They quarreled over money.

  mansu:beg *vi* scold

  messubeg *adj* angry

  subgan *vt* quarrel with *Sinubgan=na ti Ramos.* He quarreled with Ramos. *Subgantataw.* I quarrel with you.

  sumbèg *vi* get angry

subèng *n* decoration for ears made of colorful clothes

sugnud *n* permit, allow

  isugnud *vi* permit, allow, cause *Isugnud na Dios a pumu:nèd.* God gave up raining.

suklu:ban *n* bag with a top lid weaved out of "bidi:yu" leaves

sulu *n*

  messulu *adj* red

sungdu *n* finish, end

  isungdu *vt* finish something

  masungdu *pot.v* finish *Nasungdu a namangan.* He finished eating.

sungkuk *n* beak

sungput *n* evaporate

sungpu:tèn *vt* evaporate something

suntuk *n* punch

mangisuntuk *vi* punch each other

suntukan *vt* hit someone *Awan=tataw suntukan* I will not hit you.

suput *n* phimosis, phimotic penis **ant: bugit**.

surakèd *n* forward, front

passurakedan *n* forward

susu (**risat**) *n* breast

syam *num* nine

T t

ta:ku *n* together

mata:ku *vi* gather *Me''a:du agani: nata:ko ti bi:yèn=na=y* A lot of people gathered near him.

ta:law *n* cowardice

manta:law *vi* cowardly

ta:me:ta *adj* different

ta:me:tan *vt* change

ta:ta:me:ta *adj* quite different

ta:pal *n*

ita:pal *vt* put (the medicine, herb) onto the woundd

ta:sa *n* cup

ta:tèg *n* grub

ta:wa *n* window

ta:yab *n* cooking pot

ta'lu *num* three

tatta'lu *num* only three

tabas *n* cut weeds and bushes

mantabas *vi* cut weeds and bushes

tabla *n* board

tabu *n*

tabun *vt* scoop with a ladle

tabug₁ *n* grime

tabug₂ *cf:* **bugay**, **murab**. *n* **1)** pond **2)** group hunting conducted typically by three males

taddung *n* hat, cap

taddyor *n* standing

mattaddyur *vi* stand up *Mattaddyu:ra=nin.* Stand up, please.

pataddyu:rèn *vt* stand up someone *Pataddyu:ren=mu ti Meryjoy.* Stand up Meryjoy. *Pinataddyu:r=u ti Meryjoy.* I stood up Meryjoy.

tittaddyor *stat.v* be standing

tadèm *n* **1)** arrowhead **2)** cutting edge of knife or bolo

mettadèm *adj* sharp

tag'araw drought, dry season

taga from

taga-adin *intrg* from where *Taga-adi:nga.* Where are you from?

taga-Disubu *n* Arta people *syn:* **arta 1**, **edilod**.

tagdu *n* leaking

mantatagdu *vi* leak

tagèytèy *n* comb

tagi *n* calling

tagiyan *vt* call

tagi: *n* leftover *tagi:=na* his/her leftovers

tagkang *n* the ribs

taka *n* amazement

pattakataka *adv* being amazed

takaw *n* to steal

takawèn *vt* steal

take:ta *subord* therefore, so

takkèn *cf:* **paluga**. *n* boat pole

tala:wen *n* kind of swallow

talad *n* sugarcane

talagatag *n* floor

talèytèy *n* bridge *syn:* **rangtay**.

talin *n* **1)** kind of basket with no cover **2)** kind of basketry technique. cloth weave.

talingu *n* injury, wound

matalingu *pot.v* be injured

tallip *num* two *tallip a hulu aydi: si:pang* twenty one *tallip a ramarama* two fingers

talun *cf:* **bukid**. *n* forest, densely forested mountain

  talutalun *n* pl.

tamman *adv* again

tamuru *n* index finger

tanakan when

tanakwan *adj* different

  tumanakwan *vi* change

tanga *n* middle

  tanga na biyungèt *n* midnight

  tanga na langit *n* noon, midday

tangèd (tèngèd) *n* neck *syn:* **lig**.

tanggar *n* trap net

tanggu:yub *n* thin bamboo blower

tanglag *n* lemon grass (used as a medical plant)

tannag *n* fall

  manga:tannag *vi* fall *Manga:tannag i dun na ayu.* Leaves are falling.

  matannag *pot.v* fall

tanud *n* needle

tanug *n* sound *Awan ta tanug=na.* It is silent/It does not emit sounds.

tapa *n* soil, ground *Ikotkot=di=d ti tapa=y.* They bury it under the ground.

tapik *n* to slap, to clap

  tapikèn *vt* slap something *Tapik=na i bungur.* S/he slapped the mosquito.

tappug (fr. var. **ta:pug**) *n* **1)** tomb, grave **2)** bury

  tappugan *vt* bury

tapra *n* shine, sunshine *tapra na langit* sunshine

  tumapra *vi* it clears up

tara:'ok clucking, a cry of chickens

  mantara:'ok *vi* cluck *Mantara:'ok i ku:rèk=i.* The chicken is crying.

tara:du *n* contract

  makitara:du *vi* establish a covenant with

taraba:hu *n* working

  pattaraba:huwan *n* working place

tarabit *n* chating, talk

  makataratarabit *pot.v* be talking and talking

taradtad *n* to run away, escape

tarak *n* car *Massay=tèn ta tarak.* I will ride on the car.

tarubung *n* grass

tarung *n* eggplant

tastas *n*

  matastas *pot.v* be torn *Natastas=di i agi=na.* His clothes were torn.

  tastasèn *vt* tear

tataw *vt* know *Tataw=mu ti Delia?* Do you know Delia? *Tataw=na mallisnad ta yèkkan.* He knows how to cook viands.

  ipatataw *vd* inform, announce

=tataw 1sg.erg.2sg.abs

tatin *intrg* who

tattara:kot (onopatopeia) a cry of rooster

  mantara:kot *vi* (a rooster) is crying

=tay *adv* now *Konta=d=tay awan=de:ta subèg=na.* But now, he is not fearful. *Gindat=tay awan=tep makaderettyo i Sama:na.* Until now Samana bus cannot go straight.

  aytay *adv* now *aytay a dagun* this year *aytay a langit* today *aytay a biyu:ngèt* tonight *Me:na=tèn ta Dipintin aytay.* I will go to Dipintin now.

=te: *adv* only *sissi:pang=te:* only one *Nabera:ng=u a taw=te mepeppiya ayti tapa=y.* I found that you are the only one who is righteous on earth.

  ay=te:=tay *adv* just now

tèbbi *n* areca nut

tèbtèb *n* chop a coconut shell to open

  tèbtèbèn *vt* chop a coconut shell to open

tèltèg *n* to hit, to hammmer

  matèltèg *pot.v* be hammered, hit by a hammer

tèmmi *n* cleft chin

=tep *cf:* **=pa**. *phs* still

ti:m *n* drink

  mattim *vi* drink *Mattim=de:=tid ta binarayan.* They are going to drink wine.

  makatim *pot.v* want to drink, be thirsty *Makatim=tèn ta wagèt.* I want to drink water. I am thirsty.

pattati:man *n* drinking place

ti:man *vt* drink *Ti:men=mu ayna.* Drink that.

ti"idèm *stat.v* be asleep

tikkerepkep *stat.v* hold, seize

tiklis *n* fish basket

tiledtikek *n* kind of small bird

timpla *n* mix, marinate, stir

mantimpla *vi* mix, stir *Mantimpla=taw ta andi=mu.* You mix yours (your coffee).

tina:pay *n* bread (via Ilokano)

tinakèd *n* beaded bracelet

tinalib *n* kind of basketry tecnique. three-component square made of bamboo

tingiyab *n* cut the surface of something

tingiya:ban *vt* cut the surface of something *Tingiya:ban=di i biyas=i.* They crack the surface of the bamboo.

tiradur *n* slingshot

tiradurèn *vt* slingshot

tistis *n* bark of coconut tree

tittak *cf:* **kusay**. *n* kitten

tiyèd *n* leg, ankle *Napusin i tiyèd=u=y.* I broke my leg.

tiyèl *n* kind of hairy grass

to:lay *n* people

manga:to:lay *vi* be alive, live

toktok₁ *n* pick

toktokèn *vt* pick (grain)

toktok₂ tuktuk (Ilk.) *n* top *toktok didi bukid=i* top of the mountains

top *n* companion, friendship *Tatin i top=mu=y?* Who is your companion? With whom did you come?

pe:top *n* friendship < itop *Nato:lay ta pe:topna ta Dios.* He lived in fellowship with God.

tu:baw *n* pushing

nitu:baw *vt* push

tu:luy *n* continue

itu:luy *vt* continue something *Itu:luy=itam=di i istoria=tam.* Let's continue our talking session

tu:rèk *n* write

mantu:rek *vi* write

mattu:rek *vi* write

pattu:rèk *n* pen

tubèl *n* thorn

tubu *n* to grow

kattubutubu *n* the one which began to grow *minarangu aytidi kattubutubu=y a bukèl* The seeds which began to grow has dried. *Kattubutubu ni pura:=na=y.* Her white hair is beginning to grow.

mantubu *vi* grow

tubug *n* swim

tumubug *vi* swim (to somewhere)

tud *n* knee

tuddyu: *n* prick

matuddyu: *pot.v* be about to be pricked *Matuddyu: buli=mu=y.* You are about to prick your buttacks.

tugi *n* tugi (kind of taro)

tukan *n* cut (tree)

pattukan *n* cutting tree

tulang *n* **1)** bone **2)** shin

tullub *n* cover, lid over a container

tulluban *vt* cover something with a lid *Tulluba:ng=u i yakkan=i.* I will put a cover over the viand.

tuma *n* lice, flea

tumbung *n* meat of coconut

tuna *n* kind of poisonous snake, the skin being red and black *syn:* **kamandagna**.

tunaw *n* melting

matunaw *pot.v* be melted

tundan (turdan) *n* kind of banana known as Latundan bananas (also called Tundan) *gen:* **bagat**.

tungkur *n* backbone

tungpa *n* firing

mantungpa *vi* make a fire

pattungpan *n* fire place

tuntu:ru *n* to learn

ituntu:ru *vt* to teach something

ituntu:ruwan *vt* teach to someone

mangituntu:ru *vi* teach

pattuttu:ruwan *n* one's student

tunu *n* roast

itunu *vt* roast something

mantunu *vi* roast *Mantunu=tèn ta i:yan.* I will roast fish.

tuppak *n* saliva, spit

tuppakan *vt* spit on somewhere *Amma manga:paditèng=di, saddya urun=di. Tuppakan=di=d ta tuppak=di.* If someone becomes sick, that person is cured. They spit on the person. (Anthropology Note: In the culture of Arta, spitting on someone is a practice for curing a sick person, which is effective to drive away the ghost inside the person. This practice is conducted by faith healers.)

turid *n* brave

metturid *adj* brave

tuttud *n* sitting

mattuttud *vi* sit down

makituttud *vi* sit with

matatuttud *vi* sit on *Matatuttud=ten ti ayu=y.* I am sitting on the tree.

mattattud *vi* sit

tittuttud *stat.v* is sitting

tumuttud *vi* sit down *Tumuttuttu:d=a.* Sit down.

tyan *n* belly

U u

u:li *n* go back

yu:li *vt* bring back

u:ta *n* vomiting

maka'u:ta *pot.v* is about to vomit

mangu:ta *vi* vomit

umu:ta *vi* vomit

yu:ta *vt* vomit *Inyu:ta=ku inna:ngu.* I vomited what I ate.

ubbun *n* young *ubbun na ba:ka* young cow

ubo:ba *n* naked

mangubo:ba *vi* remove one's clothes

uding *n* black, charcoal

me''uding *adj* black

po:dingèn *vt* make something black

ugi:p *n*

ugi:pan *vt* sleep on somewhere

mo:gip *pot.v* go to bed

uhhu *n* thigh

ulag *n* snake

ulas *n* friction lighter

man'u:las *vi* light a fire with a friction lighter

umulas *vi* light a fire with a friction lighter

ulidaw cf. kurilaw (Ilk.) *n* sea catfish

ulit *n* bark of a tree

ulitan *vt* remove the bark of something *Inulita:ngu i ayu.* I removed the bark of the tree.

ulitaw *cf:* **kanakannak**, **madit**. *n* unmarried man, male teenager *minadupu: a ulitaw* unmarried old man

ullitaw *n* pl.

ulu *n* head *Meddgès i ulu=ku=y.* I have a headache.

ululus *n* crowling?

mangu:lulus *vi* crowl

ulus *n* washing (dishes)

-um- *n > vi*

uma *n* field

pa:nguma *n* putting the field in a good condition, maintaining the field

uman *subord* as if, such as, like (take a genitive phrase) *Uman na baruwasi=ku=y.* It is like my shirt.

uming *n* beard, mastache

umm *interj* yes

unas *n* sugercane

une: (**ine:**) *n* climbing

uppu *n* thigh

uput *n* to close, end, finish

yu:put *vt* close, end, finish, make a
conclusion

uras *n* washing (dishes)

manguras *vi* wash

urasan *vt* wash (dish, body-part) *Urasa:gu i
lima=ku=y.* I'll wash my hands. *Urasa:gu
i lima=ku=y.* I'll wash my hands.

urat *n* **1)** sinew, blood vessel **2)** root of plant
syn: **ramut**.

urèd *n* caterpiller

uriyab *cf:* **bidut**. *n* a cry of deer

uru *n* medicine

urun *vt* prescribe a medicine to

usto *adj* right, true, correct; enough *Usto a
ninta=ku siya* It is true that I met him/her.

umusto *vi* fit, become correct *Umustu=dèn
ayna a barowa:si* That clothes fit me.

uta (**utèk**) *n* brain

utu *n* louse, lice

W w

wa *n* placeholder 'whatchamacallit, what-
d'you-call-it' *Panga:rabisèn i wa=y rangtay.*
(We) are crossing the, you know, bridge.

iwa *vt* put *Iwa=ku=p=ti.* I just put it here.

mangwa *vi* do *Mangwa ta asuk.* He does
smoke. (used when the exact verb cannot
be found)

mine:wa *pot.v* be transferred

wa:nangwang *n* cast eyes into

iwa:nangwang *vt* cast one's eyes into
Pawwa:nangwang=na i mata=na He
looked around.

=wada *adv* perhaps *Anu:=mu=wada amma
ustu?* Do you know if it is correct, by any
chance? *Intan=mu=nen ana:=ku=y
manga:paditèng mapati=wada=d.* Please
look at my child, who is sick and she might
die.

wadi *n* younger sibling *Ninta ni wadi=ku=ti.*
My yonger brother saw it.

papatwadi *n* more than one younger sibling

minawwa:di *n* late younger sibling

wagèt *n* **1)** water *Ti:mèn=mu i wagèt=i.* You
should drink the water. *spec:* **wangar**. **2)**
river *ka:man a wagèt* Cagayan river (the
longest river in the Philippines running
through Quirino province)

wagtan *vt* add/put water into *Wagtan=mu i
kande:ro=y.* Put water into the pot.

watèt na kanakannak *n* amniotic fluid

wagèwagèt *n* pl.

wakwak *n* crow

walu *num* eight

wanan *n* right

wangar *n* stream *gen:* **wagèt 1**.

wasay *n* ax

wasaywasay *n* praying mantis

werwer *n* saliva

wi:gi *n* left side

wumi:gi *vi* turn left

Y y

yakkan (**yèkkan**) *n* viand, food

yèbyèb *v* urination

makayèbyèb *pot.v* want to urinate, feel like
urinating *Ahu, makayèbyèb=de:=tèn.* Oh, I
feel like urinating.

yumèbyèb *vi* (go to) urinate

yopyop *n* blow

yopyo:pan *vt* blow at, into *Payyopyo:pan=di
i du:t=i.* They are blowing into the fire (to
make it bigger).

Phonology and orthography

Table B.1: Phonemes, orthography, and their phonetic values

phoneme	orthography	phenetic value	phoneme	orthography	phonetic value
/p/	*p*	p, p̄	/l/	*l*	l
/b/	*b*	b, b̄	/r/	*r*	r (trill)
/t/	*t*	t, t̄	/w/	*w*	w, ʊ, o
/d/	*d*	d, d̄	/j/	*y*	j, ɪ
/k/	*k*	k, k̄	/a/	*a*	a
/g/	*g*	g, ɣ, ḡ	/i/	*i*	ɪ, e
/ʔ/	*'*	ʔ	/e/	*e*	ɛ
/s/	*s*	ṣ, ʃ	/u/	*u*	ʊ, o
/h/	*h*	h	/o/	*o*	ɔ
/ts/	*ts*	ts	/ə/	*è*	ə
/tʃ/	*ty*	tʃ			
/dʒ/	*dy*	dʒ			
/m/	*m*	m			
/n/	*n*	n			
/ŋ/	*ng*	ŋ			

Grammatical charts

Table 1 Arta Pronouns

	Topical	Nominative	Genitive	Oblique	Possessive
1(1SG)	tən	=tən	-ku	dən	andiku
1+3(1PL)	tami	-ami	=mi	dami	andimi
2(2SG)	taw	-a, =taw	=mu	daw	andimu
2+3(2PL)	tam	-am	=muyu	dam	andimuyu
1+2(1+2SG)	tita	-ita	=ta	dita	andita
1+2(1+2PL)	titam	-itam	=tam	ditam	anditam
3SG	siya	Ø	=na	dya	andina
3PL	tidi	=tid	=di	did	andidi

Table B.2: Person forms

person	topical	absolutive	genitive	oblique
1SG	tèn	=tèn	=ku	dèn
1PL	tami	=ami	=mi	dami
2SG	taw	=a, =taw	=mu	daw
2PL	tam	=am	=muyu	dam
1+2SG	tita	=ita	=ita	ditina
1+2PL	titam	=itam	=itam	ditam
3SG	siya	Ø	=na	dya
3PL	tidi	=tid	=di	did

Table B.3: Nominal markers

person	topical	absolutive-A	absolutive-B	genitive	dative
1SG	tèn	—	=tèn	=ku	dèn
1PL	tami	=ami	—	=mi	dami
2SG	taw	=a	=taw	=mu	daw
2PL	tam	=am	—	=muyu	dam
1+2SG	tita	=ita	—	=ta	dita
1+2PL	titam	=itam	—	=tam	ditam
3SG	siya	—	—	=na	dya
3PL	tidi	=tid	—	=di	did

Table B.4: Demonstrative forms

		TOP	ABS	GEN/ERG	OBL
PROXIMAL	SG	*si:yèy*	*a:yi:*	*ni/na a:yi:/ayni*	*ti/ta a:yi:*
			=i	*=ni*	*=ti*
	PL	*satidi:*	*(ay)tidi a:yi:*	*(ay)didi a:yi:*	*(ay)didi a:yi:*
MEDIAL	SG	*sayna*	*a:yina,*	*ni/na ayna*	*ti/ta ayna*
			=ina	*=nina*	*=tina*
	PL	*satidi:na*	*(ay)tidi:na*	*(ay)didi:na*	*(ay)didi:na*
DISTAL	SG	*saya*	*a:ya:,*	*ni/na a:ya:*	*ti/ta a:ya:*
			=ya:		*=ta*
	PL	*satiddya:*	*(ay)tiddya*	*(ay)didi a:ya:*	*(ay)didi a:ya:*

Table B.5: Verb classes

Verbs	NONPAST FORM	PAST FORM	PROGRESSIVE FORM
DYNAMIC INTRANSITIVE			
‹um› verb	‹um›	‹in›‹um›	–
maC- verb *maR-	*maC-*	*(mi)naC-*	*paC-*
maN- verb (*maN-)	*maN-*	*(mi)naN-*	*paC-*
mangi- verb	*mangi-*	*(mi)nangi-*	*pangi-*
DYNAMIC TRANSITIVE			
-èn verb	*-ən*	‹in›	*paC- -ən*
-an verb	*-an*	‹in› *-an*	*paC- -an*
i- verb	*i-*	*(i)ni-*	*paC-*
POTENTIVE			
INTRANSITIVE	*maka-*	*naka-*	–
TRANSITIVE (cf. *-èn*)	*ma-*	*(mi)na-*	–
(cf. *-an*)	*ma- -an*	*(mi)na- -an*	–
(cf. *i-*)	*ma-, me:-*	*(mi)na-, (mi)ne:-*	–
STATIVE			
tiC-	*tiC-*	–	–
manga:-	*manga:-*	–	–

/dʒ/	*ay*	dʒ	
/m/	*m*	m	
/n/	*n*	n	
/ŋ/	*ng*	ŋ	

Table B.6: Modality

Type	Item		Source, note
Modality₁ (independent)	*talaga*	'really, truely'	Tag. (adv.) 'really, actually'
	sigura:du	'surely'	Sp. *segurado* 'sure'
	sigu:ro	'probably'	Sp. *seguro* 'safe, sure, insurance'
	baka	'perhaps'	Tag. Ilk. *baka* 'perhaps, maybe'
Modality₂ (enclitic)	=*antu*	'really, truly'	
	=*wada*	'possibly, perhaps'	
	=*mina*	'if only, I wish' (hypothetical)	
	=*an*	'it is said that, as X said' (hearsay)	cf. AgtDu, AgtCas *kan*, Ilk. *kanu*

Table B.7: Interrogative pronouns

interrogative form	meaning
a:nu	'what'
adin	'where'
− *adin*	(atemporal situation)
− *adi:ni*	(present/future)
− *adinti*	(past)
sangan a N	'how many/much ...'
tanakan	'when'
ata'ay/ada'ay	'why'
kassandi	'how' (manner)

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