

UNIVERSIDADE DE SÃO PAULO  
FACULDADE DE FILOSOFIA, LETRAS E CIÊNCIAS HUMANAS

KAROLIN OBERT

# **The linguistic encoding of space in Dâw**

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# **The linguistic encoding of space in Dâw**

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'aa' dâw dâw sun~~ny~~':  
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---

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## Resumo

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OBERT, K. **A codificação linguística do espaço na língua Dâw**. 2019. 339 f. Tese (Doutorado) – Faculdade de Letras, Universidade de São Paulo, 2019.

Levinson (2003) demonstra que diferentes grupos sociais fazem uso de referências espaciais distintas, gerando assim um impacto na codificação linguística da informação espacial. Considerando essa variabilidade linguística, é necessário refletir sobre os domínios espaciais que podem se manifestar na gramática de uma língua. Segundo Levinson e Wilkins (2006, p. 2), esses domínios consistem em *relação topológica*, que indica a coincidência entre Figura (objeto a ser localizado no espaço) e Fundo (ponto de referência para a localização da Figura), e, em um sistema de *frames of reference*, isto é, um sistema de coordenação quando Figura e Fundo estão distantes no espaço. O terceiro domínio se refere à situações de *movimento*, descrevendo o deslocamento de uma Figura em relação a um determinado Fundo. Sendo assim, surge o questionamento: em quais classes formais esses domínios espaciais são expressos nas línguas e quais são os padrões semânticos que esses recursos expressam? Sendo assim, a pesquisa focou (1) na identificação e na descrição das estruturas gramaticais e lexicais para codificar referências espaciais e, (2) na revelação dos padrões semânticos das estruturas identificadas na língua Dâw (família linguística: Naduhup, AM). Verificamos, portanto, que um dos recursos principais para expressar a relação entre Figura e Fundo em Dâw, entre outras, é o uso de predicados complexos que consistem em um rico inventário de verbos locativos (postura, posição e movimento), fazendo referência à propriedades intrínsecas da Figura e à relação topológica entre Figura e Fundo. Além disso, identificamos um complexo sistema de posposições locativas, cuja escolha, em alguns casos, é motivada por propriedades físicas inerentes do Fundo. Além do mais, verificamos um sistema de classes de nomes distinguindo-os em *what-nouns* e *where-nouns*. Isto é, a primeira classe inclui nomes que são intrínsecos a objetos enquanto *where-nouns* denotam lugares. Essa distinção se manifesta na codificação sintática dos adjuntos locativos, expressando a noção de Fundo nas cláusulas locativas. Apresentaremos, então, um recorte gramatical da língua Dâw com ênfase nas classes formais, onde noções espaciais se tornam visíveis.

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## Abstract

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OBERT, K. **The linguistic encoding of space in Dâw**. 2019. 339 f. Tese (Doutorado) – Faculdade de Letras, Universidade de São Paulo, 2019.

Levinson (2003) provides evidence that distinct cultures display distinct spatial references that, as a consequence, impacts the linguistic encoding of spatial notions. This linguistic variation has fostered the interest of understanding the spatial domains responsible for the linguistic encoding of spatial information. According to Levinson and Wilkins (2006, p. 2), these domains consist in: the *topological relation*, indicating spatial coincidence between Figure (the referent to be localized in space) and Ground (reference point for the localization of the Figure) and the system of *Frames of Reference*, a coordinate system describing the Figure-Ground relation when both are separated in space. The third domain involves non-static spatial reference, i.e. *motion* that applies for spatial scenes in which a Figure is moving with respect to a Ground. Consequently, one can raise the following questions: What are the grammatical and lexical resources a language displays for the expression of these domains and what are the underlying semantic patterns? Therefore, this work focussed on (1) a fine-grained description of language-specific resources expressing space and (2) the understanding of their semantics in Dâw - an Amazonian language from the small Naduhup family. One of the principal resources for expressing a spatial relationship between Figure and Ground could be identified in the verb complex. Here, complex predicates consisting of multiple locative roots can express intrinsic properties of the Figure and Ground, as well as information on the topological relation between Figure and Ground. Furthermore, a rich system of spatial postpositions was encountered that, in some cases, is motivated by inherent properties of the Ground. With respect to nouns, Dâw presents a system of nominal classification expressing the categories of *what*-nouns and *where*-nouns. Where the former refer to more bounded entities, the latter refer to less bounded entities such as places. This dichotomy manifests in the syntactic encoding of locative adjuncts expressing the Ground in locative clauses. This work consequently presents aspects of the Dâw grammar focussing on the form classes in which spatial notions can be expressed.

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## Abbreviations

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1	first person
2	second person
3	third person
AFFIRM	affirmative
ANAPH	anaphoric pronoun
AP	associated posture
AUX:source	source-indicating auxiliary
BEN	benefactive
CAUS	causative
CNTF	counterfactual
COL	colectivizer
COM	comitative
COMP	comparative
DEM:dist	distant demonstrative pronoun
DEM:prox	proximal demonstrative pronoun
DESID	desiderative
DISC.CONJ	discursive conjunction
DOM	differential object marking
DUB	dubitative
DUR	durative
EMPH	emphatic
EXI	existential
FEM	feminine
FINAL	final conjunction
FRUST	frustative aspect
FUT	future
GEN	genitive
HAB	habitual
IDEO	ideophone
IMP	imperative
INCHO	inchoative
INSTR	instrumental
INTS	intensifier
IPFV	imperfective

ITER	iterative
LOC	locative marker (distant)
MASC	masculine
NEG	negation
NEG.EXI	negative existential
OBL	oblique
ORIG	origin
PL	plural
PLZ	pluralizer
POSS	possessive
PROG	progressive aspect
PST	past tense
PUNCT	punctual aspect
RECP	reciprocal
RPT	reportative
SG	singular
SUB	subordinator
UNIV.QUANT	universal quantifier
VOC	vocative

### **Homonymous forms in Dâw**

<i>êê'</i> <sub>1</sub>	PST
<i>êê'</i> <sub>2</sub>	DUB
<i>nã'</i> <sub>1</sub>	SUB
<i>nã'</i> <sub>2</sub>	FUT
<i>rid</i> <sub>1</sub>	LOC
<i>rid</i> <sub>2</sub>	3PL
<i>rid</i> <sub>3</sub>	SUB
<i>wâ'</i> <sub>1</sub>	on
<i>wâ'</i> <sub>2</sub>	beside
<i>dôo'</i> <sub>1</sub>	CAUS
<i>dôo'</i> <sub>2</sub>	AUX:source

## Abbreviations from quoted examples in the thesis

ABS	absolute
ASP	aspect
CLS	classifier
CONV	converb
DAT	dative
DECL	declarative
DET	determiner
GER	gerund
IMM.FUT	immediate future
IMPER	imperative
INF.EVID	inferred evidential
M	masculine
MSC	masculine
MSC	masculine (bound noun), emphasis
NF	non-future
NOM	nominative
OBJ	object
PFV	perfective
PREP	preposition
PRS	present tense
PTCL	particle

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# **1 Introduction**

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# 1 Introduction

Space and spatial relations are central to human thinking. Looking for our keys, giving directions to a certain place or even a simple sentence like ‘*Mary is jumping*’ all involve spatial reference. In other words, our experiences are often guided by space, as they are anchored to specific places. This central role of space in human cognition goes at least back to Kant (1768), who postulated that the apperception of space is governed by cognitive universals. However, Levinson (2004) and Levinson and Wilkins (2006) present results of their studies on language of space, challenging Kant’s universal approach. Levinson (2004) provides examples for the fact, for instance, that different ethnic groups use different spatial frameworks, which has an impact on the linguistic encoding of spatial information. Human spatial thinking is then quite variable, which corresponds to variability in the linguistic encoding of space (LEVINSON and WILKINS, 2006, p. 2).

Having this linguistic variability in mind, we need to think about the linguistic domains that encode spatial information. Former research mostly focused on spatial encoding in adpositions in Indo-European languages, which Levinson and Wilkins’ (2006) collaborative work has shown to be insufficient. Hence, the authors (ibid.) suggest that a description of the linguistic encoding of space should include the possible distributions of spatial notions in the grammar and also within the clause. For that reason, the authors suggest a comparative framework of key topics reflecting the conceptual division of spatial domains represented in o.

This Figure opposes the major distinctions of conceptual space, that is *stasis* vs. *kinesis*. Under *stasis* the authors subsume static location expressed by non-angular and angular relation. The non-angular subdivision refers to a topological relation indicating the spatial coincidence of Figure (theme) and Ground (or landmark).<sup>1</sup> In contrast, the angular subdivision refers to a spatial coordinate system called *Frames of reference*. This system can be understood as a coordinate system describing the relation between Figure and Ground when they are separated in space. *Kinesis*, on the other hand, describes motion, specifically motion of a Figure towards a goal or from a source functioning as the Ground. This comprises mainly deictic verbs of motion or motion verbs packing other semantic information, such as manner of motion (LEVINSON and WILKINS, 2006, pp. 3-5).

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<sup>1</sup> These terms will be explained in detail in section 1.1.1.

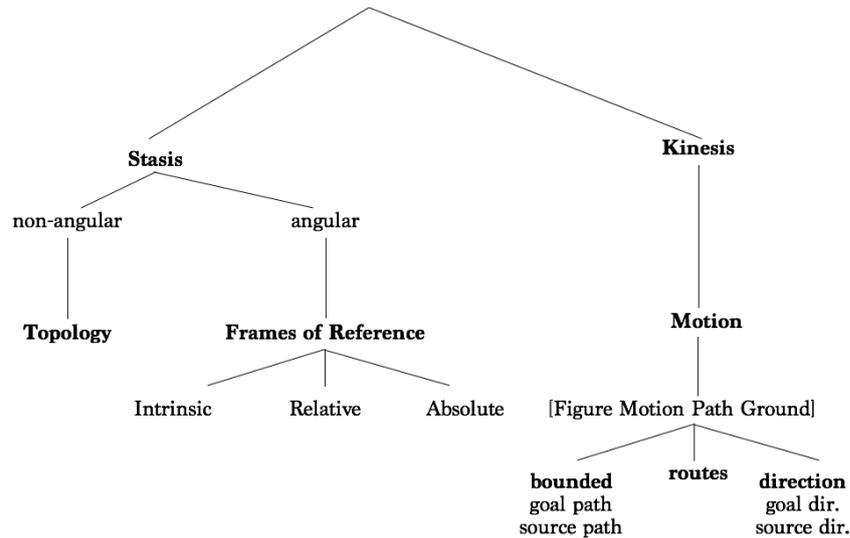


Figure 1- Conceptual subdivision of the spatial domain (adapted from: Levinson and Wilkins, 2006, p. 3)

A description of spatial language needs, consequently, to focus on the following question: in which grammatical and lexical categories are these three spatial domains (Topological relation, Frames of reference, and Motion) likely to appear? If we take the following three examples from English, one can see that all of the three spatial domains - Topological Relation, Frames of Reference and also Motion - are expressed through prepositional phrases.

**Topological relation:**

*The dog is sitting [**in the basket.**]<sub>PP</sub>*

**Frames of reference:**

*The dog is sitting [**in front of the basket.**]<sub>PP</sub>*

**Motion description:**

*The dog gets [**into the basket.**]<sub>PP</sub>*

However, Mayan languages, for example, lack a system of adpositions providing spatial contrasts and therefore make use of a rich system of positional roots (see GRINEVALD, 2006). Example (1) from Tzeltal shows the generic locative postposition *ta* indicating a generic location. The topological relation of ON in this example does derives then from the positional root *waxal-* expressing a tall, oblong-shaped container or solid object that canonically is ‘standing’ (GRINEVALD, 2006, p. 43). Topological relations in Tzeltal are, thus, expressed in the VP through positional roots encoding the position of the Figure in relation to the Ground.

- (1) **waxal-Ø**      *ta*      *ti'-k'jk'*      *p'in*  
 vertical-Abs3p      prep      mouth-fire      pot  
 'the pot is (standing vertical) by the fire'      [Tzeltal: Grinevald, 2006, p. 42]

These two examples show that the linguistic encoding of the spatial domains mentioned in ocan be distributed in different form classes. According to Levinson (2004, p. 99), spatial information is likely to be encoded in locative verbs (posture, positional, and motion verbs), adpositions, relational nominals, adverbials, determiners, and locative case marking. Furthermore, the author (ibid.) states that specific spatial information occurs cross-linguistically in certain form classes, i.e. information about the shape of the Figure is likely encoded in locative verbs, while information about the Ground is more likely expressed in adpositions. An observation of the linguistic encoding of space within these form classes provides insights on morphological, syntactic, morphosyntactic, and lexical resources of the language. That is to say, analyzing space in language requires a crosscut of the grammar in order to construct a holistic picture of the distribution of spatial information in discourse.

Apart from Levinson's framework, which is central for the description of spatial morphemes and their distribution in grammar, recent works have also focused on non-linguistic categories such as properties of the geophysical environment that can be lexicalized and grammaticalized in distinct ways (see BURENHULT, 2008; LEVINSON and BURENHULT, 2009; O'MEARA, 2010; RYBKA, 2015; BURENHULT, 2017). Burenhult (2017, p. 455) provides evidence that languages segment and label large-scale environments (e.g. landscape) through different semantic criteria which are frequently motivated by culture-specific practices and people's engagement with the inhabited space. For Jahai – a hunter-gatherer group in the Malay Peninsula – Burenhult (2008) describes, for example, the semantic encoding of the notion of water in deictic categories, relational nouns. and motion verbs reflecting the local topography. To mention one more example, Burenhult et al. (2017) provided evidence for the fact that cultures can differ with respect to how they semantically encode the notion of *forest* depending on the local ecology and livelihood tied to treed environments.

In this regard, this work aims to further our understanding of how humans encode and categorize space linguistically via a case study of the language Dâw, a highly endangered Amazonian language from the small Naduhup family. The Dâw people are a hunter and gatherer group showing traditionally spatial mobility in the interfluvial zones in the Middle and Upper Rio Negro region. As Hugh-Jones (1979, p. 1-3) mentions, these ethnic groups show profound connections with nature and cosmos resulting in an intrinsic relation with the inhabited space. Ramos (2013, p. 62) corroborates this for the Hup people (one of Dâw's sister languages) reporting an intimate relation with the forest and the nature that molds the

contours of the society. This is also supported by the salient classification of the ethnic groups of the Upper Rio Negro region in *river people* and *forest people*. River people are represented by Arawak and Tukano-Oriental groups that inhabit river banks of main rivers, while forest people, represented by Naduhup and Kakuka-Nikak groups, traditionally lived immersed in the forest showing hunter-gatherer orientation (see EPPS and STENZEL, 2013, p. 20). According to Cabalzar (2013, p. 136), these distinctions lead to the following dichotomies: river x forest, strong spatial reference x mobility, agriculture x fishing, gathering x hunting, exogamy x endogamy, and *maloca* x *tapiri*<sup>2</sup>. For this work, the opposition of strong spatial reference x mobility is of great interest, since mobility for forest people such as Dâw is crucial and can provide interesting insights for the linguistic encoding of space. Ospina Bozzi (2013, p. 1) confirms complex linguistic encoding of space in Amazonian languages based on concepts of distance, deictic perspective, visibility, and direction, as well as posture and position. More specific evidence comes from Epps (2013), who emphasized the role of non-linguistic factors in typological variation, using as an example Dâw's sister language Hup. In that work, Epps also provides examples in additional Amazonian languages (Yanomami, Pemon, Muinane, Kwaza, and Jarawara) that make reference to, for example, topographic features such as waterways in motion event coding.

Hence, this work aims to bring together Levinson's (2004) approach examining language internal strategies for the expression of spatial domains and observations on how extra-linguistic categories, such as the geophysical environment, can influence grammaticalization and lexicalization patterns in the spatial language of the Dâw people.

## 1.1 Aims of this work

The overarching aim of this work is to expand our understanding of how humans encode space linguistically. Hence, this thesis describes the linguistic encoding of space in Dâw, an endangered Amazonian language, showing how the perception of the inhabited space, cultural practices, and knowledge, as well as topographical features, can be encoded in the Dâw lexicon and grammar.

Achieving this aim requires well-defined sub-goals. The first is to identify and describe (from a typological perspective) the linguistic resources Dâw employs to establish spatial

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<sup>2</sup> Both *maloca* and *tapiri* are regional terms for different types of indigenous houses. While *maloca* refers to big community houses – also known as “long houses” for Tukanoan groups or *shapono* for Yanomami groups – *tapiri* refers to small temporary shelters covered with palm leaves.

reference. The second is to understand the distribution of these morphemes in the clause. In other words, the aim is to verify in which grammatical and lexical form classes the spatial domains (Topological relation, Frames of reference, Motion, and Deixis) are preferentially expressed in Dâw.

However, understanding the linguistic resources of spatial expression is not sufficient, since their interpretation requires systematic spatial knowledge shared by the members of the community. For that reason, the third aim of this thesis is to examine the underlying semantic patterns of these linguistic resources. Since these can be influenced by non-linguistic factors, an observation of subsistence practices, travelling, and systems of beliefs that are grounded in space and landscape are central for the understanding of these semantic patterns.

Furthermore, studies on spatial language, focused in general on Indo-European languages, have proposed the existence of universal cognitive concepts. Recent research on non-Indo-European languages, mainly in the geographical area of Austronesia (SENF, 1997) and Mesoamerica (O'MEARA and PÉREZ BÁEZ, 2011), has refuted this claim, providing evidence for variation in spatial concepts. A closer look on the research on languages of South America shows a limited number of works, such as on Tiriyo (Carib) (MEIRA, 2006), Wayana (Carib) (HOUGH, 2008), Kotiria (East-Tukano) (STENZEL, 2013), Lokono (Arawak) (RYBKA, 2015) and Baure (Arawak) (ADMIRAAL, 2016). Works on the Middle and Upper Rio Negro region in specific are restricted to Stenzel's (2013) work on Kotiria and Wa'ikhana. With respect to the Naduhup language family there are the works from Epps (2013) and Epps & Neely (2014) about motion events in Hup and on further Amazonian languages, as well as work from Ospina Bozzi (2013) for Yuhup describing locative predicates. However, the encoding of spatial notions in Dâw has not been studied in detail yet. Studying spatial notions in Dâw will contribute to comparison within the language family and the linguistic area, as well as cross-linguistic comparison.

Another goal of this work is to contribute to the continuous interest of other scientific disciplines - such as archeology, geography and anthropology - in which the domain of space and landscape can be of interest as a way to study human culture, history and cognition (see INGOLD, 2000).

Finally, a central aim apart from the understanding of spatial language is to foster the description and documentation of the language and culture Dâw, which is highly necessary due to its fragile status and pressure from the national society. This is related to a further goal to support and empower the indigenous community in accessing education and nutrition

and in preserving their territory. Given the current political scenario in Brazil, this goal is extremely important.

## 1.2 Theoretical Approach

This section introduces the main theoretical stances and general terminology that will be used in the remainder of this work. As research in the genre of spatial language tends to present varying definitions of different terms, this section hopes to avoid ambiguity.

### 1.2.1 Terminological notes

The terms *Figure* and *Ground*, referred to as *trajector* and *landmark* in Langacker (1987), are central to this work. In recent research on spatial language, these two terms are predominantly connected with Talmy's ([1985], 2007) typology of motion events. Talmy first introduced these terms in the paper '*How language structures space*' (1983), where the author describes the relationship between a Figure and a Ground as the fundamental spatial relation.

Figure and Ground derive from responses to *Where*-questions, which are considered to be universal in the world's languages (LEVINSON, 2004, p.64). Responses to *Where*-questions reveal information about a place and an object in relation to that place. For example, the question '*where is Mary?*' could precede any of the following responses:

- (2) *Mary is in London.*
- (3) *Mary is there.*
- (4) *Mary is sitting under the table.*
- (5) *Mary stands in front of the car.*

Each of these responses contains the Figure (*Mary*) and its relation to a Ground (*in London, there, under the table, in front of the car*). In all cases, the Ground establishes a reference system for describing the location of the Figure (see LEVINSON, 2004).

While examples (2) - (5) show static spatial relations, these terms are used in the same way for motion events where the Figure corresponds to a moving entity in relation to a certain Ground. In addition to the Figure and the Ground, motion events describe a *Motion* and a

*Path* (TALMY, 2007, p. 70). Motion refers to an action that involves movement or *Kinesis*. Path is the trajectory of Motion (ZWARTS, 2008). In the example sentence ‘*John walks along the river*’, the Figure is *John*, the Ground is *the river*, and the Motion is expressed by the verb *walks*. Additionally, the Motion is carried out with a certain trajectory in relation to the Ground. Therefore, the Path here is expressed by the preposition *along*.

Jackendoff (1983) suggests that there are three variations of Path: route, bounded, and directional. All three types are dependent on the extreme points, i.e., the *Source* (from; out of; away) or *Goal* (to; into; towards). For a *bounded Path*, the Ground is an extreme point of the Path, either a starting point or an endpoint. For example, in the sentence ‘*the frog jumps into the lake*’, the Ground (*the lake*) is the Goal of the Path (*into*). For a *directional Path*, the Ground could be the Source or Goal but is not an extreme point of the Path. For example, in the sentence ‘*John goes towards the house*’, the Goal (*the house*) is not an extreme point of the Path (*towards*). For a *route Path*, the extreme points are not explicit; instead, the Figure is in an intermediate relation to the Ground. For example, the Ground (*the river*) in ‘*John walks along the river*’ is not the Goal or Source of the Path (*along*) (see PANTCHEVA, 2011, p. 3).

Responses to *where*-questions are known as *Basic Locative Constructions* (BLC). According to Levinson and Wilkins (2006, p. 15), these constructions are essential for finding functional equivalents in languages. BLCs vary from language to language; some use adpositions while others use positional verbs. A prototypical BLC in English is [NP<sub>FIGURE</sub> + be + PP<sub>GROUND</sub>] as seen in the sentence ‘*The book is on the table.*’

Not all locative descriptions are a BLC. More complex spatial scenes like the description of a crack in a vase will usually not be described with a BLC (cf. *ibid.*). In Levinson and Wilkins’ (2006, p. 15) example ‘*The Cathedral stands at the heart of the old city, overlooking the Rhine*’, the sentence cannot be analyzed as a BLC as it does not describe a prototypical scene. Levinson and Wilkins (2006, p. 16) establish a spacial scene hierarchy describing contiguity between a Figure object and a Ground. This hierarchy suggests that the Figure-Ground relationship is more likely to be encoded with a BLC than a spatial scene where the Figure is impaled in the Ground. Dâw provides additional evidence for this hierarchy. I will show in this work that, in Dâw, prototypical spatial scenes tend to consist of a copular verb and postpositional phrase, whereas complex spatial scenes tend to use posture and positional verbs or even multi-verb constructions (see section 7.3.2.1).

## 1.2.2 Topological Relations

Topological relations describe a spatial relation in which Figure and Ground are in spatial coincidence. As Levinson (2004, p. 71) explains, a topological relation should be understood as non-angular, i.e., not bound to a coordinate system. For that reason, topological relations are constant even when the spatial situation is reported from different angles. In other words, a topological relation remains the same regardless of the viewpoint, so the sentence “*The monkey is sitting on the table*” is correct for all three spatial scenes even when they are reported from different places and angles.



Figure 2 - Topological Relation under different angles

Basic topological relations can be traced back to Piaget and Inhelder (1956), who described the notions of proximity, order, enclosure, and continuity as semantically correspond to the words *near*, *at*, *between* and *in* (see LEVINSON, 2004, p. 72). Historically, these notions were mainly thought to be encoded only in closed-class morphemes such as adpositions or local cases. However, in Dâw these notions can also be expressed through a set of locative verbs of posture and positional semantics. As seen in example (6) Dâw expresses the topological notion *on* through both a positional verb and a postpositional phrase.

- (6) *galap yêt mej wâ'*  
bottle lie table on  
'The bottle is lying on the table.'

The posture verb *yêt* 'lie' indicates that the Figure (bottle) is in contact with a horizontally oriented surface. Additionally, the postposition *wâ'* 'on' is used to indicate that the Figure is on a horizontal supportive Ground (the table). As there is topological information encoded in the postpositional phrase, this supports Levinson's (2003) claim that topological information can be distributed throughout the clause. Additionally, since the postposition *wâ'* refers to a Ground object with a horizontal orientation to the Figure, this contradicts Talmy's (1988) claim that topological closed class morphemes are not able to express characteristics like shape, material, angle or axis. For more information about how axial and angular properties of the Ground influence the choice of spatial adpositions, please refer to section 3.1.

### 1.2.3 Frames of Reference

Frames of Reference (FOR) help identify the location of a Figure based on angular specifications. For example, in ‘the car is to the left of the house’, the Ground (the house) is used to locate a Figure referent (the car). There are four possible coordinate systems: intrinsic, absolute, relative and deictic. Each system is distinguished using the orientation of the Ground, the Anchor and the viewpoint of the speech act participants (LEVINSON, 1996). The usage depends on the selection of the conceptual Anchor for the spatial scene (see DANZIGER, 2010, p. 168). Consider below, in which we see a static spatial situation where a teacup, the Figure, is next to a tea kettle, the Ground.

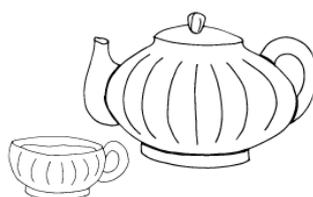


Figure 3- Where is the teacup? Adapted from Danziger (2010, p. 169)

In response to the question “where is the teacup,” a speaker may choose to respond using any one of the four FOR to explain the static spatial situation:

- (7) *INTRINSIC FOR: The cup is at the spout of the kettle.*
- (8) *ABSOLUTE FOR: The cup is to the west of the kettle.*
- (9) *RELATIVE FOR: The cup is to the left of the kettle.*
- (10) *DEICTIC FOR: The cup is there.*

Example sentence (7), the intrinsic FOR, describes a spatial situation in which the location of the Figure is specified through a feature of the Ground (the spout). In other words, the intrinsic FOR is an object-centered binary coordinate system with coordinates determined by inherent features of the Ground (see LEVINSON, 2004, LEVELT, 1996).

Example sentence (8) represents the absolute FOR, showing another binary relation between Figure and Ground. However, here the coordinates are fixed bearings such as cardinal points (east; west) or landmarks (sea-side; mountain-side). Fixed bearings like these form a part of a speech community’s common ground and are shared by their members (see LEVINSON and WILKINS, 2006, p. 21). In both (7) and (8), since the reference points are

anchored in space, the statements remain true even under viewer rotation. In contrast, the relative FOR is a ternary viewer-centered system.

As seen in example (9), it is based on the viewer's perception, i.e., its left side will be projected on the spatial scene (LEVINSON and WILKINS, 2006, p. 21). As this system considers the speaker's coordinates (the speaker's front/back/left/right), example (9) does not hold in the case of viewer rotation.

Example (10) presents the encoding via the deictic FOR visible through the demonstrative adverb *there*. The deictic FOR differs from the other FORs since the speaker functions both as Anchor and Ground (see DANZIGER, 2010, p. 168).

Levinson and Wilkins (2006, p. 22) provide additional insight into the types of FOR from a cross-linguistic perspective. They show that while there are languages that use all of the variants, it is more common to choose between only two. However, where more than one FOR is available, we might expect restrictions (in relation to scale, for example).

#### 1.2.4 Motion

Levinson and Wilkins' (2006, p. 3) overview of the conceptual divisions in the spatial domain includes *Motion*, which involves a spatial change of a Figure with respect to a Ground. This term corresponds to Talmy's (2007, p. 70) description of a basic motion event. The Ground of motion events often represents the Goal and Source of the movement as well as a landmark that is passed or crossed (see VAN PUTTEN, 2017, p. 7).

[Figure Motion Path Ground]<sub>Basic Motion event</sub>

Here, in addition to the Figure and the Ground, the Path<sup>3</sup> and Motion of the Figure can be identified. As discussed in Section 1.2.1, Talmy (ibid.) describes Path as the trajectory that the Figure follows with respect to the Ground. In contrast, Talmy uses the term Motion to describe the action which the Figure undergoes. This sketch of a basic motion event can be extended with external co-events, revealing the influence of *Manner* and *Cause* in a motion event (see TALMY, 2000, p. 26):

[Figure Motion Path Ground]<sub>Basic Motion event</sub> [Event]<sub>Co-Event</sub>

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<sup>3</sup> Figure, Ground, Path, Motion, Manner, and Cause are represented with capital letters when they refer to notions in Talmy's typology.

Here, Talmy (ibid.) describes Manner as the way the motion is carried out. For example, the sentence ‘the ball rolled into the cave’ expresses that the Motion was carried out with a Manner of rolling. Additionally, Cause is what triggered Motion, such as in the sentence ‘the wind blew the pencil off the table’.

Languages often display differing lexicalization patterns, and therefore various associated grammatical devices are used to express the notions of Motion, Path, Manner, and Cause on the surface of a motion event. Because of this, Talmy (2007; 2000; 1984) has proposed a typology of verb-framing and satellite-framing languages. He suggests that languages either show a tendency to lexicalize Manner as predicates and indicate the Path in a satellite phrase, e.g. (a), or to lexicalize Path as locative predicates and Manner as adverbs, e.g. (b).

- |                      |                         |                   |                          |
|----------------------|-------------------------|-------------------|--------------------------|
| a) <i>The bottle</i> | <i>floated</i>          | <i>out</i>        |                          |
|                      | √(Motion+Manner)        | (Path)            | <b>Satellite-framing</b> |
| b) <i>La botella</i> | <i>entró a la cueva</i> | <i>(flotando)</i> |                          |
|                      | √(Motion+Path)          | (Manner)          | <b>Verb-framing</b>      |

(see TALMY, 2000, p. 26)

Talmy refers to this packaging of spatial information within the predicate as *conflation* referring to “any syntactic process - whether a long derivation involving many deletions and insertions, or just a single lexical insertion - whereby a more complex construction turns into a simpler one” (TALMY, 1972, p. 257). In that sense, a satellite-framing language conflates Motion and Manner in one single verb root, as in many Germanic languages (a), whereas verb-framing languages conflate the notions motion and Path, as for example in German and English (b).

The question that arises is how the not-conflated notion is expressed within the clause. For satellite-framing languages, Path is expressed in a satellite that is “the grammatical category of any constituent other than a noun-phrase or prepositional-phrase complement that is in a sister relation to the verb root” (see TALMY, 2000, p. 102). In example (a), *float out* [V<sub>float</sub> + Sat<sub>out</sub>], is a satellite. In verb-framing languages, Manner appears syntactically subordinated or omitted as exemplified in (b) (see TALMY, 2000, p. 89).

Talmy’s influential binary typology has been used as a basis for the analysis of many languages. However, it turned out not to hold for all languages. For example, some languages do conflate the notions of Path and Manner in one verb root, a process that Talmy considers

to be very rare. Furthermore, Talmy's typology does not apply to languages with serial verb constructions or other kinds of multi-verb constructions; these languages tend to express Path and Manner in two separate verb roots without marking subordination. As a result, Slobin (2004) proposes *equipollent-framing*, a third type of framing that including languages that encode Path and Manner in syntactically equivalent forms. Slobin (2004, p. 25) includes the following structures under Equipollent framing: Manner verb + Path verb (serial verb languages), [Manner + Path]<sub>verb</sub> (bipartite verb) and Manner preverb + Path preverb + verb. According to Slobin (2004, p. 10), all of these structures show elements that are equal in formal linguistic terms and their force of significance.

Moreover, Beavers et al. (2009) observed that even the addition of a third device is not sufficient since many languages make use of more than one strategy. For example, satellite-framing languages can show verbs that encode Path, whereas verb-framing languages might sometimes express Path in the form of a satellite. Similarly, in equipollent-framing languages, structures of satellite-framing and verb-framing languages may co-occur. Beavers et al. (ibid.) suggest an analysis of Motion, Path, Manner, and Cause based on distributional morphological, lexical, and syntactic resources. For this work, I follow Beavers et al.'s (ibid.) proposal, focusing on verbs of motion and the distribution of motion event information through the clause in our analyses of the semantic components of motion events.

### 1.2.5 Deixis

Deictic expressions are a class of linguistic elements for indicating situational and discourse context, including speech act participants, time and location of the current speech event (see DIESEL, 2012, p.1). Our definition of deixis corresponds to Bühler's (1982[1934]) core deictic domains of person, place and time deixis. Person deixis references a speech act participant involved in a communication situation, place deixis to certain locations, and time deixis to specific temporal units. Fillmore (1997, p. 61) also includes discourse deixis and social deixis, where a referent is identified based on the information in discourse or on social relationships between the speech act participants. As Enfield (2003, p. 85) explains, each deictic expression functionally *indicates* something. In other words, deictic elements establish a direct referential link between a linguistic system and the real world (see ibid., p. 83). Consequently, deictic expressions depend on the context for interpretation of reference (cf. HANKS, 1990).

The most crucial element of deixis is the *deictic center*, the center of the coordinate system underlying the conceptualization of a speech situation. Deictic expressions express location in relation to the deictic center. For example, spatial adverbs like *here* and *there* express

different distance levels of respective locations that can only be understood in relation to the deictic center (DIESEL, 2012, p. 3).

Nominal deixis is distributed throughout pronominals, adnominals, adverbials, and demonstratives (pronouns and determiners). Verbal deixis is present mainly in motion verbs such as *come* and *go*, indicating translocative and cislocative motion with respect to the speaker. Historically, some scholars claimed that deictic content could only indicate distance with respect to the speaker, especially in the case of demonstratives (LYONS, 1977). However, cross-linguistic evidence indicates that deictic content can encode additional properties such as visibility (HANKS, 1990), elevation (ENFIELD, 2003), and location within an absolute frame of reference (cf. GRENOBLE, MCMAHAN, & PETRUSSEN, 2019). Therefore, Enfield (2003) posits an analysis based on observational use of demonstratives in interactional situations. This analysis allows for the interpretation of non-verbal elements that are central to the understanding of the deictic system of a language (see DIESEL, 2014).

### 1.3 Methodology

The material presented here was gathered over several field trips. During 11 cumulative months in the Waruá community, I recorded elicitation and natural speech deriving from a variety of discourse types. Additionally, I documented a collection of extra-linguistic and anthropological behaviors, namely human interaction and cultural practices (BOWERN, 2008, p. 14). As I became more familiar with both the language and the community, and vice versa, the more I recorded spontaneous speech and accompanied the Dâw people in their every-day life. However, controlled elicitation and stimuli aided in the confirmation of basic linguistic inventory.

Another significant component of methodology for this work involved journeys in the Dâw territory by foot and canoe. These efforts facilitated the documentation of spatial language and the historical and traditional knowledge of the last generation of elders. Furthermore, these journeys enabled the collection of narratives and other discourse associated with traditional territory and specific locations mapped with GPS. This research format further developed my understanding of the usage of spatial language at a large scale for the Dâw people in their natural surroundings. This type of work is a collaborative effort between the researcher and the community, as the community members are directly involved in decisions about the place of recordings, the routes that we traveled, and how to use the resulting resources.

Dâw speakers involved in this collaborative effort differed in age, gender, clan, and fluency of Portuguese. Older Dâw speakers generally felt more comfortable telling stories while younger Dâw speakers aided with transcriptions, translations, and elicitations. Miss Deolinda Fernandes de Souza, an elder, was especially helpful in the creation of these resources.

### 1.3.1 Elicitation

Elicitation sessions consisted mainly of controlled stimuli tasks developed by researchers of the Language and Cognition Group of the Max Planck Institute for Psycholinguistics in Nijmegen between 1992 and 2010. These comprise space games, picture stimuli, and questionnaires. Furthermore, I developed some additional elicitation tasks specifically designed to be more relatable for the community. The elicitation of different domains of spatial language through pictures was very productive in the early stages of fieldwork, as they are easily accessible for both researcher and speakers. o provides an overview of the elicitation tasks used in this work.

Table 1 - Overview of elicitation tasks applied during fieldwork

Type of session	Spatial Domain	Stimuli	Annex
<i>Picture stimuli</i>	Topological Relation	Topological Relation Picture Series (TPRS) – Bowerman/ Pederson (1992)	
		Picture series for positional verbs – Ameka/Wilkins (1999)	
		Photo Elicitation Task: topological relations Obert (this work)	
	Motion	Preliminary ‘come’ and ‘go’ questionnaire – Hill/Wilkins (1993)	
	Frames of Reference	Man and tree space games – Levinson et. al (1992)	
		Photo elicitation task: Man and house – Obert	

	Deixis	(this work)  Deixis elicitation - Obert (this work)	
<i>Guided Stories</i>	Motion	Route description Elicitation based on a site plan drawing of the village  Associated Motion Elicitation Kit- Storybook - Vuillermet (2013)  Motion verb Guided story 'Procurando Caranã' - Obert and Oliveria (2018)	
<i>Questionnaires</i>	Topological Relations  Deixis  Landscape terms and Place names	General questions about topological relations in adpositions and cases - Levinson (1999)  Deixis and Demonstratives - Levinson and Wilkins (1999)  Deixis and Location questionnaire - Engelenhoven (2000)  Landscape terms and place names elicitation guide - Bohnemeyer et al. (2004)	

The *Topological Relations Picture Series (TPRS)* (BOWERMAN and PEDERSON, 1992) consists of a selection of 71 line drawings showing two objects in a specific topological relation. In each spatial situation, the Figure is designated with a small arrow for clarity. However, some drawings present spatial situations with objects that are not common for Dâw speakers so I replaced many of them with more cultural relevant spatial settings. Still, these uncommon scenes frequently provided interesting insights of how Dâw speakers describe a (for them) non-prototypical spatial scene.

Ameka and Wilkins' (1999) *Picture series for positional verbs* contains 68 pictures and functions similar to the TPRS task, presenting objects in various positional configurations such as standing, lying or hanging. Figures vary based on dimensionality (pot = three-

dimensional vs. stick = two-dimensional) or canonical orientation (bottle vs. ball). Grounds vary based on surface properties (container or flat) or the material (rock vs. table). This task was instrumental as the results provided insights into many spatial language domains, such as the inventory of posture and positional verbs, the syntactic structure of Basic Locative Construction, and morphosyntactic Ground encoding.

Data for the description of motion events were obtained through Hill and Wilkins' (1993) *Preliminary 'come' and 'go' questionnaire*, designed to identify the parameters that semantically distinguish the notions of *come* and *go*. The task consists of 20 drawings with differing Path anchoring (start or endpoint), Path orientation to points, and Path shape (straight; heading towards a point; returning to the speaker). Some Dâw speakers performed the scenes while others described what was happening. The collected data verified the semantics of motion verbs mentioned in Martins (2004).

Structured elicitation of Frames of Reference is based on Levinson's et al. (1992) *Man and tree space game*, which consists of six core scenes showing a toy man in different positions relative to a toy tree. This task was designed to be a matcher-director task, i.e., the director describes a spatial scene and the matcher's task is to select a picture that represents the scene. There are two types of spatial variations: standing relations and facing relations. Standing relation changes the relative position of the man and the tree by showing the tree to the left or right of the man. Facing relation variants have the man looking to the left, to the right, towards the viewer, or away from the viewer (see LEVINSON and WILKINS, 2006, p. 11). In addition to these variations, similar scenes were performed using objects with inherent canonical fronts (e.g. a house) and without canonical fronts (e.g., a tree).

Finally, deixis was elicited without the use of controlled stimuli. Spatial adverbs like *here* and *there* could be elicited by responding to *where*-questions for objects in the environment. Speakers also provided examples by pointing to objects in different distances demonstrating the usage of specific morphemes like demonstratives. Additionally, a group of young Dâw speakers drew a map of the community that was used to elicit route descriptions. For example, one Dâw speaker asked for a route between two points on the map and another speaker would explain the route. In this way, the map aided in the creation of grammatical and lexical resources showing how Dâw encodes directionality and deixis.

The use of guided stories was very productive as the language went beyond the sentence level and produced comparable discourse. An effective stimulus used in this work was a Vuillermet's (2013) Associated Motion Elicitation Kit. I went through the haunting storybook with the collaborators, in order to draw their attention to the motion events

happening in the story. Five younger Dâw speakers decided to write the story in Dâw while I recorded three older Dâw speakers telling their versions of the story told. Furthermore, I developed another guided story that focused on motion events involving water. The resulting stories provided an inventory of motion verbs conflating the Ground, water or river, in the verb root. Finally, the questionnaires helped verify inventory, distribution, and other characteristics of the language that could be encountered through elicitation and discourse.

In sum, the stimuli tasks developed the Max Planck Institute for Psycholinguistics were essential for this work since they correspond to the theoretical approach applied in this work. However, for work with indigenous communities, it is often necessary to provide alternatives in order to use stimuli that are closer to the everyday life of these communities and their cultural background.

### **1.3.2 Natural Speech**

Enfield's (2003, p. 83) method of analysis, based on observational use of demonstratives in interactional situations, can be extended to spatial language in general. To complete this analysis, one must examine spatial language in spontaneous interaction and especially in situ. Interpretations of physical space depend not only on tangible categories like distance or shape but also on common ground, traditional knowledge, and personal perceptions of space among the Dâw speakers.

Understanding spatial language requires an examination of natural speech. I drew on a corpus of narratives, including traditional narratives, conversations, spells, and biographies, among others. This corpus was begun by Epps and Storto (2013) for a language documentation project and has grown through collaborative work in the last few years. Stories about the Dâw people's lives provided a useful source for studying spatial language, since these are rich in toponyms and landscape terms, establishing topographical features of the region. References to waterways are an important feature for the Dâw people since waterways are encoded in locative verbs and postpositions, providing almost redundant utterances.

However, deictic elements in narratives are often challenging to analyze due to the lack of gestures and to the missing community knowledge and common ground. For that reason, I accompanied the Dâw people on their walks through the forest and on journeys within their traditional territory; these journeys provided data that are not possible to gather during elicitation sessions. These walks also enabled a comparison between spatial language

of small scale settings and large scale settings, which is not usually included in elicitation tasks.

## **1.4 Structure of this work**

The structure of this work reflects the principal lexical and grammatical inventory responsible for encoding space. This first chapter aims to set a comprehensive frame for this work, including a concise description of the theoretical approach applied. I draw on the key concepts of spatial language, according to Levinson (2003), including Topological Relations, Frames of Reference (FOR), Motion, and Deixis. I also introduce the methodology and the data used for the analysis.

The second chapter focusses on the Dâw people and their language. I address geographic, topographic, and historical background, which are crucial for discussion of spatial language and cognition. Finally, this chapter contains a typologically informed grammar sketch of Dâw in order to facilitate the comprehension of various grammatical patterns.

Chapters 3 to 9 contain the main results of this research. The order broadly reflects the stages of my research that began with the observation of parts of speech expressing space in isolation, such as non-verbal and verbal resources.

Chapter 3 provides an overview of non-verbal elements that encode space in Dâw such as postpositions, spatial adverbs, and demonstratives, which were formerly considered the sole resources for encoding space from a cross-linguistic perspective. Chapter 4 includes an analysis of FOR which is mainly encoded with distinct nominal resources in Dâw. I show that Dâw encodes the absolute, intrinsic, and deictic FOR but not the relative FOR.

Chapter 5 examines verbal resources for expressing static spatial situations concentrating on the semantics of the locative copular and posture/positional verbs. I show that locative verbs play a central role in the expression of spatial relations since they can encode specific information on the configuration between Figure and Ground or support relations.

Chapter 6 discusses non-static spatial relations and focuses on the inventory of motion verbs in Dâw. Here, I examine how Dâw linguistically expresses the Talmyan (2000) elements of a motion event, including Motion, Path, and Manner. Chapter 7 expands the discussion of these elements with complex predicates. Multiple roots in Dâw are central for the encoding

of these lexical categories in a motion event. I also present, in chapter 7, a general analysis of complex predicates and their role for expressing spatial notions in Dâw.

Chapter 8 brings together the parts of speech and observes their interaction in different clause types. I examine locative interrogatives, Basic Locative Constructions, and locative adverbial clauses. I propose three syntactically distinct subtypes of Basic Locative Constructions: locative verbal clauses, locative non-verbal clauses, and locative phrases. They differ in the presence or absence of a verb, depending on factors like the permanency of the spatial relations.

In chapter 9, I explore the domain of landscape with an analysis of the class of landscape terms and place names. At first sight, these nouns seem to have standard morphosyntactic properties. However, when encoding Grounds in spatial relations, they show distinct morphological behavior to nouns denoting objects (first-order entities). Therefore, I suggest that Dâw shows a system of noun categorization distinguishing what-nouns from where-nouns.

Chapter 10 aims to synthesize the findings from this work and discuss the conclusions in light of the central question of this work: how does Dâw linguistically encode space?

All examples in this thesis are from my fieldwork and, when possible, the glosses correspond to the Leipzig Glossing Rules. Glosses from cited examples are preserved. All glosses can be found in the glossing list provided in this work. Furthermore, all examples from Dâw are written in the practical orthography as described in section 2.3.2. Due to its isolating profile, Dâw shows a range of homophonous forms that can be part of different word classes depending on their syntactic position. The third person plural pronoun *rid*, for example, is homophonous with the locative marker *rid*. These cases are also subsumed in the glossing list and are visually marked with subscript numbers (*rid*<sub>1</sub> ‘3PL’ vs. *rid*<sub>2</sub> ‘LOC’) throughout the examples. As discussed in section 2.3.4, complex nouns in Dâw can consist of either noun-verb combinations or lexicalized postpositional phrases. In these cases, I gloss each part of the complex noun in square brackets in the first gloss line and provide the understood meaning of the complex nouns in the next glossing line, as exemplified in (11) below.

- (11) *dâw*                    *nĩr*                    *xoot*    *waar*                    ‘*aa*’                    *tii?*  
       dâw.people        [be.located    place] ancestor        ANAPH                AFFIRM  
       dâw.people        **community**                ancestor        ANAPH                AFFIRM  
       ‘Was there really a community of the ancestors?’

Finally, citation and formatting correspond to Brazilian ABNT standards.

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## **2 Dâw and its speakers**

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## 2 Dâw and its speakers

Dâw (ISO code: kwa) is an indigenous language from the small Naduhup family spoken in the North-Western Brazilian Amazon. These peoples were formerly referred to with the pejorative term ‘Makú’, a word of Arawak origin that means “the ones without speech.” This name was often associated with “savages” or “forest Indians” (see RAMOS and OBERT, 2018) in opposition to “river Indians” represented by Tukanoan and Arawakan groups (ATHIAS, 1995). Within the Amazonian context, the Naduhup languages play an integral role in interactive regional networks, which link them to each other and to their river-dwelling horticulturalist neighbors. Speakers of all four groups of the Naduhup family have a hunting/gathering focus, in contrast to their more agriculturally oriented Arawak, Tukano, and Carib neighbors. The history of these peoples and their languages holds clues not only to the dynamics of language change and contact among small, hunter-gatherer populations (see EPPS and BOLAÑOS, 2017) but also to Amazonian prehistory.

In this section, I address what is known about the geographic, ethnographic, and historical background of the Dâw people as a representative of this language family. I also include a description of topographical features that are helpful for the understanding of spatial language. Finally, I provide a sketch grammar presenting the most central facts of the language.

### 2.1 Geographic and ethnographic context

The Dâw people currently consist of 131 speakers who live in a single community on the right riverbank of the Rio Negro river close to the city São Gabriel da Cachoeira. The Upper Rio Negro region is known for its fascinating linguistic diversity; once, dozens of languages were spoken in the area from the linguistic families East-Tukano, Arawak, Carib, and Naduhup (see o). Multilingualism is common in the area due to intense socio-economic interaction and the widespread practice of linguistic exogamy (see EPPS and STENZEL, 2013).

This distinction is also related to the respective territories of the groups: while the Naduhup people have traditionally occupied the interfluvial zones between major rivers, the Tukanoan and Arawakan people occupy the outer borders of the larger rivers. Despite this distance between them, the Naduhup groups maintained significant contact with their neighbors through interactions like trade, ritual activity, and warfare (see EPPS and STENZEL,

2013; EPPS, forthcoming; EPPS and OBERT, forthcoming). Hup and Yuhup peoples maintain (see RAMOS, 2013) close interactions with East-Tukanoan groups, whereas historical language data provided evidence that Dâw people have interacted with both Tukanoan and Arawakan people at different stages in the past. For Nadëb, Epps and Obert (forthcoming) report mainly interactions with Arawakan groups.



Map 1- Language families in the Upper and Middle Rio Negro region (EPPS and STENZEL, 2013)

According to Nimuendajú (1950), the Naduhupan peoples are the autochthonous inhabitants of the area, followed by the Arawakan and later the Tukanoan groups. The distribution of Naduhupan groups from the Middle Rio Negro region to the Upper Rio Negro region is not entirely understood. Epps and Obert (forthcoming) and Obert and Pissolati (in prep.) investigated the Dâw distribution and migration patterns from the Middle to the Upper Rio Negro region based on historical documents and shared narratives among Dâw and Nadëb people. In these publications, the authors located the Dâw people at specific places and times. An example is the following excerpt from a traditional Dâw narrative in which Mocita recounts the migration of the Dâw people in the past:

*tiid bax mār tiid wūç rid wūç rid dâw bax mār tiid. 'yām x# weed mār dâw wūç reew. diid bax kor dâw. primēel. primēel dâw bax kor tiid wēen rid. wūç rid. diid 'yām x# weed mār reew. reew t#m 'ee sun. nadâab sun weed dū dâw wūç. ab#g rid çeeb pee tid mār. ray m' daad m'. daad m' rid çeeb pee mār. ab#g rid wây nūux xoo. ab#g rid kasam rū'. dâw çeeb pee nēed ab#g rid wūçd niid. nā' ked mār dâw çeeb pee nā' ked. ab#g dâw rām mō'. tūbiil nū dū mār dâw*

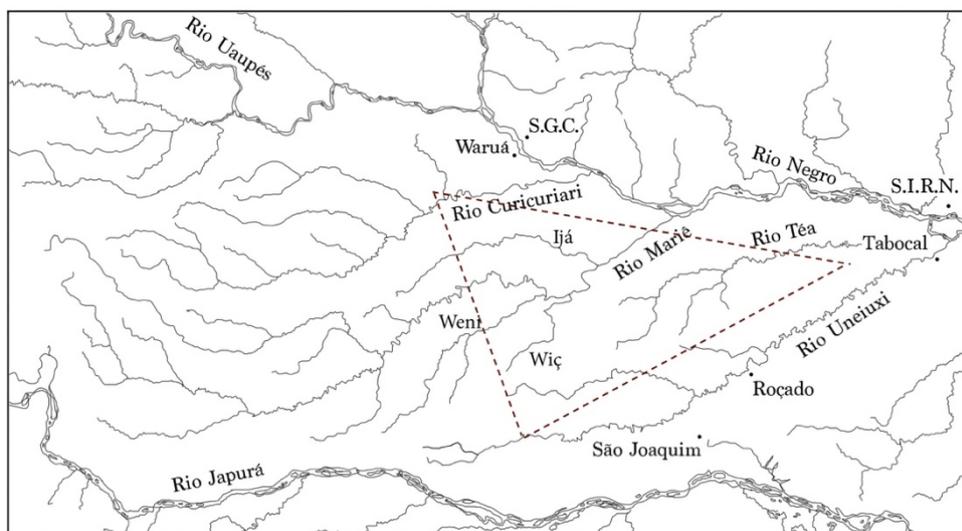
*top xaaw. tēen woor nũ bɨg. reew pay kasām dâwâ'. abɨg dâw ɕeeb  
 pee nã' ked mār wân nâax mĩ. rôt. abɨg rid top xâw' dâwũd. rôt  
 nũ dâwâ dâw tēr nũ ēr rôt. id pârēr tēen.*

(Mocita, 2013 recorded by Patience Epps)

*There, far away at the Wiç river, the Dâw people emerged. The jaguar ate many Dâw. There, the Dâw emerged first. First, they emerged there at the Wiç river. There, the jaguars ate the Dâw. There were a lot Yanomami. The Nadëb ate the Dâw. Then, they moved upwards to the Marié River. To the Marie River they moved. They came with canoe of the curupira. Then, they moved until they arrived here. Like this, they kept on moving. Then the Dâw went until Tumbira, where they also used to have houses. Today, there are many Tukano people. Many people died from diseases and other things. Then, the Dâw moved to the Curicuirari River, far away. This was the place where they had their houses. The Dâw lived really far away. They never lived close. We don't know this anymore.*

(Translation by Pedro Moraes de Souza)

As seen in Mocita's description, the Dâw report their emergence at the Wiç creek, most likely a tributary of the Weni river (see o). However, while some elders, such as Mocita, refer to the Wiç creek as the place of emergence, others mention the Weni creek. Epps and Obert (ibid.) suggest the Dâw localize the Wiç creek close to the mouth of the Ueni, most likely a tributary of the Marié river. The Nadëb people of Roçado corroborate the Marié river version since the Nadëb refer to the Dâw as *Wen Buj* 'people of the Wen River', their name for the Marié river. However, it is still possible to consider this ethnonym a result of the generic Arawakan term *weni* for 'water' or 'waterway.'

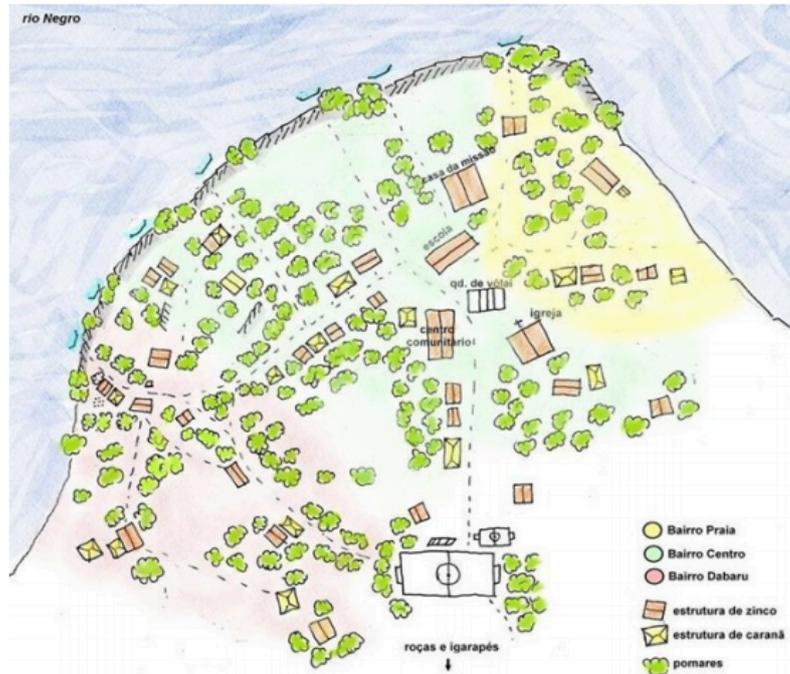


Map 2- Traditional area of occupation

Dâw narratives also describe the reduction of people and the migration north-east away from the Wĩiç/Weni crossing the Marié river to the Curicuriari area (see EPPS and OBERT, *ibid.*). The Dâw reference predations of jaguars and Curupira spirits and conflicts with other ethnic groups such as the Nadëb and *Tʔb* ‘ee ‘Narrow-Eyes’ as the main reason for leaving this area. Another possible reason could be the increasing pressure of non-indigenous rubber tappers and settlers along the Japurá at the turn of the 19<sup>th</sup>-20<sup>th</sup> centuries.

The presence of the Dâw people at the Wĩiç/Weni creek is supported by Natterer’s world list from 1831 that contained notes about Dâw spoken at the Ijá [Ia] river, a tributary of the Marié river in the north-east direction. Almost 70 years later, Koch-Grünberg collected Dâw words in 1906 along the Curicuriari river. This word list corresponds to a central point that the Dâw people frequently mention in narratives, the arrival at the headwaters of the Curicuriari river, where they later entered into contact with Tukanoan groups. Meira (1996, p. 176) describes the Dâw people’s entry into the extractivist debt-peonage system, where they harvested *piçava* for non-indigenous and indigenous (Tukanoan and Arawakan) patrons, sometime around the 1940s. Their involuntary participation in extractivist work marks a traumatic part of the collective memory of the Dâw people due to hunger, loss of relatives, and continuous relocation while escaping slavery. Martins (2005, p. 21) reports a drastic reduction in population in the community, down to 56 individuals in 1984. In the late 1980s, the evangelical missionaries Valteir and Silvana Martins helped the Dâw people settle in their current location where the Dâw have been able to repopulate.

The community name, *Waruá*, is a Nheengatú term that means ‘mirror’, which could be a reference the rhombic rocks at the community’s river bank in front of the city of São Gabriel da Cachoeira. However, Fontanelli (2015, p.73) suggests that the community’s name should be understood more metaphorically, as the community mirrors the city of São Gabriel da Cachoeira in many ways. For example, the Waruá neighborhoods have the same name and general distribution as neighborhoods from the city of São Gabriel da Cachoeira. Fontanelli’s (2015, p.78) map from 2015 shows three neighborhoods (Praia, Dabaru, and Centro) follow the exact distribution of their similarly named neighborhoods. Each neighborhood consists of people from various clans as, due to clanic exogamy, people must marry someone from another clan.



Map 3- Map of the Waruá community (FONTANELLI, 2015, p. 78)

This landscaping in the Waruá community also differs from typical communities in the area<sup>4</sup>. While in the Middle and Upper Rio Negro region, I visited several communities of different ethnic groups, including Tukanoan, Arawakan, and two Nadëb communities (Tabocal and Roçado both located at the Uneuixi river). These communities had very few trees between the houses with wide paths connecting houses, ports, the school, etc. As Fontanelli’s map shows, the Waruá community differs significantly with dense forest and domesticated fruit trees separating each neighborhood. According to elder Dâw speakers the Dâw people are not accustomed to living close to each other and “they don’t want to see each other every day the whole day.” This statement reflects the traditional lifestyle of the Dâw, where people lived immersed in the forest in small groups distant from each other.

This proximity to the missionaries and non-indigenous society in the city of São Gabriel da Cachoeira has brought on profound questions regarding cultural identity. However, the Dâw community still show positive language attitudes, and children grow up learning the language. In the context of rapid languages loss reported for languages of this region (see the Baré case), the Dâw case is a positive example of language maintenance. Nevertheless, this status must be considered fragile in light of rapid socio-cultural change and increased interaction with the non-indigenous society (see EPPS and OBERT, forthcoming). Encouraging Dâw people to participate as indigenous researchers in documentation projects

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<sup>4</sup> This impression is also corroborated for Hup communities by Rafael Moreira and Bruno Marques (p.c.).

on language and culture has increased their awareness regarding identity and protection of traditional knowledge and land. Another recently observed development is an increased desire to re-occupy interfluvial zones of the Middle Rio Negro area. This desire is particularly relevant to the contemporary Brazilian political landscape, where indigenous land rights are frequently challenged.

### **2.1.1 Topographical notes and the cultural significance of landscape**

The area of Northwest Amazonia is known for its vast hydrographic network located on the border of Brazil and Colombia. The rainforest ecosystem consists of large and small rivers with occasional stony mountain ridges leaving gaps in the tree cover. The numerous rivers draw their water from the upper and middle course of the Rio Negro, one of the principal rivers of the Amazon. The Curicuriari, the Marié, the Tea, and the Uneiuxi rivers are all tributaries on the right side of the Rio Negro. The Curicuriari river in the Upper Rio Negro region is considered the traditional area of the elders. The other tributaries at the Middle Rio Negro region play an essential role in the historical and mythological past of the Dâw people and are crucial for reconstructing contact with the Nadëb people and Arawakan groups (cf. EPPS and OBERT, forthcoming).

The interfluvial zones exist within an extensive network of small creeks (regional Portuguese *igarapé*) and consist of three macro types of vegetation: the dry-land forest (regional Portuguese *terra firme*), the caatinga forest, and flooded forest (regional Portuguese *igapó*). In addition to the varying waterbodies, these areas can be differentiated by the species of plants and animals. The Dâw people explain that the difference between these types of vegetation relies mainly on the size of the trees that result in varying types of soils (see Pictures 1-4 below). Below, Pozzobon (2011, p. 2-3) describes this relationship between the trees and soil:

*“30-meter-tall trees are predominant in “terra firme”, along with a sparse undergrowth and grass. The soil, a reddish-yellowish mud, is the most appropriate one in the area for agricultural purposes. At the “capinarana” [ou “caatinga”], a clay-sandy poorly permeable soil predominates, with a lot less nutrients. (...). Both, “terra firme” e “capinarana” mark the interfluvial limits. On the other hand, the igapó consist of a short alluvial forest (with 10-meter-tall trees or less) which appears along some parts of low margin rivers and meanders. It may spread from 5 to 6 km into de the forest and several meters along the rivers”.*



*Picture 1 - Caatinga forest*



*Picture 2 - Traditional Dâw site:  
igarapé Bukaar Pêeg*



*Picture 3 – Margin of the Curicuriari river*



*Picture 4 – Terra Firme forest*

These different parts of the forest are central for subsistence practices of the Dâw people. While the Dâw use the *terra firme* for manioc gardens and hunting ground, the *caatinga* and *igapó* are central for fruit gathering, depending on the level of flooding. Each area is used to extract different materials for the construction of traditional houses such as caraná (*mauritia carana*) leaves for roofs, vine (*cipó*) for and wood. Consequently, the surrounding forest is a central component of the livelihood of the Dâw people.

As described in the ethnographic introduction of this work, the Dâw people's relationship with the forest can be traced back to their traditional way of life. This lifestyle was marked by spatial mobility throughout the forest before the community congregated in the current area because of the influence of missionaries. Despite this newly imposed way of life, the Dâw people maintain their relationship with the forest through daily walks accompanied by children. These walks have turned into educational experiences. They circulate in a vast network of paths connecting the community with other rivers and creeks, called *varadouro* in regional Portuguese (*tuw soop dôo*, Lit.: 'path that ascends from the river'). These walks display a perceptive "bem-viver", Monteiro and McCalum's (2013) concept connecting happiness and well-being to engagement with the forest. Similar to what Lolli (2012) and Ramos (2013) described for the Hup and Yuhup people, regular walks through the forest connects the Dâw people with their territory and with their ancestry, which is tied to places in the forest. Additionally, the forest is spiritually charged due to the presence of a forest owner (*xaay dee*) who guides their interactions with and behavior in the forest during their hikes.

In the anthropological literature on the Naduhupan people, little attention has been given to the role of the mobility on and around rivers and creeks. According to their characterization as *forest people* (see also SILVERWOOD-COPE, 1972; REID, 1979; POZZOBON, 1991; JACKSON, 1983; ATHIAS, 1995), their ontological place was assumed to be restricted only to the interior of the forest. However, these bodies of water also play an essential role and are prominent topographical features of the region. The water level of the rivers and creeks transform certain landscapes, exposing or covering paths, forcing the Dâw people to take another route or to travel by canoe. Furthermore, rivers and creeks are central to the myth of origin and the history of migration from the Marié and Tea region to the Upper Rio Negro region. Central landmarks along these trajectories refer in almost all cases to hydrological features. For example, many villages, house sites (*sitios*), and mountains are often named after creeks passing through the area. Because of this, waterbodies are crucial for the identification of locations in the territory of the Dâw people. The waterbodies also frequently serve as

reference points, raising interesting questions about the ontological habitat of these groups who are so frequently associated with the forests.

## 2.2 Previous research on Dâw

Early work on Dâw and the Naduhup languages dates back to first wordlists collected by European visitors such as the naturalist Natterer in the 19<sup>th</sup> century and later Koch-Grünberg (1906) and Rivet (1920) at the beginning of the 20<sup>th</sup> century. Nearly a hundred years after their arrival, the Upper Rio Negro region draws the researcher's attention due to the local ethnic and language diversity. However, early work on these languages was carried out by missionaries from Brazilian and foreign institutions, whose (in)direct and profound influence had an impact on indigenous cultures and languages (see EPPS, 2005). In parallel, researchers, both linguistics and anthropologists from non-ecclesiastic institutions, started their work on ethnography and language descriptions.

More recent linguistic work on Dâw began with V. Martins' (1994) description of prosody and S. Martins' (1994) analysis of morphosyntactic features followed by a reference grammar in 2004. This descriptive grammar covers all parts of speech and the basic descriptive topics of a typologically-informed grammar, drawing both on elicited and natural speech data. Work on language documentation began with the project "Documentation of Dâw, a Naduhup language of Brazil," coordinated by Patience Epps (UT Austin) and Luciana R. Storto (University of São Paulo) and funded by the Endangered Language Foundation London (2013-2015). This project resulted in a collection of audio and video recordings documenting cultural practices, traditional knowledge, and Dâw discourse. This led to a partially annotated corpus, a lexical database in FLEx, and several materials for the community. Furthermore, four Master theses on diverse linguistic aspects of Dâw were written by participants of this project: Andrade (2014) on nasalization, Costa (2014) on argument structure, Carvalho (2016) on verbal aspect, and Cavalini (2017) on glottalization. A sequence of interdisciplinary documentation projects on language and culture of the Dâw and Naduhup people followed and were central for the research of this thesis. Their topics and respective participants are listed below:

**2015-2017:** *‘Language Contact and Change in the Upper Rio Negro’* (UT-FAPESP; Patience Epps & Luciana Storto, in collaboration with Danilo Paiva Ramos, Karolin Obert, Bruno Ribeiro Marques, Evani Viotti, Clariana Assis among others)

**2017-2018:** *‘Memory and landscape – recovering the ancient territory of the Dâw people (Naduhup, Brazilian Amazon) through the documentation of oral discourse’* (Firebird Foundation; Karolin Obert & Nian Pissolati)

**2017-2018:** *‘Caminhos dos Naduhup: arte verbal e imagem, tecendo floresta e mundos’* (Museu do Indio/ Rio de Janeiro and UNESCO; Karolin Obert, Nian Pissolati, Bruno Marques)

The last two projects were essential for collecting data for the understanding of spatial language in Dâw since they address territory, landscape, and memory. The outcomes of these projects were also vital for understanding the history of the Dâw people, their distribution in their ancestral territory, and past interactions with other groups. Data collected during these projects were archived at ELAR (archive of the ELDP London), AILLA (The Archive of the Indigenous Languages of Latin America, UT Austin) and partially at the Museu do Indio of Rio de Janeiro.

Anthropological work on the Dâw people is restricted to Pozzobon (1983), Meira (1993), Assis (2001) and (2006), and more recently Fontanelli (2015), who is currently working on an ethnography of the Dâw people for his PhD project. Pozzobon (1983) and Meira (1993) address the Naduhup people in general, with discussion of Naduhup social organization and their engagement in the extractivist debt-peonage system. Assis (2001 and 2006) and Fontanelli (2015) focus exclusively on the Dâw people. Recent interdisciplinary collaboration from Obert and Pissolati (in prep.) and Epps and Obert (forthcoming) attempt to describe the Dâw people’s interactions with their territory, the Nadëb, and other peoples tied to the migration and occupation in the Middle and Upper Rio Negro region.

## **2.3 Sketch Grammar**

### **2.3.1 Dâw within the Naduhup family**

The language Dâw belongs to the small Naduhup family consisting of Yuhup, Hup, and Nadëb. Initially, these languages were subsumed under the name ‘Makú’ or ‘Makú Puinave’ which includes the languages Kakua, Nîkak, and Puinave. These assumptions were derived from the wordlists made by early European visitors like the German ethnologist Theodor Koch-Grünberg (1906), who proposed this classification. V. Martins (2005) suggests a division in ‘East-Makú’ (Dâw, Hup, Yuhup, and Nadëb) and ‘West-Makú’ (Kakua, Nîkak, and

Puinave) subgroups. However, more recently, Epps and Bolaños (2017) show that there is no evidence to support Koch-Grünberg’s or Martins’ (2005) analysis. The authors provide strong evidence for shared lexical and morphological inventory among Dâw, Yuhup, Hup, and Nadëb, supporting a genetic relationship restricted to these four languages. This theory of the internal classification is provided in obelow.

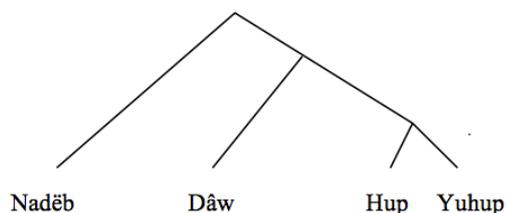


Figure 4 - Naduhup internal classification (EPPS, forthcoming)

The following Table summarizes typological features in the Naduhup languages and shows how Nadëb’s typological profile differs greatly from Hup, Yuhup, and Dâw (cf. EPPS and BOLAÑOS, 2017; EPPS and OBERT, forthcoming; EPPS, forthcoming). These differences conflict with the presence of numerous lexical similarities<sup>5</sup> and very few sound changes. As an explanation, the authors mention long-term contact with neighboring languages that has lead to structural reorganization.

Table 2 Some typological features across the Naduhup family (EPPS, forthcoming)

	<b>Hup</b>	<b>Yuhup</b>	<b>Dâw</b>	<b>Nadëb</b>
suffixing/prefixing	suffixing	suffixing	suffixing	prefixing (+suffixing)
Head/dependent marking preference	dependent	dependent	dependent	head
Basic constituent order	AOV	AOV	AVO	OAV
Root serialization	yes	yes	yes	no/limited to two roots
alignment	NOM-ACC	NOM-ACC	NOM-ACC	ERG-ABS
tone/vowel length	tone	tone	tone + length	tone + length

Based on shared innovations in phonology, morphology, and lexicon, the authors (ibid., p. 480) argue for a close relationship between Hup and Yuhup as well as a Dâw-Yuhup-Hup subgrouping. Evidence for this subgrouping is based on shared innovations such as devoicing of word-final obstruents, the shift from word-final \*k to /x/ in Dâw and /h/ in Yuhup and

<sup>5</sup> Epps and Bolaños (2017, p. 13) mention that 45 of 100 words from the Swadesh list are probable cognates across the family and note the possibility of being reconstructed in the Proto-language.

Hup, and the development of tone, some of which may have been simultaneously motivated by drift and contact with Tukanoan languages (EPPS and BOLAÑOS, 2017). Shared features between Dâw and Nadëb, such as vowel length and various lexical items, can equally be analyzed as retentions.

Some of these shared features between Dâw and Nadëb could be the result of contact with Arawakan languages (see EPPS and OBERT, forthcoming). The presence of many shared Arawakan loans among Dâw and Nadëb peoples indicates their contact not only with Arawakan languages but also with each other. Based on Natterer’s notes from the 19<sup>th</sup> century on both languages and traditional Dâw and Nadëb narratives, Epps and Obert (forthcoming) consider the Middle Rio Negro region to be a common ground for the groups. Dâw, Nadëb, and Arawakan groups (Manao and Baré) may have participated in a regional network similar to the to Naduhup-Tukanoan networks in the Upper Rio Negro region (EPPS and BOLAÑOS, 2017; EPPS and OBERT, forthcoming).

Tukanoan loans and structural innovations are a result of the Dâw people’s migration from the Middle Rio Negro to the Upper Rio Negro. Dâw consequently holds an interesting position within the Naduhup family, functioning as a link between the many areas that the Dâw people have occupied. The inventory of loanwords from different groups indicates interaction via trade, ritual activity, and warfare at different stages of the Dâw people’s history.

### 2.3.2 Phonology

This section provides an overview of Dâw’s segmental inventory, prosodic phenomena, and phonotactics. According to Martins (2004), the phonological inventory of Dâw consists of 25 consonants and 15 vowels represented in o and o below.

*Table 3- Dâw consonant inventory adapted from Martins (2004, p. 16)*

	labial	palatal + ant.	palatal - ant.	velar	glottal
stop	p b	t d	c ʃ	k g	ʔ
fricative			ʃ	x	h
nasal	m	n	ɲ	ŋ	
glottalized nasal	mʔ	nʔ	ɲʔ		
lateral		l			
glottalized lateral		lʔ			
aproximant	w		j		
glottalized aproximant	wʔ		jʔ		

Consonants are divided in sonorants and non-sonorants, motivated by the glottalization of the sonorants (see MARTINS, 2004; BARBOZA, 2017). Glottalization in Dâw is phonemic as it has both contrastive and segmental properties. According to Barboza (2017), glottalization in Dâw is indicated by creaky voice and harsh voice. According to Martins (2004) and Andrade (2014), Dâw also contrasts the nasalization in laterals and approximants. Oral-nasal contour segments function as allophones in form of pre-oralized nasal consonants in coda position as /<sup>b</sup>m/ (ANDRADE, 2017, p. 7), illustrated in (12).

- (12) /pɛm/ - [pɛ<sup>b</sup>m] 'to sit'  
 /mɛm/ - [mɛ<sup>b</sup>m] 'butterfly'

Concerning vowels, Dâw and its sister languages present a relatively large inventory compared to other languages of the region (EPPS, to appear). o shows 15 vowels, of which nine are contrastive (i, u, ɯ, e, ɤ, o, ɛ, ɔ, a) and six are nasal counterparts.

Table 4- Dâw Vowel inventory adapted from Martins (2004, p.55)

	oral	nasal	oral	nasal	oral	nasal
high	i	ĩ	u	ũ	u	ũ
mid	e		ɤ		o	
low	ɛ	ẽ	a	ã	ɔ	õ

Allophonic vowel length in Dâw is motivated by contour tone in the syllable nucleus (13). Lagyngealized allophones appear when the adjacent consonant is glottalized (14) (ANDRADE, 2014, p. 8).

- (13) /pux/ - [pux] 'to boil'  
 /púh/ - [pú:h] 'king' [MARTINS, 2004, p. 56]

- (14) /wʔán/ - [ʔwá:n] 'wild cará tuber'  
 /wʔáh/ - [ʔwá:h] 'capoeira' (overgrown swidden)

V. Martins (2005, p. 51) argues that Dâw does not show spreading of nasality from nasal vowels to constants and from nasal consonants to vowels. However, Andrade (2014) argues for nasal spreading from vowels to consonants. The author claims that the spreading process targets the voiceless glottal fricative /h/ when co-occurring in a syllable with a nasal vowel.

Dâw exhibits a strong preference for CVC syllables and monosyllabic roots (see MARTINS 2004; EPPS, forthcoming), with additional CV or VC syllables. While CVC and CV

patterns usually express lexical items such as (15) and (16), VC is restricted to suffixes (17) (ANDRADE, 2014, p. 8). Disyllabic words in Dâw show vowel repetition (18), whereas loan words do not necessarily provide identical vowels in syllables (19).

(15) [wah] ‘old’

(16) [xà:] ‘to cook’

(17) [mʔεʔ-ɛd] ‘one-ESP’

(18) [waʔap] – ‘cashew’

(19) [baʔpolʔ] – ‘steam boat’ [MARTINS, 2004, p. 74]

According to Andrade (2014, p. 8), words with more than one syllable undergo the process of resyllabification, where a CVC root modified by a VC suffix passes the consonant in coda position the onset of the subsequent syllable, as illustrated in (18). In this way, Dâw shows a strong tendency toward isomorphism between the morpheme and the syllable.

Dâw has phonemic tone, which falls on primary stressed syllables and can be either falling or rising (see MARTINS, 2004). As shown earlier in this section, tone interacts with vowel length, i.e., falling and rising occur with long vowels, whereas short vowels are atonal (MARTINS, 2004, p. 79). In cases with phonological words composed of two tonal roots, tone occurs only on the last root and coincides with the accented syllable, creating a system of pitch accent (see MARTINS, 2014, p. 13; ANDRADE, 2014, p. 9).

Finally, I present the practical orthography that was developed by Valteir and Silvana Martins. The alphabet consists of graphemic representations of vowels and consonants. Glottalized phonemes are indicated through an apostrophe, ex. /mʔ/ and <mʔ>, while nasalized vowels are indicated through (̃). All examples in this work are presented in this practical orthography. The phoneme-grapheme relations are represented in o below.

Table 5- Phoneme – grapheme relations, adapted from Andrade (2014)

phoneme	grapheme	phoneme	grapheme	phoneme	grapheme	phoneme	grapheme
p	p	ɟ	j	ɲ	nh	u	u
t	t	g	g	ŋ	gn	e	ê
c	ç	ʃ	s	l	l	ɾ	â
k	k	x	x	w	w	o	ô
ʔ	ʔ	h	r	ɟ	y	ɛ	e
b	b	m	m	i	i	a	a
d	d	n	n	u	u	ɔ	o

### 2.3.3 Morphological structure and word classes

From a typological perspective, Dâw can be considered an isolating analytic language with only a few processes of suffixation. The lexicon consists of monosyllabic items with a low rate of affixation. Verbal (e.g., tense and aspect) and nominal categories (e.g., plural and gender) are predominantly indicated with free words. Epps and Ananthanarayan (2018) show that several morphological forms are innovations or retentions that emerged from complex predicates consisting of several roots, especially for verbal morphology, (see also EPPS for Hup, 2016). This grammaticalization process has led to retentions of the ability of some of these etyma to function as independent verbal roots (cf. *ibid.*, p. 7).

On the other hand, complex predicates are a common source for the production of compound verbs through lexicalization in Dâw, i.e., lexical innovations. These constructions were previously analyzed as verb serialization by Martins (2004; 2007) involving a series of roots and grammatical formatives that are all phonologically independent. For this work, I opt to label them as complex predicates, as the syntactic independence of the roots is unclear (see chapter 7). Complex predicates can express coinciding events (20) and the directionality of motion (21). Additionally, complex predicates can consist of a lexical root followed by a grammatical element as illustrated in (22) by the aspectual auxiliary *tâg*.

(20) *tir* [kuun xaa] bây  
 3SG weave sit.AP basket  
 ‘She is weaving a basket (while) sitting.’

(21) *dâw xut* [toow yâa] xaaw  
 person MASC carry.on.arms return rifle  
 ‘The man came back carrying the rifle.’

- (22) *ãr rãm ii' taa xeet [yũt tãg] rid*  
 1SG go father.VOC DSCD caiman kill HAB SUB  
 'I go to (the place) where my late father used to kill caimans.'

Dâw's nominal morphology is more isolating than its verbal morphology. There are only a few processes of suffixation, such as the benefactive suffix on pronouns (23) and differential object marking (24), which suggests dependent-marking preference.

- (23) *nãkêdêe' id-ëej mër kaaw*  
 formerly 1PL-BEN NEG.EXI manioc.garden  
 'In the old days, there wasn't a manioc garden for us.'

- (24) *tir xâad xuwêel-ũuy' tir yũt nã'*  
 3SG look.for rabbit-DOM 3SG kill FINAL  
 'He was looking for that rabbit (in order) to kill it.'

Major word classes such as verbs, nouns, and adverbs are open classes in Dâw, but the status of property terms is challenging to resolve. Martins (2004, p. 125) suggests that Dâw does not provide a class of adjectives. Instead, the author argues that noun modification functions through a class of stative verbs with attributive semantics. Costa (2014, p.70), in contrast, provides arguments for a class of adjectives that are verbalized through the copular verb *rãm* (adjective + *rãm*). What Costa (ibid.) refers to as a copula verb could also be analyzed as an auxiliary verb that selects a VP as its argument, which would favor the verb status. Furthermore, copula verbs in Dâw generally precede their arguments rather than follow it. Another factor complicating the definition of this class is the ambiguous formation of an adjectival phrase. A phrase like *taax dep* 'the tapir is fat' can either be stative or a process of noun modification with an adjective and a zero copula. Due to the lack of evidence, I leave the discussion open for future work, and I adopt Martins' analysis for this work.

Dâw has a set of ideophones that imitate sounds of natural surroundings, especially from the forest, such as the sound of cracking twigs (25) or the sound of animals. They are frequently found in traditional Dâw narratives, often appearing after an utterance for an acoustic description of the event expressed in the utterance. Martins (2004, p. 169) considers ideophones to be verbs, yet our corpus does not support this classification as these ideophones are never attested with verbal morphology.

- (25) *tir xũũ nêed mãr sãx sãx sãx*  
 3SG descend come RPT IDEO IDEO IDEO  
 'They say, she came down (twig cracking noise).'

### 2.3.4 Nouns and the noun phrase

This section explores the structure and components of the noun phrase in Dâw. I will provide an overview of minor nominal word classes, introduce the modification processes for noun phrases, and present compounding and derivational processes.

Dâw uses oblique pronouns for first and second person singular, whereas the other pronouns are marked morphologically with the oblique marking suffix *-ũũy'*. o below presents the pronoun inventory in Dâw. Note the absence of masculine-feminine and inclusive-exclusive distinctions.

Table 6- Inventory of Dâw pronouns

	Personal pronoun	Oblique pronoun	Possessive pronoun	Focussed pronoun
1SG	<i>ãr</i>	<i>mũnh</i>	<i>mẽnẽnh</i>	<i>rã'</i>
2SG	<i>ãm</i>	<i>mũũy'</i>	<i>ãm</i>	'ma'?
3SG	<i>tir</i>	<i>tir-ũũy'</i>	<i>tir</i>	<i>tir-i'</i>
1PL	<i>'id</i>	<i>'id-ũũy'</i>	<i>'id</i>	<i>'id-i'</i>
2PL	<i>nũg</i>	<i>nũg-ũũy'</i>	<i>nũg</i>	<i>nũg-ũ'</i>
3PL	<i>rid</i>	<i>rid-ũũy'</i>	<i>rid</i>	<i>rid-i'</i>

Martins (2004, p. 361) hypothesizes that the genitive marker *-ẽej* expresses possession through fusion with the pronouns, as illustrated in (26). However, pronouns suffixed with *-ẽej* do also provide a benefactive reading (28). Furthermore, Dâw indicates possession through the juxtaposition of the possessive pronoun and the possessed noun, as illustrated in (27). Possession of inalienable nouns like kin terms, body part terms, and plant parts is also expressed through juxtaposition, where the possessors precede the possessed nouns (e.g. *dâw nũr* 'person's head')

(26) *'aa' top tir-ẽej*  
 ANAPH house 3SG-GEN  
 'This house is his (house).'

(27) *naa' mẽnẽnh top*  
 DEM:prox 1SG.POSS house  
 'This is my house.'

(28) *mẽr suuk rid-ẽej*  
 NEG.EXI manioc.meal 3PL-BEN  
 'There was no manioc meal for us.'

Martins (2004, p. 350) also describes two distinctive, focused pronouns for first (29) and second person singular, whereas the remaining pronouns express focus through the suffix *-V'*.

- (29) *nãk*            *saak*            *rãm*    *tâg-ẽr*            *rã'*  
 [ancient        climb.up]        go        HAB-NEG        I.SG.FOC  
 its.been.a.while            go        HAB-NEG        I.SG.FOC  
 'It's been a while that I don't go (to my manioc garden).'

Similar to its sister languages, Dâw provides the indefinite pronoun *dâw* 'someone' (see EPPS, forthcoming) which is also used in first person plural contexts when Dâw speakers reference their ethnic group (30).

- (30) *dâw*    *suk*    *pũud*            *yêd*  
 person hunt    be.a.lot        INTS  
 'We (the *dâw* people) hunt a lot.'

Dâw shows a two-way distinction in its demonstrative system, expressing the proximal with *naa* 'this' and the distal/intangible with *taa* 'that' (see section 3.3); these can also function as the respective demonstrative determiners when preceding nouns. In discourse, Dâw provides the generic anaphoric pronoun '*aa*' that functions both as a pronoun (31) and as a determiner (32) when preceding nouns. Additionally, the reference to multiple human entities such as a group in narratives and discourse is established through the anaphoric pronoun *aa'* *xooç sun* as illustrated in (33). The semantics of this construction is transparent, consisting of the anaphoric pronoun *aa'*, the noun *xooç* 'group', and the collectivizer *sun*.

- (31) *abug*            '*aa*'            *rãm-ẽr*            *mãr*  
 DISC.CONJ        ANAPH            go-NEG            RPT  
 'Then, they say, that one (the man) did not leave.'

- (32) '*aa*'            *dâw*    *xut*            *wâa-ẽr*  
 ANAPH            person MASC    listen-NEG  
 'These guys did not listen.'

- (33) *nãkêd*            *kâr-êe'*            *mêenh*            '*aa*'            *xooç sun-u'*  
 formerly            suffer-PST        I.SG.POSS        [ANAPH        group COL]-FOC  
 formerly            suffer-PST        I.SG.POSS        these  
 'In the old days, these (my children) suffered.'

V. Martins (2004, p. 384) lists a set of clause-initial interrogative pronouns that require a clause-final verb (see chapter 8 for a discussion of the syntax of locative interrogatives).

Some interrogative pronouns that Martins (ibid.) described to have a discursive function could not be verified in content interrogatives. For example, *raay* was previously described as an interrogative particle in questions like ‘How is it, again?’ However, in o it functions as an interjection and placeholder for lexical items that are typically verb stems or nouns.

- (34) *rid xâad raay*  
 3PL look.for whatchamacallit<sup>6</sup>  
 ‘They are looking for that (fruit).’

Plural marking on nouns in Dâw is optional and occurs predominantly with [+human] referents through the addition of *dâr* postposed to a noun (see MARTINS, 2004, p. 400). There is also a distinct collective marker, *sun*, that can be used for both animates and inanimates.

Dâw also marks gender of human referents through the juxtaposition of the noun *ãay* ‘women’ and *xut* ‘man’, such as in *dâw ãay* ‘dâw woman’ or *buuy ãay* ‘non indigenous woman.’ This gender marking also occurs on nouns referring to spirits such as *nũux ãay* ‘female Curupira’, but is not encountered with animals<sup>7</sup>. Furthermore, Dâw shows a deceased marker postposed to nouns as illustrated in example (22).

Concerning quantification, Dâw has several quantifiers that follow the noun such as *wap* ‘all’, *mêrêd* ‘few/none’, *pis* ‘little (derived from ‘be small’), *reew* ‘many’, and *pêg* ‘much’ (derived from ‘be big’). Storto (to appear) shows that quantification morphology in Dâw is the only way to distinguish mass nouns from count nouns since *reew* and *mêrêd* are used with count nouns, while mass nouns are quantified with *pêg* and *pis*. Dâw also expresses universal quantification through the use of the post-verbal auxiliary *rũ’*, which may refer to S and O arguments, as illustrated in (35) (see Storto and Carvalho, 2014; Epps and Ananthanarayan, 2018).

- (35) *tir tuuk 'yêet rũ' bâay*  
 3SG turn.upside.down lie UNIV.QUANT basket  
 ‘He turned all the baskets upside down’.

Dâw shows a restricted numeral system from one to three expressed by ‘*mê* ‘one’, *tum* ‘two’ (etym. ‘eye’), and *mut wap* ‘three’ (etym. ‘rubber tree seed quantity’) (see MARTINS, 2004;

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<sup>6</sup>This gloss is adapted from Epps (2008, p. 714) for the related element *hãy* in Hup showing the same behavior.

<sup>7</sup> In some narratives we find the female form of the jaguar ‘*yãm x#’ ãay* that usually refers to the mythological transformation from persons to jaguars. In other words, in these cases, Dâw speakers refer to the gender of the person that turned into a jaguar.

EPPS, 2006; STORTO, to appear). Martins (2004, p. 391) reports that some older Dâw speakers still remember a tally system for numerals between four and ten based on the noun *maam* ‘sibling’. When referring to odd numbers ‘*mẽ maam*’ ‘one sibling exists’ is used and even numbers were consequently expressed by ‘*mẽ maam mẽ*’ ‘one has no brother’. However, as Storto (to appear) explains, the Portuguese numeric system is currently used.

Regarding the compositional structures, there are both mono-morphemic nouns, (e.g. *xeet* ‘caiman’, *bee* ‘tree’, *top* ‘house’) consisting of one lexical root, and complex nouns, consisting of more than one root. Complex nouns can be formed through juxtaposition or agglutination with other elements. According to Martins (2004, p. 142), these processes differ with respect to phonological conditions depending on the syllable structure. If the first element of the compound is CVC, the second element is appended without triggering any phonological changes. o provides a brief overview of the possible word formation structures of complex nouns in Dâw, which can involve elements from either the same class or distinct classes.

Table 7 - Structures of complex nouns in Dâw (juxtaposition)

<b>noun + noun</b>	<i>nâax taax</i> ‘capibara’ water + tapir
<b>noun + class term (noun)</b>	<i>dâw sob</i> ‘hand’ person + hand
<b>noun + class term + attributive verb</b>	<i>dâw sob pis</i> ‘finger’ person + hand + be small ‘finger’
<b>noun + attributive verb</b>	<i>nâax pis</i> ‘creek’ water + be small
<b>postpositional phrases</b>	<i>dâw sob ked</i> ‘palm of the hand’ person + hand + in

In contrast, other complex nouns are formed through the agglutination of the nominal roots using vowel harmony (cf. MARTINS, 2004, p. 150). As a result, Dâw produces a noun with a CV.CV(C) structure in which both syllables show the same vowel, as illustrated in (36).

(36) /bõhõ/ ‘bonfire’ = /bε/ ‘tree’ + /hõ/ ‘to light on’ [MARTINS, 2004, p. 150]

Finally, Martins (2004) describes derivation based on verbs through changes of the tonal pattern. The author describes a morphophonological process in which the addition of a rising tone on atonal verbs derives nouns (37).

- (37) *wây* ‘speak’ – *wây* ‘word’  
*rũp* ‘grate’ – *rũp* ‘grater’

The distribution of elements in the noun phrase in Dâw corresponds to what Epps (to appear) describes for the Naduhup family in general. Demonstrative modifiers and numerals precede a noun while quantifiers and attributive elements follow.

Privative negation can be morphologically marked on nouns through the negative suffix *-ẽr* such as in (38). However, this type of negation is not very productive in Dâw since the language favors clausal negation on verbs using the same morpheme (see section 2.3.6 on simple clauses).

- (38) *rid borõo-ẽr* ‘ox *xõo* *mãr*  
 3PL fire-NEG run circualte RPT  
 ‘They escaped without fire, they say.’

Finally, I present the inventory for marking participant roles on nominal constituents, consisting of a restricted set of suffixes marking core non-subject arguments and a set of postpositions responsible for marking non-core arguments. Martins (2004, p. 498) describes the suffix *-ũũy*’ as an optional case marker in order to mark core and non-core non-subjects that are ‘affected’ by the action of the verb. However, Costa (2014, p. 184) provides evidence that this case-marking optionality is restricted to direct objects in transitive clauses. For these cases, Costa (ibid.) suggests that *-ũũy*’ is a differential object marker (DOM) that occurs related to definiteness and animacy of the referent (compare (39) and (40)).

- (39) *ãr wây taax*  
 1SG see tapir  
 ‘I saw the tapir.’

- (40) *ãr wây ‘aa’ taax-ũũy*  
 1SG see ANAPH tapir-DOM  
 ‘I saw that tapir.’

[COSTA, 2014, p. 202]

Costa (ibid.) also reports a homophonous form of this suffix marking oblique constituents in ditransitive clauses (compare examples (41) - (43)). In these sentences, the direct object is unmarked because of inherent accusative case marking. Because of this distinct behavior, she argues for two homophonous forms of this suffix, with one functioning as a DOM marker and the other as an oblique case marker.

- (41) *dâw xut nõo weed dâw tee-ũũy'*  
 person MASC feed food person child-OBL  
 'The man gives food to the child.' [COSTA, 2014, p. 210]
- (42) *\*dâw xut nõo weed dâw tee*  
 person MASC feed food person child [COSTA, 2014, p. 210]
- (43) *\*dâw xut nõo weed-ũũy' dâw tee*  
 person MASC feed food-OBL person child [COSTA, 2014, p. 210]

Further oblique roles are expressed through a set of postpositions included in o below. Dâw provides the locative marker *rid* used to mark static location or both source and goal in motion events (see chapter 6). However, its usage is restricted to nominal referents that inherently denote places such as toponyms or landscape terms (see section 9.1.5). More specific locative information is expressed through a rich set of spatial postpositions that I discuss in detail in chapter 3.

Table 8- Markers of non-core participant roles in Dâw

comitative postposition	<i>diid; rũuy</i>
instrumental postposition	<i>rēd</i>
origin	<i>dee</i>
locative marker (direction: source and goal and location)	<i>rid</i>
other locative roles	<i>large set of spatial postposition (see chapter 3)</i>

### 2.3.5 Verbs and the verb phrase

This section outlines the major grammatical categories that are marked on verbs and their distribution within the Dâw verb phrase.

The syntactic expression of Dâw is crucial to understanding grammatical categories in the language. Dâw syntax relies predominately on root serialization of phonologically independent lexical items and grammatical formatives with fixed ordering principles, as illustrated in example (44). The left edge in these complex predicates is comprised of lexical items (*tuuk, yêt*), while grammatical elements (*xâd* 'DUR', *mâr* 'RPT') occur at the right edge. Most of the right edge elements are interpreted as auxiliaries because they display verbal properties. Verbal morphology expressed through suffixes, such as the negative *-êr* and the remote past suffix *-êe'*, are predominantly attached to the last root of the predicate. Root serialization in Dâw is, thus, a central source for the development for grammatical and lexical innovations/retentions in Dâw as previously mentioned (cf. Epps and Ananthanarayan, 2008).

- (44) *abug dâw tuuk yêt xâd mâr bood*  
 there person turn.upside.down lie.down DUR RPT oven  
 ‘There, they say, the Dâw people turned the oven upside down.’

Where person, number, and gender marking on verbs is absent in Dâw, categories expressed in the right slot are tense, aspect, mood, and directionality. Tense marking in Dâw is not obligatory and is restricted to the remote past suffix *-êe*’ and to what Martins (2004, p. 277) describes as general future (*-êj*) and immediate future (*-êj*). However, there is also an analytic form for the imminent future consisting of the lexical item followed by the desiderative auxiliary *tuk* (45). Martins (ibid.) also identifies the ‘strategic future’, indicated through the particle *nã*’. However, this particle is best interpreted as an adverbial subordinator in purposive adverbial clauses, as illustrated in (46). Further temporal resources in Dâw are temporal adverbs like *nũkedêe*<sup>8</sup> ‘formerly’, *çem* ‘yesterday’, *têen* ‘today’, *bũub* ‘tomorrow’, and *cêm* ‘night’.

- (45) *nâax dôj tuk*  
 water rain DESID  
 ‘It is going to rain.’  
 Lit.: ‘It wants to rain.’

- (46) [*xaay ãr rãm*] [*pudêel’ id xâad nã’ id weed*]  
 forest 1SG go can 1PL look.for FINAL 1PL food  
 ‘I am going to the forest (in order) to look for our food.’

In lieu of a rich tense morphology, Dâw has a productive system of auxiliaries that encode grammatical aspect. Martins (2004) describes an inventory of 15 aspectual auxiliaries in Dâw. However, Carvalho (2016) shows that many are either not productive or not clearly aspectual, while others are actually lexical aspect markers. Most of Dâw’s aspectual auxiliaries have grammaticalized from a lexical source in complex predicates (cf. MARTINS, 2004; MARTINS, 2007; EPPS and ANANTHANARAYAN, 2018; Epps, to appear), as summarized in 0.

Table 9- Dâw aspectual inventory

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<sup>8</sup>The temporal adverb *nũkedêe* ‘formerly’ is frequently used in the first utterance of a narrative with the function of indicating that the story happened in remote past. This semantics is comprehensible according to its morphological components that are the property term *nũk* ‘ancient’, the morpheme *-ed-* whose function is unclear and the remote past suffix *-êe*’.

	Aspectual auxiliary	Etymological clues
imperfective	?	?
progressive	<i>yooow</i>	be straight
continuous	<i>dâr raam</i>	<i>râm</i> 'go'
perfective	<i>yūt</i>	kill
completive	<i>rũ'</i>	finish
habitual	<i>tâg, weer, p̃n'</i>	know?additionally always?
telic	<i>râm/-âm</i>	go
durative	<i>xâd</i>	pass (by)
iterative	<i>beey</i>	return
inchoative	<i>dôo'</i>	take

Imperfective aspect in Dâw requires additional investigation as analyses are highly diverse. Martins (2004, p. 288) argues that the imperfective aspect is expressed through the free morpheme *ta'* in examples that do not clearly describe an ongoing situation, as illustrated in (47). On the other hand, Carvalho (2016, p. 55) claims that Dâw speakers do not recognize this morpheme and suggests that the imperfect is expressed through one of the two habitual auxiliaries *tâg* and *weer*. The data gathered for this work confirms the case of *tâg* to express habituality in Dâw, see (48) and (49), and suggests that *p̃n'* can be used in similar contexts, see (50) and (51). One possible explanation is their interaction with tense. Where *p̃n'* is used in past tense contexts, *tâg* seems to be more related to events in the present tense. However, to verify this analysis elicitation tests must be used to examine the interaction of both auxiliaries with the remote past marker *-êe*.<sup>9</sup>

- (47) *ãr kât dôo' ta' bee wâ' wud*  
 1SG stand INCHO IPFV tree on well  
 'I am going to try to stand on this tree.' [MARTINS, 2004, p.289]
- (48) *ãr nãa tâg-êr ãm-ũũy' 'aa' pay*  
 1SG talk HAB-NEG 1SG-DOM ANAPH like  
 'I never used to talk to you like this.'
- (49) *bũg tun nũ tâg tii*  
 there island EXI HAB AFFIRM  
 'Isn't there an island?'
- (50) *[buuy rũuy mēenh iip rãm tâ']*  
 non.indigenous.person COMMIT 1.SG.POSS father go SUB:when

<sup>9</sup> Carvalho (2016, p. 119) argues that the habitual *tâg* is compatible in remote past contexts. However, the author does not provide examples of the interaction between the respective tense and aspectual morphology.

*ãr nêe pũn' kaaw ãr-wud*  
 1SG make HAB.PAST manioc.garden 1SG-REST

‘When my father went away with the white men, I used to make the manioc garden alone.’

(51) *ãr pis tẽn*  
 1SG be.small at.the.time.that

(52) *abug [nor-ẽr pũn' bee]*  
 conj.disc cut.stick-NEG HAB.PAST tree

‘But when I was small, I did not (use to) manage to cut a stick.’

This multifunctional character has been already observed by Storto and Carvalho (2014), who suggest that some of the auxiliaries listed in 0 are portmanteau morphemes carrying TAM information.

Another interesting property of Dâw aspectual morphology is its interaction with directionality, especially concerning the inchoative *dôo'* and the telic *rãm*. The alternation between the aspectual and directional interpretation depends on two main factors: first, whether they combine with a specific verb class such as motion verbs or transitive/intransitive activity verbs (53) and, second, whether there is a locative adjunct present in the clause (54) (OBERT, STORTO, and ASSIS, 2018). However, further investigation is necessary to determine the full range of the aspectual inventory in Dâw.

(53) *tir ox dôo'*  
 3SG run INCHO  
 ‘I began to run.’

(54) *Rosi yãa dôo' baal rid*  
 Rosi return DIR:source Manaus LOC  
 ‘Rosi came back from Manaus.’

Some of the aspectual morphemes described by Martins (2004) were reanalyzed by Carvalho (2016) to express modal categories that are marked through post-verbal auxiliaries. The frustrative *wud* and the desiderative *tuk*, as illustrated in (55), are frequently used in Dâw.

(55) *ãr rãm tuk wud dũ' nẽb rid*  
 1SG go DESID FRUST also Inebo.creek LOC  
 ‘I also wanted to go to the Inebo creek (but I did not).’

Deontic modality in Dâw is expressed using auxiliaries borrowed from Portuguese *deel* ‘can’ (probably borrowed from *poder* ‘can’) and *pilsij* ‘need’ (probably borrowed from *precisar* ‘need’). These contrast with other auxiliaries; the deontic auxiliaries precede the verbs they modify, in a similar manner to the corresponding Portuguese construction (e.g., *eu preciso comer* ‘I need to eat.’). Epistemic modality in Dâw is expressed through the dubitative particle *êe*’ indicating doubtful assertion, mainly in interrogatives (see section 8.1), as illustrated in (56). The particle contrasts with the affirmative particle *tii* used to express the certainty of the information, as in (57).

(56) *wâan*                      *nâax* *nôr*                      *mãay* ‘aa’                      *êe*’  
 curicuriari.river      river    mouth                      not.be ANAPH                      DUB  
 ‘Wasn’t this the mouth of the Curicuriari river?’

(57) *reew* *mãay* *mâr* *weed* *diid*                      *tii*                      *yēm* *ta*’  
 a.lot    INTS    RPT    eat    there:ITG                      AFFIRM                      world    entire  
 ‘They say, there they really ate a lot, everywhere.’

Additional modal categories in Dâw include the imperative, marked through the verbal suffix *-ôr*, and the counterfactual auxiliary *kon*, marked in the subordinated clause, as illustrated in (58).

(58) [*ãm wây*]                      *kon*] [*ãm* *ôo*]  
 2SG see                      CFT    2SG    laugh  
 ‘If you had seen (this), you would laugh.’

Finally, evidentiality in Dâw is restricted to the reported evidential particle *mâr*. The syntactic mobility of this particle in the clause is illustrated in (59) and (60). Epps (to appear) provides evidence suggesting this reported evidential was present in Proto-Naduhup.

(59) ‘*yãm x#*’ *weed*    *mâr*    *dâw-#y*’  
 jaguar eat                      RPT    person-DOM  
 ‘They say, the jaguar ate the Dâw.’

(60) *a-b#g*                      *rid*    *çeeb*                      *pee*                      *tiid*                      *mâr*  
 ANAPH-there    3PL    change.place    go.upriver                      over.there                      RPT  
 ‘There, they say, they moved upriver in that direction (pointing).’

Another grammatical category expressed with verbs is directionality – a central topic of this work. As we will see in detail in chapters 6 and 7, Dâw encodes directionality either through simple or complex roots. Simple roots are expressed by directional motion verbs that

inherently express direction with respect to the deictic center, i.e., the most basic notions *nēd* ‘come’ and *rām* ‘go’. In motion events with inherent motion verbs, such as *ox* ‘run’, directionality is indicated through multiple roots by adding a directional motion verb to the end of the complex predicate, as seen in (61). *Dâw* does not display a distinct set of directional postpositions marking translocative or cislocative motion, but instead uses a generic locative marker *rid* on the respective Ground nominal.

- (61) *paas lāb xxtt nâax dōo rid*  
 stone roll descend water port LOC  
 ‘The stone rolls (down) towards the port.’

Associated Motion (AM) in *Dâw* is expressed in complex predicates that associate a motion component with an event. In (62), a lexical verb root *rām* ‘go’ is in the second slot of the predicate with an event expressed by the root from the first slot *ōn*.

- (62) *tir ãn rām*  
 3SG smoke go  
 ‘He walks smoking.’

Valency-adjusting mechanisms in *Dâw* are predominantly carried out by proclitics. Verbs in *Dâw* can be intransitive, transitive, ditransitive, and labile (cf. MARTINS, 2004; COSTA, 2014; EPPS, to appear). To increase valency, Martins (2004) states that the transitivization of intransitive verbs in *Dâw* happens using changes in the tonal pattern. Our fieldwork confirmed intransitive/transitive pairs that differ with respect to vowel length and tone, however it remains unclear how productive this derivational process is. Costa (2014) and Storto et. al. (2013) provide evidence that tone is predictable at the sentence level, contradicting Martins’ analysis. Costa (2014, p. 129) suggests instead that transitivization in *Dâw* occurs through automatic or labile alternation, i.e., the subject of the intransitive verb becomes the object of the transitive variant, as illustrated in (63) and (64).

- (63) *xop wox*  
 cup brake  
 ‘The cup broke.’

- (64) *João wox xop*  
 João brake cup  
 ‘João broke the cup.’

[COSTA, 2014, p. 129]

Another mechanism of increasing valency is causitivation through the proclitic *dôo'*, which is related to the verb 'take' in Dâw. When preceding the main verb, *dôo'* is responsible for adding an agentive subject while the syntactic subject functions as the direct object, which may receive DOM depending on definiteness and animacy (compare examples (65) and (66)).

(65) *buuy* *w̃w̃w̃d*  
 non.indigenous.person arrive  
 'The white person arrived.'

(66) *tir* *dôo'* *w̃w̃w̃d* *buuy-ũuy'*  
 3SG CAUS arrive non.indigenous.person-DOM  
 'He made the white person arrive.' [COSTA, 2014, p. 160-161]

Decreasing valency in Dâw is primarily done by preposing a pro-form *xub* (indicating reciprocal relations) to the main verb, as illustrated in (67). Reflexive relations, in contrast, are indicated through pro-forms in object position, providing coreference between subject and object such as in (68).

(67) *dâw* *xub* *ũum* *pôo'* *p̃ñn'* *ñk̃k̃êd*  
 person RECP beat cut.half HAB.PAST formerly  
 'In the old days, the Dâw beat each other and cut each other's heads.'

(68) *ãr* *wâay* *m̃nh*  
 1SG see 1SG.OBL  
 'I see me.' [COSTA, 2014, p.178]

Middle voice constructions and passive constructions are not morphologically or syntactically encoded in Dâw (cf. COSTA, 2014, p. 181). Intransitive clauses encode what is usually expressed by middle voice constructions and transitive clauses like the ones in (67), which are usually expressed by passive constructions. According to Martins (2004, p. 181), Dâw also has lexicalized noun incorporation in verbs such as *rũ' ãa* 'to hunt' ('game' + 'sleep') and postposition incorporation such as *rêd baax* 'to sweat' (with + sweat). However, it is not clear whether these incorporations are a syntactic process to adjust valency and consequently productive or whether we should consider them word formation processes.

This section has shown that standard grammatical categories in Dâw are usually expressed using complex predicates with multiple roots, with the exception of tense suffixes. Accordingly, we can identify three main types of complex predicates based on function and the syntactic position of the grammatical formative, as presented in o. Furthermore, TAM

and directional categories follow the main verb in complex predicates, whereas valency adjusting formatives precede the main verb.

Table 10- Root ordering in complex predicates and their grammatical functions

Function	Root ordering
Lexical: expression of two coincident events; associated motion	$V_{lex} + V_{lex}$
Verbal categories: TAM and directionality	$V_{lex} (+V_{lex}) + auxiliary$
Valency adjusting	CAUS/REFLX/RECIP+ $V_{lex}$

### 1.4.1.1 Simple clauses

This section discusses simple clauses and their syntactic and morphological alignment patterns. It will also describe constituent ordering, sentential mood, and strategies of negation.

Epps (to appear) shows that constituent order in Dâw is pragmatically driven, with a strong tendency to drop one or both arguments in discourse (see section 2.3.8). This section focuses on basic/unmarked constituent order of basic sentential moods with fully expressed arguments. o shows how sentential mood in Dâw manifests itself either syntactically or morphologically.

Table 11- Constituent order in Dâw simple clauses

declarative clause	SVO(- <i>ũũy'</i> )
imperative	V- <i>õr</i>
interrogative (polar interrogative)	VS
interrogative (WH-question)	WH S V/ WH V S

Basic constituent order in Dâw declarative clauses is SVO as exemplified in (69). As discussed earlier, Dâw shows nominative-accusative alignment that is morphologically visible on O arguments through the oblique case marker (see example (71)) or the homophonous DOM marker (70).

- (69)    **S**        **V**        **O**  
           *ãr*      *paar*    *kapawari*            *x#see*  
           1SG    know    kapawari.creek      rapid  
           'I know the Kapawari rapids.'

(70) **S V O-DOM**  
*ãr paar naa' dâw xut-ũũy'*  
 1SG know DEM:prox person MASC-DOM  
 'I know this man.'

(71) **S V O O-OBL**  
*dâw xut não weed dâw tee-ũũy'*  
 person MASC feed food person child-OBL  
 'The man gives food to the child.'

Affirmative imperatives in Dâw are marked morphologically through the suffix *-õr* (72). In many cases, the addressed second-person subject is expressed overtly in a clause-initial position, a function providing an audible pause between subject and predicate (73). Martins (2004, p. 513) also provides examples where the subject appears after the verb with the imperative suffix, such as in (74). However, this detail was not verified in the data gathered for this project and thus requires further investigation. Additionally, (75) shows how Dâw optionally uses the first person plural hortative pronoun *mẽ*, which is generally interpreted as encouraging (cf. MARTINS, 2004, p. 353).

(72) *xũũ-õr*  
 descend-IMP  
 'Get down!'

(73) *mẽenh ãam, rãm-õr kaaw-ã'*  
 1SG.POSS wife go-IMP manioc.garden-FOC  
 'My wife, go to the manioc garden!'

(74) *rãm nũũg-õr*  
 go 2PL-IMP  
 'Go (you)!' [MARTINS, 2004, p. 513]

(75) *mẽ çom*  
 hort bath  
 'Let's bathe!'

The interrogative sentential mood is expressed through S and V inversion or a clause-initial WH-question particle. The subject-verb inversion is obligatory in polar interrogatives, as in (76), while content questions use a WH-question particle, as in (77) and (78). Martins (2004, p.553) claims that S-V order in Dâw WH-questions encodes emphaticness. Additionally, by observing (77) and (78), we can see that the constituent order can also be

interpreted as connected to tense and aspect variation since they seem to encode immediate future or prospective aspect, respectively.

- (76) *weed ãm?*  
eat 2SG  
'Are you eating?'
- (77) WH-question: VS ordering  
*rid pẽem dâw tee?*  
where sit person child  
'Where is the child sitting?'
- (78) WH-question: SV ordering  
*rid dâw tee pẽem?*  
where person child sit  
'Where is the child going to be sitting?'

There are many different negation strategies in Dâw, for example, clausal, privative, existential, and constituent negation. Clausal negation in Dâw is indicated through the suffix *-ẽr* on verbs, seen in (79). In the case of complex predicates with two lexical roots or a lexical and grammatical root (e.g. auxiliary), the negative suffix occurs on the rightmost element of the predicate, as illustrated in (80).<sup>10</sup>

- (79) *têen 'id nĩ-ẽr 'aa' pay*  
now 1PL live-NEG ANAPH like  
'Now, we don't live like that (like in the old days).'

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<sup>10</sup> As Obert, Storto and Assis (2018) show, the aspectual auxiliaries *xãd* and *dâr* have different inflectional properties when compared with other aspectual auxiliaries. Hence, the negative suffix can occur on the main verb or on the aspectual auxiliary, as (a) and (b) show. A formal explanation for this behavior is to assume that the verb and the auxiliary may have formed a complex head via head-movement of the verb to the auxiliary position. When the verb is inflected, we instead assume that no movement of the verb to aspect takes place. If this hypothesis is correct, the verb always forms a complex unit with *xãd* and *dâr* via head movement.

- |     |   |     |   |
|-----|---|-----|---|
| (a) | <i>tir wẽed-ẽr yũt</i><br>3SG eat-NEG PFV<br>'He did not eat' | (b) | <i>tir weed yũt-ẽr</i><br>3SG eat PFV-NEG<br>'He did not finish eating' |
|-----|---|-----|---|

- (80) *id nêe par-êr 'aa' pay*  
 1PL make know-NEG ANAPH like  
 ‘Now, we don’t know how to make it like that.’

Privative negation is indicated through the identic suffix on nouns, expressing the notion of ‘without X’ such as in (81).

- (81) *yêel-êr têen dâw nũuk nõo' bii xid*  
 money-NEG now person never give without.purpose  
 ‘Now, without money, the Dâw don’t give things without purpose.’

Dâw also presents negation of stative predication through *mêr* and *mãay*. While *mêr* expresses existential negation such as in (82), *mãay* negates the identity of a nominal constituent (‘X is not an X’) (83). Epps (to appear) confirms their status as predicative elements but opposes their ‘verbyness’ since they do not combine with other roots in complex predicates and do not receive verbal morphology<sup>11</sup>. In this corpus, *mêr* and *mãy* indeed never appeared in these environments, with exception of the counterfactual auxiliary *kon* as illustrated in (84).

- (82) *id-êej mêt*  
 1PL-BEN NEG.EXI  
 ‘There was nothing for us.’

- (83) *dâw mãy a-gâ'*  
 person not.be ANAPH-EMPH.PRON  
 ‘A human being is this (forest spirit) not!’

- (84) *'yãm mêt kon*  
 dog not.be CFT  
 ‘If this wouldn’t have been a dog...’

There are no negative indefinite pronouns in Dâw. Instead, Dâw uses an existential construction when possible, corroborating Kahrel’s (1996) typological prediction for languages without negative indefinite pronouns. This construction is seen in the answer to WH-questions with the negative existential (85) or a negated main verb (86).

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<sup>11</sup> One possible argument for identifying *mêr* and *mãy* as verbs stems from syntactic positioning.



- (88) [abɯg            tir       nɛ̃p                rãm    pɯɯd]# [xaay                rãm    yoow]  
 DISC.CONJ    3SG    dissappear    TEL    a.lot    forest                [go    PROG]  
 DISC.CONJ    3SG    dissappear    TEL    a.lot    forest                go.away  
 ‘Then he really disappeared in the forest and (he) went away.’

Martins (2004, pp. 588-595) also provides a semantically diverse set of clause-linking elements that occur in clause-final position. According to the author, the clause with connecting element follows the unmarked clauses, such as in (89). However, the presence of these clause-linking elements is not obligatory since an identical semantic relationship between the clauses can also be expressed pragmatically by the juxtaposition of the clauses, as in (90).

- (89) [abɯg                ‘aa’    xaaw    mɔ̃r] [xaaw-ẽr        nɔ̃r]  
 DISC.CONJ    ANAPH boil    RPT    boil-NEG    ADVERSATIVE  
 ‘Then, they say, that (termite mound) boiled but it wasn’t (actually) boiling.’

- (90) [ãr        wâay-ẽr                dũ’        waa    dâr-ũy’] [waa    ãay    dâr    sâr    mũnh-ũ]  
 1SG    see-NEG                also    old    PLZ-DOM    old FEM PLZ teach 1SG.OBL-FOC  
 ‘I also did not see the ancients but the old women taught me (about them).’

This corpus additionally includes clause coordination with the conjunctions *bɯg*<sup>13</sup> ‘and then’ and the derived *abɯg*, a fused form of the anaphoric pronoun ‘aa’ and *bɯg* which could be transcribed literally as ‘after this’. Clause coordination links two clauses with the function of relating temporally consecutive actions such as in (91). Syntactically, *bɯg* occurs in clause-initial position and expresses the more temporally advanced action.

- (91) [dâw    rãm    yoow    rãm    yoow] [**bɯg**    çêm    xɯɯ                beey    mɔ̃r]  
 person [go    PROG] [go    PROG] CONJ    night    descend                ITER    RPT  
 person go.away                go.away                CONJ    night    descend                ITER    RPT  
 ‘They say, the man went away, went away and then it dawned again.’

Subordination in Dâw is less understood than coordination. Whether a clause should be analyzed as coordination or subordination is often ambiguous due to the lack of morphology indicating finiteness or non-finiteness of verbs. One indicator of subordination is the presence of clause-final subordinating elements in the subordinated clause for relative clauses and adverbial clauses.

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<sup>13</sup> The conjunction *bɯg* seems to derive from the homophonous spatial adverb *bɯg* ‘there’ and may be used metaphorically in order to refer to a time frame that follows the action expressed by the first main clause of the coordinated construction.

For relative clauses, syntactic dependency in the main clause is marked through the subordinators *pay* ‘that/who’ and *uy* which Martins (2004, p. 596) interprets as demonstrative pronominal elements. Both subordinators are likely to have grammaticalized from homophonous interrogative pronouns. In the case of *pay*, there is a clear correspondence to ‘What?’ while for *uy* no related form could be found in Dâw. However, Epps (2008, p. 788) shows the interrogative pronoun *ʔũy* ‘Whom?’ for Hup, which indicates that *uy* might once have been an interrogative pronoun in Dâw also. Relativization of both core and non-core arguments is possible in Dâw. Where *pay* refers to S and O arguments as in (92) and (93), *uy* usually relativizes O arguments as in example (94). Similar to Dâw’s sister language Hup (see EPPS, forthcoming), relative clauses in Dâw can be headless and follow a gapping strategy, i.e., the relativized NP does not occur in the relative clause. When externally headed, they function as modifiers of a noun and occur in modifier position to the left of the head noun, as illustrated in (94).

(92) *rid xâad-ěr [nũk war dâr weed pay]*  
 3PL look.for-NEG ancient old PLZ comer REL  
 ‘They are not looking for (the things) the ancestors used to eat.’

(93) *kas pũd yêd [laak âg pay-a’]*  
 be.ugly a.lot INTS cachaça drink REL-FOC  
 ‘Who drinks cachaça, is really bad.’

(94) *tir âg xâjâa [mẽneh nêe uy] suuk*  
 3SG drink enter 1SG.POSS make REL manioc.meal  
 ‘He entered drinking my (soaked) manioc meal that I made.’

Cleft sentences in Dâw are equative clauses resulting from the juxtaposition of a subject and a clause without overtly expressing a copula. In contrast to relative clauses, they do not provide a clause-final subordinating element but instead make use of the anaphoric pronoun ‘aa’ to establish a reference, as illustrated in (95) and (96).

(95) *mẽneh maam’ [‘aa’ dâw winh’ũ tii]*  
 1.SG.POSS brother ANAPH person appear AFFIRM  
 ‘My brother is the one that appears to be a person (but it was a jaguar).’

(96) *xuup [Lucimar ‘aa’ nãa a-gâ’]*  
 be.true Lucimar ANAPH say ANAPH-EMPH.DEM  
 ‘This what Lucimar is saying, is the truth.’

Complementation is expressed using the juxtaposition of a main clause and a dependent clause that functions as an object of the main clause. However, there is no morphological marking identifying syntactic dependency between the main and dependent clause. Consequently, it is not clear whether these structures are best analyzed as subordinate or coordinate constructions (compare (97) and (98)).

(97) [ãr tuk]                      [ãm weed rũu dep]  
 1SG want                      2SG eat game meat  
 'I want that you to eat meat.'

(98) [ãr par]                      [ãm yũt                      'yãm x#']  
 1SG know                      2SG kill                      jaguar  
 'I know that you killed the jaguar.'

Dâw also has a diverse set of adverbial subordinators that occur in clause-final position in dependent clauses and indicate temporality (simultaneity/sequentiality), condition, purpose (99), and location (100) (see MARTINS, 2004, p. 495). Adverbial clauses in Dâw are adjuncts since they can be omitted or substituted by a single word, and they may modify either the verbal complex or the entire main clause. Dâw constituent order is flexible, especially for adjuncts.

(99) Adverbial clause: purpose  
 [dâw                      nãam tir yar                      yâa mâr suub pej]  
 person                      corpse 3SG bring                      return RPT Suub close.to  
  
 [Suub weed                      nã']  
 Suub eat                      SUB  
 'He returned, bringing the dead body (close) to Suub so that Suub could eat.'

(100) Adverbial clause: locative  
 [dâw                      bax                      rid] [nũux                      nĩ                      mãy]  
 dâw.people emerge                      SUB curupira                      EXI be.intensive  
 'Where the Dâw people emerged, there were many curupiras (forest spirits).'

There are adverbial constructions without any subordinating element, as illustrated in (101). The complex construction consists of a simple juxtaposition of the clauses. The purposive reading of this complex clause derives from the context. However, in the case of coordination, Dâw speakers usually drop the subject in order to indicate coordination (102), which is not common in subordinate clauses without a subordinating element.

(101) [nã' waat id rãm xaay] [id suuk]  
 other day 1PL go forest 1PL hunt  
 'The other day, we went to the forest (in order) to hunt.'

(102) [nã' waat id rãm xaay] [suuk]  
 other day 1PL go forest hunt  
 'The other day we went to the forest and hunted.'

In Dâw, directly quoted speech constructions have a quoted main clause associated with another main clause. Neither clause is morphologically marked as dependent on the other. The quotative framer is the verbum dicendi *nãa* 'say/speak' in combination with the reported evidential *mãr*, neither of which is obligatory before the direct quote (compare (103) and (104)) but is obligatory after the quote. Additionally, Dâw speakers recognize the beginning and the end of a quote by pauses and, in many cases, changes in the speaker's voice to imitate the quoted speaker. Direct quotes are often arguments of the transitive/ditransitive verb *nãa*, and therefore such quotes frequently postpose (103) or prepose (104) the predicate – both possible positions for direct objects/subordinate clauses.

(103) *abug tir yãa mãr bug tir nãa mãr*  
 DISC.CONJ 3SG return RPT CONJ 3SG say RPT  
 "pôos pôol lôr lôr lôr" *nãa ka' mãr*  
 ideo ideo ideo ideo ideo say lie.in.hammock RPT  
*yeg ked*  
 hammock in  
 'Then he came back, they say, and he said "Pôos, pôos, lôr, lôr, lôr" (voice of the jaguar) lying in a hammock, they say.'

(104) "beey 'ô-ôr" *nãa mãr*  
 again laugh-IMP say RPT  
 "'Laugh again!" she said.'

### 2.3.7 Information structure and discourse

This section describes information packaging and verbal art in Dâw discourse. As previously discussed, constituent order in Dâw is sensitive to pragmatic variation associated with topic and focus. According to Martins (2004, pp. 456-457), focus is indicated through the bound morpheme *-V'* which can be attached to open classes (noun, adverbs, verbs) and closed classes

(pronouns, conjunctions). *Dâw* indicates focus on both core and non-core arguments. The constituent occurs in clause-final position for focused subjects (105) while focused non-subject arguments are fronted (106). In contrast, locative adjuncts in discourse tend to occur in clause-initial position when indicating new information and tend to occur without the focus indicating morpheme, such as in (107).

(105) *naa'*                    *mʉg*    *âg*                    ***rid-i'***  
 DEM:prox            here    drink                    3PL-FOC  
 'They (the white men) drank right here.'

(106) ***woor-ũũy'***                    *mĩnõr*    *rid*                    *kĩnh*                    *look*    *dâr*                    *mãr*  
 tukano.person-DOM    arm    3PL    shoot.arrow    pierce    AGTV    EVID  
 'They say, they pierced the arm of the Tukano (person) by shooting with arrow'

(107) ***tuu***                    *tir*                    *pẽem*  
 ground                    3SG                    sit  
 'On the ground, he is sitting'

The initial clause slot in *Dâw* is dedicated to anaphoric reference, frequently occupied by the anaphoric pronoun '*aa*' and the discursive conjunction *abʉg* 'and then/after this' to establish anaphoric, temporally-consecutive events.

Repetition is significant in *Dâw* discourse, which includes parallelisms crossing stanza boundaries and Tail-Head-Linkage (henceforth THL) functioning as inter-sentential bridges. These rhetorical devices help create the plot and establish an emphasis on the main events. In some cases, the repetition of the adverbial clause is accompanied by a perceptible pause, which is used as an opportunity to think about the continuation of the story. THL occurs when clauses are summarized and repeated at the beginning of the following sentence. In (108), the postposed locative adverbial clause (tail-clause) introduces new spatial information to the main clause (head-clause). In (109), the repeated locative adverbial clause (head-clause) establishes anaphoric reference to the anterior clause while the postposed main-clause (tail-clause) introduces new information.

(108) *primêl*                    *nir*                    *xoot*    *něb*                    *bug*  
 first                    [be.located                    place]    Inebo.creek    over.there  
 first                    village                    Inebo.creek    over.there



Dâw discourse employs a variety of emphatic strategies of category and sentential types, such as the stative verb *mãay* ‘be intensive’ (111), the quantifier *reew* ‘a lot’ (112), the intensifier *yêd* (113), and the affirmative particle *tii* (95). These morphemes differ from each other based on their syntactic positioning and the constituents they refer to, but they are all consistently translated as ‘really’ or ‘a lot’. The emphatic demonstrative pronoun *agâ*’ induces a similar reading since it emphasizes a referent, subject, or object that was recently introduced in the narrative (111).

(111) *tâaw*            ***mãay***            *mãr*    *agâ*  
 be.mad            be.intensive    RPT    ANAPH-EMPH.DEM  
 ‘They say, that one is really mad.’

(112) ***reew*** *tum*    'ee            *sun*  
 many eye    narrow            COL  
 ‘There were many Yanomami (narrow eyes).’

(113) *abug*            *tir*    *weed*    *rũ*'            *yêd*    *tir*    *yum-êd*  
 DISC.CONJ    3SG    eat    UNIV.QUANT    INTS    3SG    raw-ESP  
 ‘And then, he really ate everything raw.’

Emphatic discourse in Dâw is often accompanied by prosodic features such as sentential stress on the emphasized elements, which is frequently articulated through audible vowel lengthening and laryngealized phonation.

Finally, Dâw verbal art is marked by the use of ideophones and direct quotes with changing intonation in order to imitate the quoted speaker. According to elder Dâw speakers, “the one’s that know how to speak like the others, speak well,’ indicating that the ability to imitate voices is necessary to be considered a good storyteller.

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### **3 Non-verbal resources expressing space**

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### 3 Non-verbal resources expressing space

As shown in the Introduction, spatial notions can be found in several parts of speech and distributed throughout the clause. To begin with, this chapter examines nominal resources encoding space, since these were considered the most common source for encoding spatial relations. This chapter contains four sections addressing the principal non-verbal resources responsible for the expression of spatial notions in Dâw. I begin with the system of spatial postpositions, describing their semantics and selective properties, and subsequently introduce the locative marker *rid*. Section 3.3 discusses demonstrative determiners and demonstrative adverbs and their role in spatial discourse. Finally, I present the inventory of further spatial adverbs in Dâw.

#### 3.1 The system of spatial postpositions in Dâw

Adpositions are considered one of the main grammatical resources to encode space. The concepts of *in*, *under*, *on* etc. according to Piaget (1956) are directly encoded in closed classes such as adpositions in order to reflect language specific projections of universal semantic notions. Jackendoff & Landau (1993, p. 223) conclude therefore that a comprehensive idea of spatial relations expressed in languages can be revealed by focusing only on spatial adpositions. Yet, we will see in the following chapters that Dâw is a language that encodes spatial information not just with adpositions but also with locative verbs and multi-verb constructions. An observation of adpositions alone would be thus not sufficient.

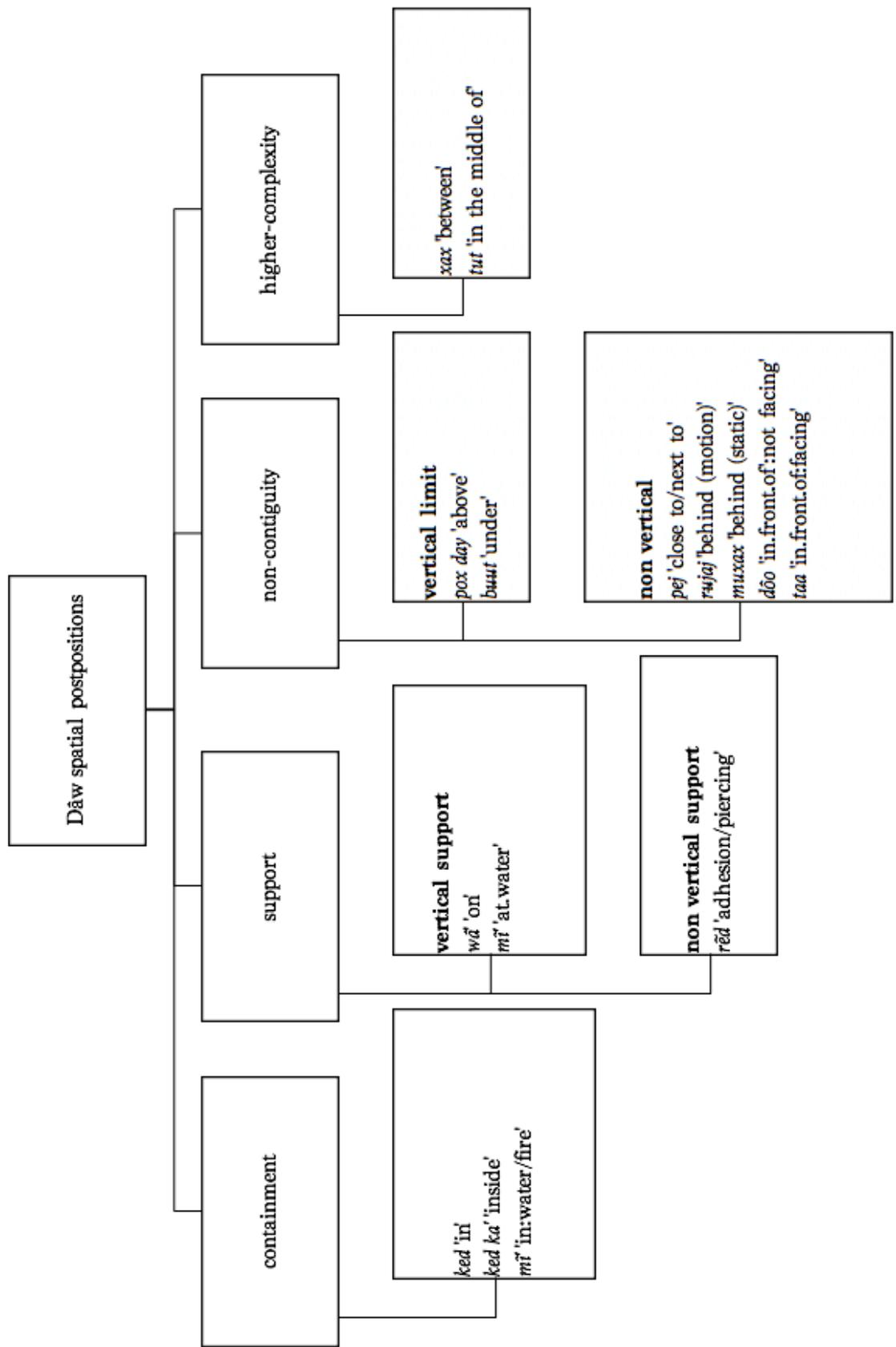
Nevertheless, the system of postpositions in Dâw is interesting, since it exemplifies how languages differ in the distinctions they make with respect to topological meanings. For example, the concept of *being in a house* is represented as *being under a house* in Dâw. However, Levinson (2004) predicts cross-linguistic tendencies of spatial scenes that can be subsumed under the notions Attachment, Superadjacency, Subadjacency, Full Containment, and Proximity. In order to classify spatial postpositions in Dâw, these were primarily elicited using Bowerman & Pederson's (1992) TPRS elicitation sessions, as well as with the adapted Photo-Elicitation (PE) task; elicited forms were later verified in discourse.

In accordance with Dâw's linguistic profile (that is, predominantly head-final) the language shows postpositions, which I define as functional categories in the syntax according to Saint-Dizier (2006, p. 3). They are heads of postpositional phrases requiring a noun phrase.

Furthermore, this lexical category imposes selection on a categorical and semantic level. Zwarts (2005, p. 690) does not consider them to be lexical items due to their functional character of linking constituents, although the author remarks that adpositions have referential content as they refer to an element of spatio-temporal organization. They resemble other predicative categories in the fact that they show type-restrictions on their arguments and have semantic content. However, they differ from other open-class categories as they usually do not show any morphology (SAINT-DIZIER, 2006, p. 3).

For Dâw, postpositions have already been described by Martins (2004) who divided them in *classifying*, *non-classifying* and *directional* postpositions. The author (2004, p. 420) considers them as classifying since they select Ground-nominals with respect to inherent properties. If a Dâw speaker refers to a Figure that is located in water, for example, *mĩ* ‘in water’ will be used instead of *ked* ‘in’. Both postpositions refer to containment, but the argument of *mĩ* ‘in water’ needs to be a noun related to water (e.g., a river), whereas *ked* ‘inside’ refers to a containment situation of any other container object. In contrast, *non-classifying* postpositions refer to the position that a Figure referent occupies in space, independent from the inherent characteristics of the the Ground nominal (MARTINS, 2004, p. 426). Finally, the author (ibid., p. 431) mentions *rid* as directional postposition with both allative and ablative semantics.

The inventory of spatial postpositions proposed by Martins (2004) could be verified in my data. However, for this work I follow Meira’s (2006, p. 335) suggestion to classify adpositions with respect to semantic categories like *containment*, *support*, *non-contiguity* and *higher complexity*. This classification is useful in order to understand the configurational setting a certain postposition describes. The following semantic map presents the inventory of Dâw postpositions divided into the semantic categories. The following subsections describe the semantic and selective properties of the postpositions of each semantic group and examine possible interactions with locative verbs.



### 3.1.1 Containment postpositions: *ked*, *ked-ka'* and *mĩ*'

Dâw presents three postpositions used to describe the location of a Figure referent in container spaces. They differ from each other for selecting their arguments with respect to specific physical properties of the Ground. Ground nominals that appeared with both *ked* and *ked-ka'* are container objects whose lateral boundaries are closed, such as canoes, baskets, or boxes, as in examples (114) - (116).

(114) *be'eg nĩ bo ked*  
 fruit be.located bowl in  
 'The fruit is in the bowl.'

(115) *weew nĩ bee may ked*  
 owl be.located tree hole in  
 'The owl is in the hole.'

(116) *naa' bood ked id nêe pñn suuk*  
 DEM:prox oven in 1PL make IPFV flour  
 'In this oven we make flour.'

At the same time, Ground nominals with the same inherent physical properties were found as arguments of *ked ka'*. This postposition consists in the postposition *ked* 'in' and the posture verb *ka'* 'lying in hammock'. From a historical perspective, *ked ka'* may be a result of postposition incorporation, which is found marginally in Dâw. However, postposition incorporation generally generates verbs in Dâw, as in the case of *wâ' kât* 'step' (*wâ'* 'on' + *kât* 'stand'), and not postpositions. The grammaticalization path between a possible verb formed through postposition incorporation and a postposition remains unclear. The presence of the posture verb *ka'* leads to assumptions of expressing information on the Figure's position with respect to the Ground, i.e. be inside of X lying. Nevertheless, this semantic difference could not be confirmed as a clear-cut distinctive criterion since both forms are interchangeable, as illustrated in (117) and (118).

(117) *lakaar tũp nĩ bãy ked-ka'*  
 chicken egg be.located basket in-lying.in.hammock  
 chicken egg be.located basket inside  
 'The chicken egg is inside the basket.'

(118) *lakaar tũp nĩ bãy ked*  
 chicken egg be.located basket in  
 'The chicken egg is in the basket.'

However, in examples where the Figure’s posture is salient, Dâw speakers opted for *ked* when a person is sitting in the canoe (119), for example, and for *ked-ka’* when a person was lying in a canoe (120). The choice seems additionally to be triggered by the locative verb. Where the locative copular verb *nĩ* does not provide information about the Figure’s posture or position, *yêt* already indicates the Figure’s position with respect to the Ground.

- (119) *dâw*            *nĩ*            *xoo*    ***ked***  
 person            be.located    canoa    in  
 ‘The man is in the canoe.’
- (120) *dâw*            *yêt*    *xoo*    ***ked ka’***  
 person            lie        canoa [in    lying.in.hammock]  
 person            lie        canoa    inside  
 ‘The man lies inside the canoe.’

The postposition *mĩ’* ‘in liquid’ selects Ground nominals that refer to fire (121) or water (122) and (123)). According to Martins (2004, p. 420), these containment postpositions may be analyzed as traces of a noun classifier system that diachronically grammaticalized into postpositions. However, there is no evidence for the existence of a noun classifier system in Dâw in both diachronic and synchronic perspective (see also Epps (2007) for a study on this topic for Hup). The closest strategy to noun classification is noun compounding and inalienable possession, which would be a more plausible path for the development of this postposition.

- (121) *abug*            *tir*        *bâa*    *yâa*    *mâr*    *ool*    *borõo*    ***mĩ’***  
 DISC.CONJ    3SG    spill    return    RPT    oil    fire    in.fire  
 ‘Then he spilled oil in the fire.’
- (122) *las*        *nĩ*            *nâax*    ***mĩ’***  
 boat    be.located    water    in.liquid  
 ‘The boat is in the water.’
- (123) *id*        *bax*            *mĩg*    *nâax*    *pôog*    ***mĩ’***  
 IPL    emerge        here    water    big    in.liquid  
 ‘We emerged here in this river.’

With respect to Figure and Ground configuration, examples (121) - (123) show that the Figure referent is immersed in the Ground (water or fire). However, *mĩ’* also selects toponyms, i.e. names of rivers, as its arguments, as in (124). In these cases, the relation between Figure and

Ground is not of containment but being located at a waterway and is therefore glossed as ‘at water’.

(124) *ween mĩ’ daad mĩ’ yaal mĩ’*  
 ween.river at.water marié.river at.water íá.river at.water

*xôo bũuk dâw bâas*  
 canoe bark dâw.people atravessar

‘They crossed the Ween river, the Marié river, the Íá river in a canoe made out of bark.’

[Lit.: ‘At the Ween river, at the Marié river, at the Íá river they crossed with a canoe made out of bark.’]

### 3.1.2 Support postpositions: *rẽd* and *wâ’*

The relation of support in Dâw can be found expressed by the postpositions *rẽd* ‘at’ and *wâ’* ‘on’. Their usage differs with respect to contact level and orientation of the Ground. Where *rẽd* describes configurations in which the Figure is in partial contact with the Ground, similar to ‘be attached to something’ (125), *wâ’* applies when a Figure referent is located on a horizontal support below it, as illustrated in (126).

(125) *xop dâk puleg rẽd*  
 cup be.attached nail at  
 ‘The cup is hanging on the nail.’

(126) *xig wôob mej wâ’*  
 cup be.on table on  
 ‘The cup is on the table.’

The postposition *rẽd* is related to the homophonous verb ‘to possess’ and the instrumental postposition, as illustrated in (127). This is a possible reason why *rẽd* in its spatial use functions in less specific configurations between Figure and Ground, such as situations of attachment as in (128) and (129).

(127) *nũkedêe’ ’waar dâr suuk çag rẽd*  
 formerly ancestor PLZ hunt arrow INS  
 ‘In the old days, the ancestors hunted with arrows.’

(128) *çop dâk bee xâk rêd*  
 fly be.attached tree trunk at  
 ‘The fly is on the trunk.’

(129) *pâm nîi bee n#d rêd*  
 mushroom be.located tree stump at  
 ‘The mushrooms are at the stump.’

It is noteworthy, that *rêd* was used in some spatial scenes describing a recipient relation between Figure and Ground. These relations included, for example, the lampshade on its stand, a headband on a person’s head, and also a fruit pierced with an arrow (130). In these cases, the Ground nominal fulfills the function of a possessor. Especially in this example, the notion of being pierced derives only from the verb *lok* ‘to pierce’ while the postpositional phrase describes literally that the fruit is “having/possessing” the arrow.

(130) *sok lok be’eg rêd*  
 arrow pierce fruit at  
 ‘The arrow is pierced in the fruit.’

The support postposition *wâ’*, in contrast, clearly describes the spatial configuration of a Figure being located on a horizontally oriented surface, as illustrated in (131) and (132).

(131) *sâan nîi tapete wâ’*  
 cat be.located carpet on  
 ‘The cat is on the carpet.’

(132) *waan pis wôob bāagn’ wâ’*  
 knife small be.on bench on  
 ‘The small knife is on the bench.’

In large scale spatial scenes, *wâ’* applies for Figure referents located in treeless environments such as communities, manioc gardens or soccer fields. Hence, in these spatial scenes the arguments of *wâ’* are comprised of landscape terms, such as in (133) and (134), or place names (135).

(133) *dâw nir xoot wâ’ tir ka’ xâd*  
 Dâw.people [be.located place] on 3SG lie.in.hammock DUR  
 ‘At the Dâw people’s place he kept lying in hammock.’

- (134) *tir mē' rũuy 'aa' rãm-ê' kaaw wâ'*  
 3SG mother together ANAPH go-PST manioc.garden on  
 'Together with his mother he went to the manioc garden.'
- (135) *taaw wâ' daad tēen rid-i'*  
 São.Gabriel.da.Cachoeira on study now 3PL-FOC  
 'Now they are studying in São Gabriel da Cachoeira.'

The postposition *wâ'* also functions to indicate a perlocative notion in motion events, i.e. to expresses motion *through*, *across* or *along* a certain Ground as illustrated in (136) and (137). This reading surfaces only when the predicate is comprised of a motion verb.

- (136) *João rãm xôo comunidade wâ'*  
 João go circulate village through  
 'João walks through the village.'
- (137) *nâax pôog xâd xaam wâ'*  
 water be.big pass soccer.field through  
 'The river passes through the soccer field.'

### 3.1.3 Non-contiguity postpositions: *pox-day*, *bũut*, *pej*, *rũjaj*, *muxax*, *dôo* and *taa*

Non-contiguity postpositions refer to spatial situations in which the Figure and the Ground referent are *not* in a contiguous relation, i.e. the Figure and Ground are separated in space. Nevertheless, they describe their spatial arrangement. In a sentence like '*The lamp is hanging over the table*', for example, we do know that the lamp is located above the table without being in contact with it. Recalling the definition of Frames of Reference (FOR) from the previous chapter, it can be anticipated that non-contiguity postpositions are productive grammatical and lexical resources for the encoding of FOR information in Dâw.

Non-contiguity postpositions in Dâw are *pox day* 'above'; *bũut* 'under'; *pej* 'next to'; *rũjaj* 'behind static', *muxax* 'behind motion'; *dôo* 'in front of (facing)'; and *taa* 'in front of (not facing)'. Some of them (*pox day*; *rũjaj*; *muxax*; *dôo*; and *taa*) were analyzed as *spatial localizers* by Martins (2004, p. 450); she understands these as a closed class of nouns and differentiates them from postpositions for distributional reasons. However, to my understanding, they may be best analyzed as postpositions according to the necessity of requiring arguments, i.e. Ground nominals, in order to form postpositional phrases.

The complex postposition *pox day* ‘above’ consists of the spatial adverb *pox* ‘high’ or ‘sky’ and the comparative suffix *day* (MARTINS, 2004, p. 450). This leads to a comparative construction in which the Figure functions as the compare NP and the Ground as the standard NP as illustrated in (138) and (139). In chapter 4, I show that these constructions are favored for the expression of the absolute FOR.

- (138) *buguu nĩ paas pox day*  
 cloud be.located stone [high COMP]  
 cloud be.located stone above  
 ‘The cloud is above the mountain.’  
 Lit.: ‘The cloud is higher than the mountain.’

- (139) *lampel pew nĩ tir pox day*  
 lamp hat be.located 3SG [high COMP]  
 lamp hat be.located 3SG above  
 ‘The lampshade is above it (the stand).’  
 Lit.: ‘The lampshade is higher than it (the stand).’

The postposition *bũũt* ‘under’ describes inverse situations, since it refers to a Figure referent that is located below a certain Ground object without being in physical contact with it, as in (140) and (141).

- (140) *topsaaw yêt top bũũt*  
 broom lie house under  
 ‘The broom is lying under the house.’

- (141) *abũg 'yãm xũ' yêt mār rid bũũt*  
 DISC.CONJ jaguar lie RPT 3SG under  
 ‘The jaguar was lying under them.’

Another interesting use of *bũũt* is to describe the concept of being in a house, as in (142) where one would expect the use of *ked* ‘inside’. However, Dâw speakers prefer the usage of *bũũt*, which literally means that a Figure referent is under the house, leading to ambiguities between examples (140) and (142). A possible explanation for this usage may be found in the architecture of traditional Dâw houses, which were originally built without walls and consisted therefore of a roof covered with leaves. This has probably motivated the usage of literally ‘being under a roof’ as being ‘inside an enclosed space’ instead.

- (142) *bɯg tir ãa dâw top war bɯut mâr*  
 there 3SG sleep dâw house old under RPT  
 ‘They say that he slept in the old house of the Dâw.’  
 Lit.: ‘They say that he slept under the old house of the Dâw.’

Another non-contiguity postposition is *pej*, expressing proximity in the sense of being ‘next to something’. When used in Basic Locatives Constructions (BLC) with the locative copula or stative locative verbs, it establishes a relation of proximity between Figure and Ground without connoting physical contact, as illustrated in (143). Similarly, when combined with motion verbs, *pej* indicates a movement towards a Goal close to the Ground, as in (144).

- (143) *dâw xut nĩ borõo pej*  
 person MASC be.located fire next.to  
 ‘The boy is next to the fire.’

- (144) *abɯg rid yâa ‘aa’ pej*  
 DISC.CONJ 3SG arrive ANAPH next.to  
 ‘Then they arrived next to her.’

Furthermore, *pej* is frequently used in contexts where we would expect the usage of viewer-related terms such as left and right. In spatial scenes in which a person was positioned to the ‘left’ or to the ‘right’ side with respect to the viewer, answers always involved Ground-encoding through a postpositional phrase headed by *pej*. This may be motivated by the fact that Dâw lacks terms like ‘left’ and ‘right’ that would be able to localize a Figure to Ground based on the projection of the viewer on the spatial situation.

The postpositions *ɾɯjaj* and *muxax* express the notion of ‘behind’. According to Martins (2004, p. 452), *ɾɯjaj* is composed of the comitative postposition *ɾuuy* ‘with’ and the augmentative suffix *-aj* ‘more’ having the semantics of ‘more behind’. The postposition *muxax*, in contrast, was described by the author as ‘behind’ or ‘at the back of’ as it derives from *dâw muxax* - the term for ‘back’.

(145) 'yãm rãm ka'<sup>14</sup> tir dee **rujaj**  
 dog [go be.last.in.row] 3SG owner behind.motion  
 dog walk.last 3SG owner behind.motion  
 'The dog walks behind his owner.'

(146) \* 'yãm rãm ka' tir dee **muxáx**  
 dog [go be.last.in.row] 3SG owner behind  
 dog walk.last 3SG owner behind

(147) dâw ãay nĩ dâw xut **muxax**  
 person FEM be.located person MASC behind  
 'The woman is behind the man.'

At first sight both postpositions describe similar spatial arrangements, as examples (145) and (147) show. Yet, by comparing (145) and (146) we see that these postpositions are not interchangeable, since their usage is conditioned by the type of locative verb that occurs in the predicate. In the case of motion events, the Ground nominal is headed by the postposition *rujaj* (compare (148) and (149)), while in static spatial scenes *muxax* functions as the head of the postpositional phrase, as in (150) and (151).

(148) dâw ãay rãm ka' dâw xut **rujaj**  
 person FEM [go be.last.in.row] person MASC behind.motion  
 person FEM walk.last person MASC behind.motion  
 'The woman walks behind the man.'

(149) dâw ãay 'ox dâw xut **rujaj**  
 person FEM run person MASC behind.motion  
 'The woman runs behind the man.'

(150) dâw ãay nĩ dâw xut **muxáx**  
 person FEM be.located person MASC behind  
 'The woman is behind the man.'

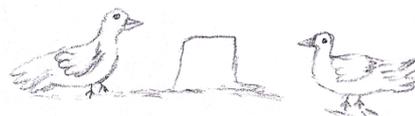
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<sup>14</sup> The morpheme *ka'* is difficult to gloss, since there is no consensus about its function in the literature. In its verbal function, *ka'* carries positional semantics expressing 'lying in hammock', which in example (32) cannot be the case for pragmatic reasons. In post-verbal position, this morpheme was described by Martins (2004, p. 302) as one of three progressive aspectual morphemes. Yet, Carvalho (2016, p. 137) claims that *ka'* has no aspectual function, since it only adds the notion that an action is done while lying in hammock. Nonetheless, the author only shows examples of *ka'* in postverbal position with verbs other than verbs of motion. To my understanding, Dâw speakers used the combination of *rãm ka'* in order to refer to a Figure that is the last person walking in a line of persons on a path. A possible translation would be 'walk as the last', however a possible historical explanation must be left for future work.

- (151) *dâw* *ãay* *pẽem* *dâw* *xut* ***muxáx***  
 person FEM sit person MASC behind  
 ‘The woman sits behind the man.’

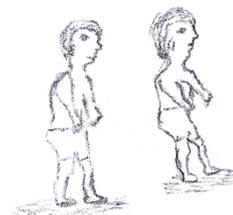
Finally, both *dôo* and *taa* express the notion of ‘in front of’. They differ with respect whether the Figure and Ground are facing each other or not. As the drawing<sup>15</sup> of example (152) shows, *taa* indicates that the Figure and Ground are facing each other. In contrast, *dôo* is used to describe spatial arrangements in which two referents are in front of each other without facing as illustrated in (153).

- (152) *wěr* *nĩ* *tir*  
 bird be.located 3SG



- maam* ***taa***  
 comrade in.front.of:facing  
 ‘The bird is in front of his comrade (facing it).’

- (153) *dâw* *xut* *rãm* *tir*  
 person MASC go 3SG



- maam* ***dôo***  
 comrade in.front.of:not.facing  
 ‘The man is walking in in front of his comrade.’

The drawings reveal that both *taa* and *dôo* are used only in the cases in which both the Figure and Ground (or at least the Ground) include a canonical front/back axis. If this is not the case, such as for bonfires or trees, *pej* is used instead.

### 3.1.4 Higher complexity postposition: *xax* and *tuut*

Higher complexity adpositions can involve complex Grounds, such as in spatial situations like ‘*Berlin is between Hamburg and Munich*’. *Dâw* provides two spatial postpositions for the description of similar scenes: *xax* ‘between’ and *tuut* ‘in the middle of’. Where *xax* applies in non-contiguous spatial scenes, *tut* indicates contiguity between Figure and Ground. The prototypical use of *xax* is thus to locate a Figure between of two or more Grounds, as in (154)

<sup>15</sup> Both drawings were drawn by Pedro Morães de Sousa (2016) who drew prototypical spatial situations for each spatial postposition.

and (155). It is noteworthy that *xax* implies the notion of plurality of its Ground-denoting arguments, since plural marking is optional in Dâw.

(154) *yãm yēt bee dur xax*  
 dog lie tree piece between  
 ‘The dog is lying between the logs.’

(155) *comunidade nâax xax*  
 village water between  
 ‘The village is between two rivers.’

*Xax* also appears in motion events indicating motion along or through the Ground referents as illustrated in (156).

(156) *bol lâb bee xax*  
 ball roll tree between  
 ‘The ball rolls between the trees.’

Furthermore, *xax* selects as its Ground-nominal landscape terms which denote specific parts of the forest showing a certain vegetation. For example, the landscape term for ‘caatinga’, or in regional Portuguese *floresta de pau* (Lit.: ‘forest of sticks’), is typically selected by *xax*, as illustrated in (157). This makes reference to the profile of its vegetation, which is defined by a density of small and thin trees. In other words, being located in a caatinga forest means that a Figure is located between trees as opposed to to plantations or communities, which are usually treeless environments.

(157) *dâw tee rũ’ rĕk wâk xax*  
 person children play like caatinga between  
 ‘The children like to play in the caatinga.’

The postposition *tut* is used in spatial scenes in which a Figure is located in the in middle of a line (158) or a volume (159) representing the Ground. These spatial scenes differ from the ones described for *xax* in that the Figure’s location is specified with respect to the distance between it and each element of the Ground-nominal. For example in (159), both riverbanks serve as a reference point in order locate an object that can be found right in the middle between the riverbanks. This usage has intrinsic interpretations since it refers to an inherent property of the river, that is its half-measure.

(158) *Marcia pẽem xoo tuut*  
 Marcia sit canoe in.the.middle.of  
 ‘Marcia sits in the middle of the canoe.’

(159) *xoo nĩ nãax pôog tuut*  
 canoe be.located [water big] in.the.middle.of  
 canoe be.located river in.the.middle.of  
 ‘The canoe is in the middle of the river.’

### 3.2 Locative marker *rid*

In motion events, the Ground is commonly encoded through the postposition<sup>16</sup> *rid* which indicates the notions of Goal (160) or Source (161) in Dâw. On the other hand, it functions in static spatial scenes, as illustrated in (162). According to its three-fold function of marking Source, Goal, and location, I describe *rid* as a locative marker in Dâw.

(160) Goal  
*abug rid rãm yoow mâr pox rid*  
 DISC.CONJ 3PL [go prog] RPT up LOC  
 DISC.CONJ 3PL go.away RPT up LOC  
 ‘Then they were going away upwards.’

(161) Source  
*João nẽed dôo’ top rid*  
 João come AUX:source house LOC  
 ‘João is coming from the house.’

(162) Location  
*Maria nĩ nũ’ mãy nĩr xoot rid*  
 Maria be.located other [be.located place] LOC  
 Maria be.located other community LOC  
 ‘Maria is in another community.’

---

<sup>16</sup> I do not consider *rid* to be a locative case morpheme, since it does not mark core arguments but peripheral arguments. Furthermore, *rid* is more similar to adpositions as it is a non-inflectional dependency-marking particle, whereas case affixes are considered to be inflectional dependency markers (ZWART, 2005, p. 690).

These three different functions are implied by the semantics of the locative verb (or verbs, in the case of complex predicates). As the following three structures show, *rid* indicates Source or Goal-oriented Grounds when the predicate consists in a motion verb, while it indicates location with static locative verbs (including posture and positional verbs). It can be anticipated that Source-orientation in motion events is additionally indicated by the post-verbal auxiliary *dôo* that will be discussed in section 6.4.

<i>Motion – Goal-oriented:</i>	$NP_{\text{Figure}} + VP_{\text{motion verb}} + PP_{\text{Ground}} + rid$
<i>Motion – Source-oriented:</i>	$NP_{\text{Figure}} + VP_{\text{motion verb}} + dôo + PP_{\text{Ground}} + rid$
<i>Location:</i>	$NP_{\text{Figure}} + VP_{\text{stative locative verb}} + PP_{\text{Ground}} + rid$

In its directional function, *rid* can take NPs (163), adverbs (164), or postpositional phrases as its arguments (165). When postposed to a postposition, *rid* indicates trans- or cis-locative movement with respect to the Ground that is represented in the PostP. Hence, example (54) reports a motion event that occurred relative to a complex Ground, ‘next to the fire’.

- (163) *kaa tôog ‘aa’ çem wɨɨd*  
 Oscar daughter ANAPH yesterday arrive  
  
 ‘aa’ *nēed dôo’ baal’ rid*  
 ANAPH come AUX:source Manaus LOC  
 ‘Oscar’s daughter arrived yesterday. She came from Manaus.’
- (164) *Karol nēed ‘mũg rid*  
 Karol come here LOC  
 ‘Karol is coming here.’
- (165) *bɨg pãa’ nēed borõo pej rid*  
 there grandmother come fire next.to LOC  
 ‘There the grandmother came close to the fire.’

*Rid* is obligatory in Ground-denoting locative adjuncts in motion events, which could not be observed for static spatial relations. The question then is to verify in which conditions a locative adjunct in static spatial scenes is headed by *rid* and when not? In earlier stages of this

work, *rid* was understood to mark locations invisible to the speaker, since frequent arguments of *rid* are both landscape terms and place names, as illustrated in (166) - (168).

(166) *primeiro*      *dâw*    *nĩ*      *ta-bʉg*                      *xaay*    ***rid***  
 first                      person live      DEM:dist-there                      forest    LOC  
 ‘First the Dâw people lived there in the forest.’

(167) *ãr*      *nãsêel*                      *tiid*                      ***daad***                      ***rid***  
 1SG    be.born                      to.that.place    Marié.river                      LOC  
 ‘I was born in that direction at the Marié river.’

(168) ***wêen***                      ***rid***      *bax*                      *dâw-â'*  
 Wêni.river      LOC    emerge                      dâw-FOC  
 ‘The Dâw emerged at the Wêni river.’

In other words, locative adjuncts headed by *rid* in static spatial scenes provide descriptions of large scale spatial scenes that differ from tangible table-top space scenes, which are indicated through the set of spatial postpositions. This explains at the same time why responses from TPRS elicitation were judged ungrammatical when a postposition was interchanged with *rid* (see (169) and (170)).

(169) *yʉʉw*    *nĩ*                                      *waan*    *pis*      ***rêd***  
 blood    be.located      knife    small    at  
 ‘The blood is on the knife.’

(170) \**yʉʉw*    *nĩ*                                      *waan*    *pis*      ***rid***  
 blood    be.located      knife    small    LOC

The property of selecting nouns as arguments that inherently denote places, instead of selecting for “non-place nouns” denoting first order entities, points to the presence of a nominal classification system that was described as a *what/where*-distinction (see BROWN, 2008 and RYBKA, 2015). I will resume this distinction in chapter 9, where we will see that *rid* is central for dividing *what*-nouns and *where*-nouns.

### 3.3 Demonstratives

According to Diessel (1999), non-verbal deixis can be conveyed by pronominal, adnominal, adverbial, or demonstrative identifiers. From a cross-linguistic perspective, demonstratives in particular play a central role in the encoding of space, for revealing information about

perceptual space and about distance levels. Diessel (1999, p. 2) defines them with respect to the following three criteria: first, demonstratives can fulfill different syntactic functions since they appear as pronouns, nominal modifiers, and adverbs. Second, they serve specific pragmatic functions such as drawing the interlocutor's attention to objects or locations in a speech situation and further organize information flow in discourse. As a third criterion, Diessel (ibid.) mentions that demonstratives have specific semantic functions, since languages are deictically contrastive, showing (at least) a two-way distance based system consisting of a proximal demonstrative (located close to the deictic center) and a distal demonstrative (located distant to the deictic center).

Having these criteria in mind, we can state that Dâw employs the same roots for demonstrative determiners and demonstrative adverbs expressing the distal-proximal distinction. Furthermore, an intangible distinction (where physical accessibility is lacking or irrelevant) can be expressed by spatial adverbs; however, there is no determiner that expresses this notion.

### 3.3.1 Demonstrative pronouns and modifiers

Demonstrative pronouns are independent pronouns which appear in the argument position of verbs and adpositions and are often found formally distinguished from demonstrative modifiers, which accompany a noun (see DIESSEL, 1999, p. 4). In Dâw, two morphemes fulfil both syntactic functions since they appear as demonstrative pronouns and as modifiers at the same time. These are *naa'* for a proximal relation and *taa'* for a distal relation of a Figure with respect to the deictic center, as shown in o.

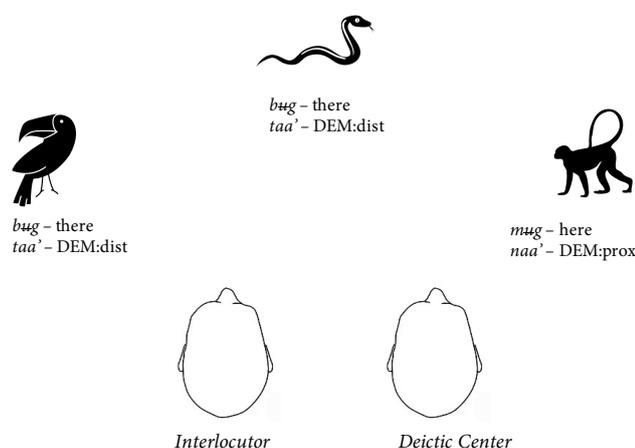


Figure 5 - Sketch of the elicitation scenario of demonstratives

oshows the spatial configuration between deictic center, interlocutor, and the Figure objects that were sought in space in an elicitation task. The collaborators were asked to identify each animal as the following transcription of an elicitation session will show:

R: *Which animal is the snake?*

(171) **taa'**                *reer*  
DEM:dist            snake  
'That one is the snake.'

R: *Which animal is the toucan?*

(172) **taa'**                *çukwet*  
DEM:dist            toucan  
'That one is the toucan.'

R: *Which animal is the monkey?*

(173) **naa'**                *waas*  
DEM:prox            monkey  
'This one is the monkey.'

Examples (171) - (173) show verbless equational clauses composed via the juxtaposition of the demonstrative pronoun and the nominal predicate that represents the animal sought in space. The demonstrative pronoun *taa'* denotes objects that are located distant from the deictic center. Furthermore, Dâw does not provide a distinct demonstrative pronoun expressing hearer proximity. In these cases, *taa'* is used as well, as in (172). In contrast, the location of objects in tabletop space and within arms' reach was established through the demonstrative pronoun *naa'* 'this', as illustrated in (173). The choice between *taa'* and *naa'* can therefore be understood as speaker-oriented in Dâw, given that the distance of objects in relation to the addressee does not play a role. The deictic system of the language may be best analyzed as a *Distance Oriented System* that is speaker-anchored and does not take the addressee into account (ANDERSON and KEENAN, 1985). Such a system depends on the relative distance of other Figures involved in a spatial setting.

In their function as modifiers *naa'* and *taa'* precede the noun they are modifying and have the same function as the respective demonstrative pronouns. Example (174) represents a spatial situation where *naa'* modifies the Figure NP located close to the deictic center (speaker).

In contrast, in (175) the Figure NP is distant from the deictic center, motivating the use of *taa'*.

(174) *naa'*            *çuk-wet*            *id*    *xax*  
 DEM:prox    toucan            1PL    between  
 'This toucan is between us.'

(175) *taa'*            *paas*            *cabari paas*  
 DEM:dist    stone            cabari stone  
 'Those mountains are the Cabari mountains.'

In discourse, Dâw frequently employs the anaphoric pronoun '*aa*'. Martins (2004, p. 365) describes its usage as similar to *naa'*. However, in discourse '*aa*' has a generic anaphoric function since it is coreferential to an antecedent core or non-core argument. Its function is then to keep track of discourse participants, as illustrated in (176) and (177), rather than indicating distance. O arguments or peripheral arguments substituted with '*aa*' are frequently found left-dislocated to clause-initial position (see MARTINS, 2004; OBERT, 2019). Furthermore, the anaphoric pronoun procliticizes to nouns with the loss of the final glottal stop.

(176) '*aa*'            *rid*    *xaa*    *yaa*  
 ANAPH            3PL    cook    roast  
 'They cooked that (the offspring of the jaguar).'

(177) *abug*            '*aa*'            *xaaw*    *mãr*  
 DISC.CONJ    ANAPH            boil    RPT  
 'And then, they say, that (the termite's mound) boiled.'

According to Martins (2004, p. 365), Dâw presents the focus demonstrative pronoun '*ag*'. Its interaction with focus is unclear, yet '*ag*' seems to have a more emphatic function similar to 'that/this one' in English and does not depend on speaker related distance information. In my data, it predominantly occurred with the suffixed focused marker *-V?* as in (178) and (179).

(178) *diid*            '*ag-â*  
 there:ITG            DEM.EMPH-FOC  
 'That one (river) is there far away.'

(179) '*mĩg*    '*nĩp*            *rãm*    '*ag-â*  
 here    disappear            go            DEM.EMPH-FOC  
 'Right here that one (porcupine) disappeared.'

Dâw also has complex emphatic demonstrative pronouns which are built from the demonstrative pronouns *naa'* and *taa'* and an emphatic suffix *-ag*. In these cases, speakers are expressing both emphasis and the distance of a Figure referent with respect to the speech act participants. This is typically used in contexts where there is more than one possible referent such as in (180). Here, a group of Dâw youngsters was hunting a porcupine and were talking about its location. In the moment of utterance in example (180), they were trying to identify the location of the porcupine based on the sounds of rustling leaves around them.

- (180) *tag*                      'aa'      *tag*                      'aa'                      *taa*  
 DEM:dist.emph              ANAPH DEM:dist.emph      ANAPH                      DEM:dist  
 'That one (there) is really it (porcupine), that one (there) is really it (porcupine), that there.'

Another finding is that Dâw shows directional demonstrative adverbs indicating, in general, a movement towards a place that is either close or distant with respect to speaker. These adverbs result from the juxtaposition of demonstrative pronouns *taa'* and *naa'* and the locative marker *rid* (see 2.2), as presented in i) and ii).

- i)      [*naa'* (DEM:prox)+ *rid* (LOC)] = *niid* 'to this place' (hitherward)  
 ii)      [*taa'* (DEM:dist) + *rid* (LOC)] = *tiid* 'to that place' (thitherward)

Since *naa'* represents objects that are proximal in relation to the deictic center, *niid* indicates that an event is happening in direction to the deictic center as in (181). On the other hand, in (182) and (183), *tiid* indicates a place that is distant from the deictic center.

- (181) *ũw*                      *nēed-ēr*                      ***niid***  
 Kleber                      come-NEG                      to.this.place  
 'Kleber don't come here.'

- (182) *ār*      *nāsēel*      ***tiid***                      *daad*                      *rid*  
 1SG      born      to.that.place      Marié.river      LOC  
 'I was born there at the Marié river.'

- (183) *id*      *rām*      ***tiid***  
 1PL      go      to.that.place  
 'We go to that place.'

In sum, we have seen that Dâw encodes a two-way deictic system that is speaker-anchored and makes proximal-distal distinctions. This is encoded via demonstrative pronouns that function at the same time as modifiers. Intangible distance or non-visibility is only

marked in spatial adverbs, and when necessary referred to with distal demonstrative pronouns or modifiers. the demonstrative elements and their emphatic expression are summarized in o.

Table 12 - Overview on demonstratives in Dâw

	<b>Demonstrative pronoun/modifier</b>	<b>Emphatic demonstrative pronoun</b>	<b>Directional demonstrative</b>
<b>proximal</b>	<i>naa</i> 'this'	<i>nag</i> [ <i>naa</i> + 'ag]	<i>niid</i>
<b>distal</b>	<i>taa</i> 'that'	<i>tag</i> [ <i>taa</i> + 'ag]	<i>tiid</i>
<b>anaphoric</b>	<i>aa</i> '	<i>agâ</i> ' ?	-

### 3.3.2 Demonstrative spatial adverbs

According to Diessel (1999, p. 5), demonstrative adverbs in general differ formally from pronominal demonstratives and modifiers. Their main function is to indicate the location of an event that is expressed by a co-occurring verb. Hence, demonstrative spatial adverbs mainly function as verbal modifiers, which distinguishes them from demonstrative pronouns, which are nominal modifiers (DIESEL, 1999, p. 74).

Dixon (2003, p. 87) observes that nominal demonstratives (modifiers and pronouns) and adverbial demonstratives, discussed in this section, make the same spatial distinctions. However, Dâw presents a two-way distinction in the class of nominal demonstratives that was described in the last chapter, and a four-way distinction in the class of demonstrative locative adverbs, as summarized in o.

Table 13- Dâw adverbial demonstratives

<b>Form</b>	<b>Gloss</b>	<b>Distance level</b>
<i>mãg</i> 'here'	here	present
<i>bwg</i> 'there'	there	proximal
<i>bug</i> 'over there'	over.there	medial (close to addressee)
<i>diid</i> 'there far'	there:ITG	intangible

Adverbial demonstratives in Dâw can be characterized by their syntactic mobility. In discourse, they frequently occur in clause-initial position with the function of establishing anaphoric reference to a place mentioned earlier in the discourse, as illustrated in (184).

(184) *mũg siil yaa tuk id rãap*  
 here Silia roast DESID 1PL fish  
 ‘Here, Silia wants to roast our fish.’

In elicited contexts, such as in (185) - (187), they occur in post-verbal position that is the default place for adjuncts in unmarked Basic Locative Constructions. These examples describe the same spatial setting as in the animal identification task shown in the previous section. Similar to the usage of the nominal demonstratives, *mũg* refers to location of objects that are within arm’s reach of the speaker, while *bũg* establishes reference to a location a little further away than *mũg*.

R: *Where is the snake?*

(185) *reer nĩ bũg*  
 snake be.located there  
 ‘The snake is there.’

R: *Where is the toucan?*

(186) *çukwet nĩ bũg*  
 toucan be.located there  
 ‘The toucan is there.’

R: *Where is the monkey?*

(187) *waas nĩ mũg*  
 monkey be.located here  
 ‘The monkey is here (near me).’

In some spatial settings, Dâw speakers made use of the demonstrative adverb *bug* to express medial distance, i.e. reference to an object that is close to the addressee as illustrated in (188) and (189). In this spatial situation, one of the speaker’s sons (Oskar) was sitting next to her while the other one (João Bosco) was sitting next to me, which lead to the uses of *mũg* and *bug* respectively. The difference between *bug* and *bũg* are difficult to pin down since their usage often overlaps. The medial distinction is made when there is a (for the speaker) perceivable distance between Figure and speaker and a proximity between Figure and addressee. However, due to the interaction of *bug* and *bũg* with further elements in the spatial scene, their exact usage is not fully understood at this point.

(188) *m̃g nĩ mēnh tee bōoskaa*  
 here be.located 1SG.POSS child Oskar  
 ‘Here is my son Oskar.’

(189) *bug nĩ mēnh tee jōow boos*  
 over.there be.located 1SG.POSS child João Bosco  
 ‘Over there is my son João Bosco.’

Intangible distance is indicated by the demonstrative adverb *diid* in Dâw. It indicates the location of Figures which are far away from the speakers. This typically involves large scale spatial scenes, such as the location of rivers, communities, or landforms that are out of the speaker’s sight. Hence, visibility of the location plays an important role for the usage of *diid* such as in (190) where the speaker refers to a Tukanoan community that is located a five-day trip away from the Waruá community (the place of utterance).

(190) *Tumbil diid*  
 Tumbira.community there:ITG  
 ‘The Tumbira community is there (far away)!’

The anaphoric use of *diid* is very frequent in narratives, as illustrated in (191). Here, it replaced a locative adjunct (here a postpositional phrase) at the beginning of the subsequent sentence. Constructions like these are central in Dâw verbal art and help to keep track of key events that are tied to locations.

(191) *nadâb sun mē wēn mĩ*  
 Nadëb.people COL other Weni.river in.liquid  
 ‘The Nadëb people were at another river, at the Weni river.’

*diid bax koor dâw-â*  
 there:ITG emerge do.before dâw.people-FOC  
 ‘There (at the Weni river), the Dâw people emerged before.’

It is noteworthy that *diid* differs from the directional demonstratives *niid* ‘to this place’ and *tiid* ‘to that place’ as it denotes a static Ground, while both of the directional demonstratives describe spatial scenes that are dynamically directed towards a Ground.

### 3.3.3 Interaction between demonstratives

In Dâw discourse, adverbial demonstratives are frequently found modified by nominal demonstratives that proclitize to the adverbial roots presented in the previous section. Their combination patterns are restricted to:

- a) *naa* ‘DEM:prox’ + *mũg* ‘here’ = *na’-mũg* ‘this here’
- b) *taa* ‘DEM:dist’ + *bug* ‘over.there’ = *tabug* ‘that there’
- c) *taa* ‘DEM:dist’ + *bũg* ‘there’ = *tabũg* ‘that over there’

These juxtaposed forms can function either as demonstrative determiners modifying a noun, as illustrated in (192), or as demonstrative spatial adverbs, as in (193). In this latter function they are more common in Dâw discourse and play an important role in discourse structure for being co-referential with preceding locative adjuncts.

(192) *id*      ***na’-mũg***                      *nâax*    *pôog*    *mĩ*                      *bax*  
 1PL      DEM:prox-here                      water    be.big    in.liquid                      emerge  
 ‘We emerged from this river here.’

(193) ***ta-bug***                      *kâk*    *xaa*    ‘*ag-ũuy*’  
 DEM:dist-over.there    tie    sit    DEM.EMPH-DOM  
 ‘(They) tied him sitting there.’

The compound *na’-mũg* appears in situations in which the Ground of the spatial scene coincides with place of utterance, such as in (194). In other words, the location and the referred object are directly accessible for both speaker and addressee. In contrast, in examples with *tabug* and *tabũg*, Dâw speakers refer to a location that is not accessible to the speech act participants at the moment of utterance, as illustrated in (195).

(194) *id*      *nêe*    *ďũ*      ***na’-mũg***                      *id*      ‘*wũnh*’  
 1PL      make    also    DEM:prox-here                      1PL      work  
 ‘We also do our work (this place) here.’

(195) *primeiro*                      *dâw*                      *nũ*      ***ta-bug***                      *xaay*    *rid*  
 first                      dâw.people    live    DEM:dist-over.there    forest    LOC  
 ‘At first, the Dâw people lived over there in the forest.’

The close connection between demonstrative determiners and demonstrative adverbs in Dâw demonstrates a central characteristic of the language: specifically, an emphasis on

providing information on distance and also on definiteness expressed through demonstrative determiners.

### 3.4 Further spatial adverbs

Beyond demonstrative spatial adverbs, Dâw provides further spatial adverbs functioning as Ground-denoting adjuncts. Similar to demonstrative adverbs, they show syntactic mobility within the clause, as illustrated in (196) - (198).

(196) *id ton-êe xaay rõt*  
 1PL give.birth-PST forest far  
 ‘We gave birth far in the forest.’

(197) *ãr rãm xôo xôod rid neb mĩ*  
 1SG go circulate upriver LOC Inebo.river in.liquid  
 ‘I went downriver on the Inebo (river).’

(198) *mêed rid rid bax*  
 downriver LOC 3PL emerge  
 ‘Downriver, there they emerged from’

These adverbs often derive from nouns as o shows, yet they cannot be considered relational nouns because they do not involve an obligatory possessed noun stem as is described for relational nouns in Mesoamerican languages (see AISSSEN, 1987, p. 11).

Table 14- Spatial adverbs in Dâw

Spatial Adverb	Translation	Etymological reference
<i>mêed</i>	downriver	?
<i>xôod</i>	upriver	?
<i>rõt</i>	far	?
<i>sôob xup</i>	right	<i>sôob</i> ‘hand’ + <i>xup</i> ‘good’
<i>sôob sâar</i>	left	<i>sôob</i> ‘hand’ + <i>sâar</i> ?
<i>tuu</i>	down	<i>tuu</i> ‘floor’/ ‘ground’
<i>pox</i>	above	<i>sky</i>
<i>xaay rid</i>	outside	<i>xaay</i> ‘forest’ + <i>rid</i> ‘LOC’
<i>yēm ta’</i>	everywhere	<i>yēm</i> ‘world’ + <i>ta’</i> ‘be far’?

o shows that Dâw spatial adverbs can be both mono-morphemic and complex. They can show semantic relationships to other nouns such *pox* ‘above’ and ‘sky’, or *tuu* ‘down’ which is related to ‘ground’; others do not show semantic transparency (e.g. *mêed* ‘downriver’, *xôod* ‘upriver’).

Others are complex nouns that are postpositional phrases like *xaay rid* ‘outside’ or phrases such as *yēm ta* ‘everywhere’. All spatial adverbs can be arguments of the locative marker *rid*, but they are not found as arguments of spatial postpositions due to pragmatic incompatibility.

### 3.5 Summary

This chapter aimed to describe nominal resources expressing space in Dâw. We have seen that Dâw has an interesting set of spatial postpositions that select their arguments with respect to either physical properties of the Ground or the configuration of the Ground (horizontally vs. vertically). Moreover, Figure information can also play a role for the choice of some postpositions, as in the case of *ked ka* ‘inside (lying)’ which is used when a Figure referent is in a compact position inside a container. Moreover, I have shown that the locative marker *rid* indicates the notions of Source and Goal when co-occurring with verbs of motion and has a locative reading when it appears in sentences with static locative verbs.

With respect to nominal deixis, Dâw presents a speaker-anchored proximal - distal system, as expressed by two demonstrative pronouns and determiners, but provides a four-way distinction (speaker and addressee based) in the spatial demonstrative adverbs.

Finally, nominal Ground encoding frequently makes reference to salient topographic features such as waterways; these notions can be found encoded in different classes, such as postpositions (*mĩ* ‘at/in water’) and spatial adverbs (*mēed* ‘downriver’). This provides an example of cultural and environmental parallels in grammar and lexicalization patterns.

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## **4 Frames of Reference**

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## 4 Frames of Reference

In chapter 1, I introduced Levinson's (2004, p. 66) semantic subfields for the identification of location in space; these are repeated in obelow (simplified diagram from p. 3). Under non-angular specifications, Levinson (ibid.) includes spatial coincidence, contiguity or proximity between Figure and Ground. A spatial relation like *'The cup is on the table'* provides spatial coincidence based on the preposition *on* that, in the case of English, implies a support relation between Figure and Ground.

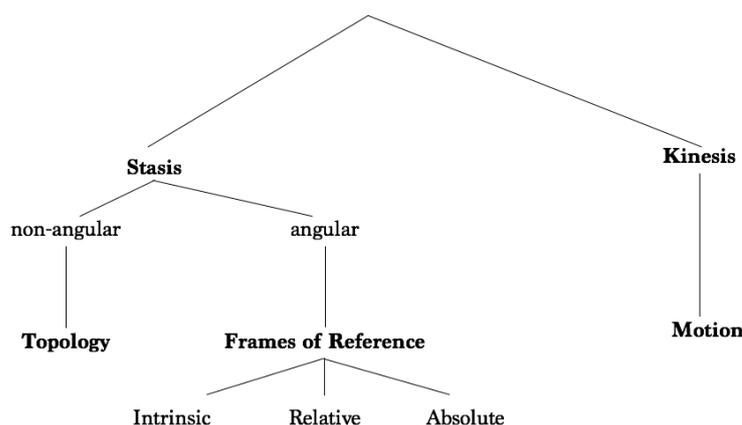


Figure 6 - Non-angular and angular specifications and their subtypes (after LEVINSON and WILKINS 2006, p. 3)

Another strategy to identify the location of a Figure is based on angular specifications. This is the case when a Figure referent is located as separated from a Ground referent such as in *'The car is to the left of the house'*. The description of this spatial situation is then based on a projective relation expressed by three possible coordinate systems: intrinsic, absolute, and relative Frames of Reference (FOR). I introduced these systems in section 1.2. Their distinction is based on the orientation of the Ground, the Anchor, and the viewpoint of the speech act participants (LEVINSON, 1996), and their usage depends on the selection of the conceptual Anchor for the spatial scene (DANZIGER, 2010, p. 168).

In this chapter, I address the following two central questions: i) Does Dâw linguistically reflect the distinction between angular and non-angular specification in the grammar? and ii) What are the linguistic resources for expressing the three FORs in Dâw? In order to find answers to these questions, I will first provide a brief summary on what I observed for the expression of non-angular specifications in Dâw. Subsequently, I show how Dâw grammatically encodes the three FORs proposed by Levinson (2004), as well as how it

encodes Diessel's (2014) concept of the deictic FOR, in order to identify possible morphosyntactic differences in the encoding of angular and non-angular specifications.

For the analysis of FOR, I draw on elicited data from an adapted version of the Man and Tree Space Game (LEVINSON et. al, 1992)<sup>17</sup>, as well as some scenes from the Topological Relation Picture Series (BOWERMAN and PEDERSON, 1992) and spontaneous speech recorded in natural speech acts. It is necessary to note that this chapter is a first attempt to understand the projective domain of spatial reference in Dâw. Hence, the analysis of FOR in Dâw is still in a preliminary stage, and an in depth discussion must be left for further research.

#### 4.1 Non-angular specifications

As Levinson and Wilkins' (2006) collaborative work shows, non-angular specifications can manifest cross-linguistically in various ways. In order to understand how Dâw describes spatial coincidence with respect to Topology as suggested by Levinson (2004, p. 66), I analyzed data from Bowermann and Pederson's (1992) Topological Relation Picture Series and Levinson and Burenhult's (2006) questionnaire for landscape terms and place names throughout this work (see chapters 3 and 9).

An initial observation must be made with respect to the syntactic structure of these three semantic subdomains, namely that they are all expressed by Basic Locative Constructions (BLC) such as in (199) – (201). In these constructions, the Figure is expressed by the subject and the Ground in form of locative adjuncts. As I show in § 6.2, Dâw presents subtypes of BLCs with respect to presence and absence of verbal predicates, a parameter motivated by the permanency of a certain static spatial relation. In other words, more permanent spatial situations are expressed by non-verbal locative clauses whereas less permanent spatial situations are more likely to be expressed by locative verbal clauses. Consequently, toponymical specifications are provided by locative non-verbal clauses. In contrast, topological specifications are provided by locative verbal clauses.

Topological specifications in Dâw are typically expressed in copular sentences, such as (199) and (200). In the cases in which posture or position of the Figure is salient, locative verbs (posture or positional verbs) take the place of the locative copula verb (201).

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<sup>17</sup> I substituted the tinker toy figures from the Man and Tree Space Game with Dâw speakers, using both trees and houses as Grounds in order to verify results for Grounds with canonical sides. The spatial scenes were photographed and are presented in section 4.2.2.

- (199) *tiit nĩi bel rēd*  
 string be.located candle at  
 ‘The lace is on the candle.’
- (200) *bee nĩi paas rēd*  
 tree be.located mountain at  
 ‘The tree is at the mountain.’
- (201) *sāan pēem tapete wā’*  
 cat sit carpet on  
 ‘The cat is sitting on the carpet.’

Spatial coincidence in topological relations is expressed through postpositional phrases with Ground nominals as their arguments (199) - (201). The main function of postpositions in these constructions is to specify the configurational relation between Figure and Ground. As I show in section 3.1, these can be containment, support, and non-contiguity, which, again, express spatial coincidence, contiguity or proximity and are therefore appropriate candidates to encode topological relations in Dâw.

Toponymical specifications also describe spatial coincidence of a Figure with respect to a Ground location, specifically a place name. Spatial relationships of this kind in Dâw show distinct syntactic and morphological properties that are motivated by the fact that place names have a built-in locative function, as I show in section 9.1.5. This identificational function leads to the absence of a verbal predicate; instead, Figure (subject) and Ground (locative adjunct) are juxtaposed (202). Furthermore the Ground nominal occurs unmarked, as visible in example (202), or as an argument of the locative marker *rid*, as in (203). These differences in Dâw provide evidence for the fact that topological and toponymical relations require different Ground encoding strategies, a fact common in many languages as observed by Levinson (2004, p. 67).

- (202) *tumbil wāan nāax*  
 Tumbira.community Curicuriari.river river  
 ‘The Tumbira village is at Curicuriari river.’
- (203) *tuy’ rid ’wĩnh p#n’ ’nāp ’yêe*  
 Tuy.creek LOC work IPFV piaçava  
 ‘(They) used to work with piaçava at the Tuy creek.’

This brief summary has shown that non-angular specifications in Dâw encode the Ground through postpositional phrases or unmarked locative adjuncts. Additionally, they

show variation with respect to the presence or absence of locative verbs. Nevertheless, they are similar in terms of choosing a Ground referent that is in close contiguity with the Figure, in contrast to angular specifications.

## 4.2 Angular specifications

### 4.2.1 Absolute Frame of Reference

As introduced in section 1.2.3, locative expressions can rely on fixed bearings in a landscape (cf. LEVINSON, 2006, p. 541). This is the case of the absolute FOR, since names and directions of immovable points in the landscape are fixed and are based on community consensus and knowledge (see LEVINSON and WILKINS, 2006, p. 4). In a sentence like ‘*Munich is in the South of Germany.*’ Figure and Ground are thus located with respect to a fixed Anchor. Interestingly, in these cases Ground and Anchor are represented by the same entity, classifying the absolute FOR as a binary coordinate system that builds only on the relation between Figure and Ground. Furthermore, a spatial relation expressed by the absolute FOR holds even after a change in the position of speech act participants, as well as when the spatial scene is observed from different angles. In other words, Munich will always be in the South of Germany, even if this utterance is made in Spain or Russia.

What is interesting about the absolute FOR in a language is to understand what kind of fixed bearings a culture employs; these can go far beyond a system of cardinal directions. Brown (2008), for example, describes in Tzeltal a system based on the notional slope or angled world so that ‘up’ is south, ‘down’ is north, and ‘across’ is east or west. In contrast, Ameka and Essegbey (2006, p. 402) describe for Ewe an absolute system based on terms for *sea* and *lagoon* that surround the region of the Ewe speakers to the East and to the West. Fixed bearings can consequently be considered as reflecting topographical conditions into a coordinate system.

This holds also for the Dâw case, as we can see in examples (204) and (205), which present a system based on the direction of the river’s water flow. To indicate the two directions of water flow, Dâw uses the adverbs *mêed* ‘downriver’ and *xôod* ‘upriver’. In both examples the spatial relationship is syntactically expressed through a non-verbal locative clause indicating permanency. Moreover, absolute expressions of this kind are morphologically marked by *day*, which appears to indicate a contrastive comparison. This morpheme occurs postposed to one of the two adverbs comprising the Ground together with an antecedent nominal. The usage

of these constructions is necessary in Dâw in order to express the absolute FOR, i.e. the locative expression needs an overt contrastive counterpart that is or more upriver or more downriver with respect to the Figure.

- (204) *Baal*            *Santa Isabel*    ***mēed***        ***day***  
 Manaus            Santa.Isabel    downriver      COMP  
 ‘Manaus is downriver of Santa Isabel.’  
 Lit.: ‘Manaus is further downriver than Santa Isabel.’

- (205) *Santa Isabel*    *Baal*            ***xôod***        ***day***  
 Santa.Isabel    Manaus          upriver        COMP  
 ‘Santa Isabel is upriver from Manaus.’  
 Lit.: ‘Santa Isabel is further upriver than Manaus.’

One might expect that the upriver/downriver system has as its central axis the Rio Negro flowing from West to East, since it is the adjacent river to the Waruá village. However, as o below shows, the upriver/downriver system can be projected to any river or creek independent from its orientation with respect to the Waruá village. Consequently, Figure referents that are located closer to the river’s headwaters are referred to with *xôod* ‘upriver’ whereas when located closer to the river’s mouth *mēed* ‘downriver’ is used.

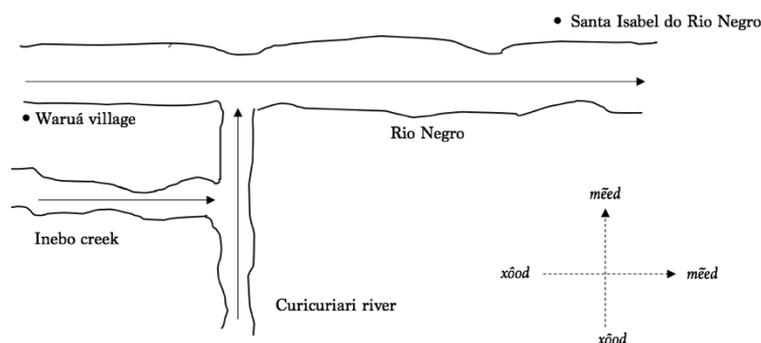


Figure 7- Representation of the upriver/downriver system

Besides the upriver/downriver system, there are some specific motion verbs that conflate the semantic notions of Motion and Ground in the verb root, such as *dôob* ‘go (down) towards the river port’ and *soop* ‘ascend from the river’. In utterances without overt encoding of the Ground in form of PPs, these verbs imply an absolute reading since the motion event is anchored to a fixed bearing, that is the river as in (206) and (207). They differ with respect to if the river is considered the Goal of Motion ((206) or the Source of Motion (207).

(206) *Karol dôob*  
Karol go.towards.port  
'Karol goes (down) to the river port.'

(207) *Karol soop*  
Karol ascend.from.port  
'Karol goes up from the port.'

The linguistic manifestation of the absolute FOR based on the river is the sole linguistic manifestation for expressing the absolute FOR that I can identify in Dâw. At the same time, it is constantly used by Dâw speakers when referring to the localization of villages or tributaries or other landscape features in discourse.

#### **4.2.2 Intrinsic Frame of Reference**

Similar to the absolute FOR, the intrinsic FOR is also understood as a binary system involving the relation between Figure and Ground (cf. DIESEL, 2014, p. 191). It differs in that the angle is specified relative to an inherent facet of the Ground (see LEVINSON and WILKINS, 2006, p. 4). In a sentence like '*The car is in front of the house.*' we localize the Figure (*the car*) with respect to an inherent part of the Ground (*the house*), that is, its canonical front. As a consequence, the spatial situation holds even when the viewer's position is rotated. However, rotation of the Ground affects the truthfulness of the spatial expression. Both situations are schematized in below.

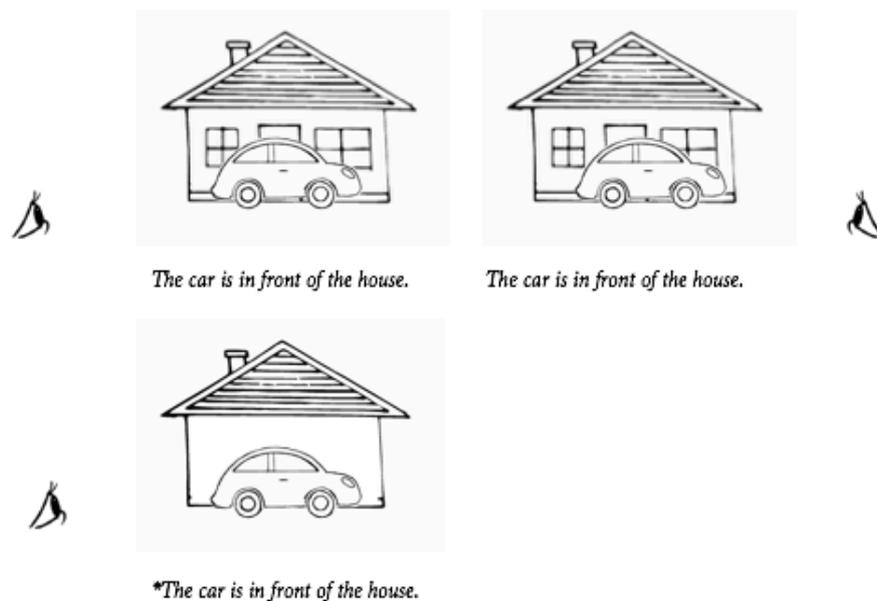


Figure 8 - Representation of the intrinsic FOR under viewer and Ground rotation

Consequently, in Dâw, intrinsic FOR is used in cases in which the Ground referent has a canonical, front, back, and laterals, as with animals, human beings, houses, canoes, etc. Reference to canonical parts of Ground referents is provided through the three following postpositions *taa* ‘in front of: facing’, *dôo* ‘in front of: not facing’ and *muxax* ‘behind not moving’ that I introduced in § 2.1.4. A prototypical spatial scene with *taa* is when two persons are facing each other as exemplified in (208). In contrast, *dôo* is used to describe spatial arrangements in which two referents are in front of each other but *not* facing, for example sitting in a row in a canoe such as in (209). The postposition *muxax* derives from the body part term for ‘back’ in Dâw and is thus used to refer to a Figure referent that is located at the Ground referent’s back, i.e. behind it as in (210).

- (208) *Karol nĩ Uç taa*  
 Karol be.located Pedro in.front.of:facing  
 ‘Karol is in front of Pedro.’  
 Lit.: ‘Karol is face to face with Pedro.’



- (209) *Karol pẽem Uç dôo xoo ked*  
 Karol sit Pedro in.front.of:not.facing canoe in  
 ‘Karol sits in front of Pedro in the canoe.’



- (210) *Uç pẽem Karol muxax xoo ked*  
 Pedro sit Karol behind canoe in  
 ‘Pedro sits behind Karol in the canoe.’  
 Lit.: ‘Pedro sits at Karol’s back in the canoe.’



One observation about the usage of these three postpositions and the intrinsic FOR is that they reveal what Dâw speakers consider to be the canonical front of an object, which can differ cross-culturally. This can be seen in the following sequence of spatial settings from an elicitation task.<sup>18</sup> In this task, Dâw speakers were asked to respond to the *WH*-questions ‘Where is Sunny?’ and ‘Where is the house?’. We can observe that when the house functions as the Ground, speakers choose between the postpositions *dôo* and *taa* depending on whether the Figure (person) is located on the rectangular house’s short or long sides respectively. These choices do not depend on the Figure’s position (person facing or not facing the house) since in the case of Figure rotation, indicated through a complex predicate composed of the verbs *bâad* ‘turn around’ and *kât* ‘stand’, the postposition remains the same (compare (211) and (213); (215) and (217); (219) and (221)). This implies that Dâw speakers consider the long sides of a house as canonical fronts, as here they use *taa* ‘in front of: facing’, while they refer to its short sides with *dôo* ‘in front of: not facing’. Analogously, when speakers located the Ground represented by the person, the selection of the postposition depended on the inherent facets of the person as well, i.e. its front (indicated through *taa* or *dôo* such as in (214) and (216)) or its back (indicated through *muxax* such as in (212) and (218)). An observation must be made with respect to humanness of the Ground referents. Persons and animals provide unambiguous front and back sides leading to alternations between *taa/dôo* and *muxax* expressing the contrast of ‘in front of’ or ‘behind/at someone’s back’. In contrast, for Grounds composed of [-human] nominals the front/back distinction is made with respect to facing/not facing the Figure.

### Setting A

(211) *Sunny nĩ top dôo*  
 Sunny be.located house in.front.of:not.facing  
 ‘Sunny is in front of the house (not facing it).’

(212) *top xaa Sunny muxax*  
 house sit Sunny behind  
 ‘The house is behind Sunny.’  
 Lit.: ‘The house it at Sunny’s back.’



<sup>18</sup> This elicitation task was repeated with a traditional house of the Dâw people that has no closed sides but has a similar rectangular ground plan to the house on the pictures. Hence, Dâw speakers also considered the long sides the house’s fronts. Unfortunately, these scenes were not photographed, since this elicitation task happened spontaneously in a moment that I was not equipped with a camera.

## Setting B

- (2I3) *Sunny bâad kâat*  
Sunny turn.around stand

*top dâo*  
house in.front.of:not.facing  
‘Sunny stands turned around in front of the house.’



- (2I4) *top xaa Sunny dâo*  
house sit Sunny in.front.of:not.facing  
‘The house is in front of Sunny.’

## Setting C

- (2I5) *Sunny kâat top taa*  
Sunny stand house in.front.of:facing  
‘Sunny stands in front of the house.’

- (2I6) *top xaa Sunny taa*  
house sit Sunny in.front.of:facing  
‘The house is in front of Sunny.’  
Lit.: ‘The house sits facing Sunny.’



## Setting D

- (2I7) *Sunny bâad kâat*  
Sunny turn.around stand

*top taa*  
house in.front.of:facing  
‘Sunny stands turned around in front of the house.’



- (2I8) *top xaa Sunny muxax*  
house sit Sunny behind  
‘The house is behind Sunny.’  
Lit.: ‘The house sits at Sunny’s back.’

## Setting E

- (219) *Sunny kât top taa*  
Sunny stand house in.front.of:facing  
‘Sunny stands in front of the house.’



- (220) *top xaa Sunny taa*  
house sit Sunny in.front.of:facing  
‘The house is in front Sunny.’  
Lit.: ‘The house sits facing Sunny.’

## Setting F

- (221) *Sunny bâad kâat*  
Sunny turn.around stand



- top taa*  
house in.front.of:facing  
‘Sunny stands turned around in front of the house.’

- (222) *top xaa Sunny muxax*  
house sit Sunny behind  
‘The house is behind Sunny.’  
Lit.: ‘The house sits at Sunny’s back.’

## Setting G – Person behind the house facing/not facing it

= Setting A/Setting B respectively

There are two infrequent alternative constructions for referring to the intrinsic laterals of a Ground referent in my corpus, exemplified in (223) and (224). The postposition *wâ* ‘beside’ in (223) can be used to express spatial scenes like Settings C, D, E, and F from the pictures above. Speakers confirmed that *wâ* can be used for these spatial scenes regardless of whether the Figure and Ground are facing each other or not.

- (223) *dâw xut nîi top wâ*  
person MASC be.located house beside  
‘The man is next to the house’

- (224) *dâw xut kât ‘yãm têen*  
person MASC stand dog ?  
‘The man stands next to the dog.’



Older Dâw speakers also provided utterances using the postposition *têen* in order to describe, for example, a person at the dog's lateral as in (224). However, as of now I cannot identify the semantic properties of *têen* in comparison to the inventory presented in this subsection. We know that *têen* has a homophonous counterpart in the spatial adverb 'now', and that it occurs in the landscape term *xaay têen* 'deep in the forest' or 'in the middle of the forest'. One possible interpretation can be made with respect to the segmentation of the body parts of quadruped animals, that is, the buttocks, the rump and the front (head). In the case of the spatial scene in (224), the person stood beside the dog next to its rump that can be considered the 'central part' of the animal. This hypothesis would also support the usage of the intrinsic FOR for these spatial settings, since the Ground is again specified based on its internal parts. Nevertheless, confirmation of this hypothesis must be left for future research.

### 4.2.3 Relative Frame of Reference

Finally, I consider the expression of the relative FOR in Dâw. In contrast to the absolute and intrinsic FOR, which are binary systems, the relative FOR additionally considers the speaker's coordinates (the speaker's own front/back/left/right) and is therefore understood as a ternary system (see LEVINSON, 2006, p. 543). A sentence like '*The man is to the left of tree*' demonstrates that the Figure (*the man*) is in a specific location relative to the Ground (*the tree*) based on the viewer's projection, i.e. its left side. Consequently, this spatial expression does not hold in the case of viewer rotation. According to Levinson (ibid., p. 544), the relative FOR evolved from the intrinsic FOR in order to describe spatial relations for Grounds that have no intrinsic sides. Based on this assumption, the author argues for shared lexemes between the intrinsic and relative FOR, as in the case for English, for example, where the sentence '*The car is in front of the house*' could both have an intrinsic interpretation like '*The car is on the front side of the house*' or a relative interpretation like '*The car is between me and the house*'.

Firstly, it is noteworthy that resources for the expression of the relative FOR in Dâw seem to be scarce. Lexical items expressing the notions of left and right in Dâw, *sôob sâr* 'left hand' and *sôob xub* 'right hand', are not used to indicate the location of a Figure with respect to a Ground. To my knowledge, these terms are only used in order to refer to the left or right part of the speaker's body. One strategy for describing the relation between Figure and Ground referent that does not display intrinsic sides (e.g. tree, bonfire, stone etc.) is the usage of the the postposition *pej* 'close to/next to'. In examples (225) and (226), the speaker confirmed the truthfulness of this utterance for any position of Figure referents with respect to Ground referents.

- (225) *çôkwê* *pêem* *bee* *pej*  
 toucan sit tree next.to  
 ‘The toucan is sitting next to the tree.’



- (226) *dâw* *xut* *pêem* *borõo* *pej*  
 person MASC sit bonfire next.to  
 ‘The boy sits next to the bonfire.’

Both examples show that the usage of a postpositional phrase headed by *pej* expresses spatial situations that per definition would require the usage of a relative FOR due to the missing canonical sides of the Ground referent. However, in these constructions the viewer’s own bodily coordinates are not involved in the projection, since utterances (225) and (226) are not sensitive to viewer rotation. In other words, the Anchor in these examples does not lie in the viewer, as key characteristic of the relative FOR. Based on the lack of linguistic material for the expression of the relative FOR, I argue that Dâw lacks this FOR.

Other evidence for this claim comes from Levinson’s (2004, p. 157) *Recall memory: the ‘animals’ task* - a non-linguistic elicitation task that intends to distinguish between an absolute and relative coding in detailed memory. The task was involved in order to verify congruence between the coordinate systems used in language and those in memory (ibid.). In this task, speakers are presented with toy animals in a row on a table and asked to reproduce the order on another table after rotating 180°. In the cases in which the order of the recalled line of animals was preserved, the responses can be understood as absolute encoding. In contrast, responses are considered as relative when the line is preserved with respect to the left or right direction of the viewer (ibid.). All the experiments were run on mixed-age and mixed-sex-samples with four Dâw speakers and was repeated several times using different arrays consisting of different toy animals. The results provided 100% consistency in absolute coding as represented in 0, which is a visualization of the recall task.

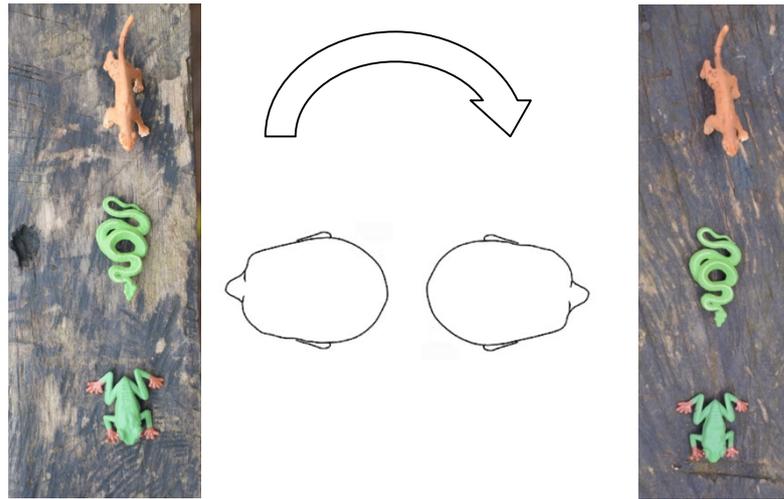


Figure 9 - Example result from Recall task: animals in a row

The usage of an absolute coordinate system and the absence of relative encoding in non-verbal spatial cognition reflects the usage of linguistic FOR encoding in Dâw. This further supports the claim that Dâw is a language that lacks the relative FOR. However, it does not imply that Dâw speakers do not conceptualize space from an egocentric perspective, as this conceptualization is visible in the pervasive use of deictic elements such as demonstratives in spatial descriptions. This corresponds to Danziger’s (2010, p. 176) and Diessel’s (2014, p. 129) assumptions that a lack of the relative FOR in languages (she cites the Tzeltal case) can be solved with the deictic FOR.

#### 4.2.4 Deictic Frame of Reference

Danziger (2010) and Diessel (2014)<sup>19</sup> suggest the inclusion of the deictic FOR when addressing the speaker’s bodily orientation for the analysis of the linguistic expressions of spatial coordinate systems. In particular, Diessel’s claim is based on the predominance of the egocentric perspective in spatial language and cognition and on the fact that the most basic linguistic expression of spatial orientation in many languages can be found in the class of demonstratives. Hence, the deictic FOR is commonly expressed by demonstratives and is accompanied by pointing gestures. Working with the Dâw people on the description of spatial scenes for this work has proved that this way of expressing spatial relations is pervasive in

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<sup>19</sup> Danziger (2010) in suggest the inclusion of four-way distinction of Frames of Reference including the ‘direct frame of reference’. Danziger’s criteria for this FOR correspond to Diessel’s (2014) suggestions for the deictic FOR. For this work, I choose Diessel’s term for this FOR, since it reflects more precisely the central role of the speaker in the respective coordinate system.

discourse. The first attempts of testing even topological relations based on picture stimuli, for example, brought dialogues like ‘Where is the cat?’ – ‘There (pointing with lips to the photo)’ providing evidence for the particular status of a coordinate system based on demonstratives in Dâw.

- (227) *yãm* *yêt* *bug*  
 dog lie there  
 ‘The dog is lying there.’

The deictic FOR differs from the other FOR since the speaker functions both as Anchor and Ground (see DANZIGER, 2010, p. 168). A sentence in Dâw such as (227) shows that the Figure (*the dog*) is located with respect to the speaker, which is the Ground of its own deictic utterance. The question that arises is how the addressee resolves to search for the Figure referent since demonstratives like *bug* ‘there’ are vague. Danziger (ibid.) points out that this vector information is established through pointing gestures or gaze, which provide the Anchor that indicates the search domain in order to locate the Figure. This can be observed with Dâw speakers, since gestures such as lip pointing, finger pointing, and arm gestures frequently accompany the spatial language in Dâw. Interestingly, a vertical oriented gesture such arm raising and pointing to the sky accompanies deictic utterances marking reference to an upriver location (see Pictures 5 and 6). Horizontally oriented arm gestures, in contrast, usually accompany deictic utterances referring to demonstrative adverbs like *tiid* ‘over there’ that are tangible for the speaker. Dâw speakers provide a rich inventory of gestures that accompany spatial languages, therefore an in-depth discussion must be left for future work.



Picture 5 – ‘upriver’ gesture



Picture 6 – ‘over there’ gesture

Another striking difference with respect to linguistic encoding is the fact that the deictic FOR expressed through demonstratives does not locate an explicit Figure with respect to an explicit Ground. Instead, it indicates the location of a Figure with respect to an implicit Ground that

is entailed by the demonstrative (DIESEL, 2014, p. 128). For the Dâw case, this can be expressed through locative adjuncts, which are adverbial phrases composed of spatial demonstrative adverbs, as introduced in section 3.3.2, such as in (228) and (229).

(228) *top nĩ 'mũg*  
 house be.located here  
 ‘The house is here.’

(229) *kaaw tiid*  
 manioc.garden over.there  
 ‘The manioc garden is over there.’

They can also be expressed through spatial adverbs that receive deictic meaning when a Ground referent is not overtly expressed. This may be understood by comparing opposing examples using the deictic FOR (230) and the absolute FOR (231). In (230), the spatial adverb *pox* ‘sky/above’ establishes deictic reference to the speaker on the vertical axis, i.e. the vulture is flying above the speaker. In (231) in contrast, the usage of the absolute FOR requires an overtly expressed Ground referent (*the man*) in order to locate the Figure referent (*the vulture*) on the vertical axis in a comparative construction.

(230) Deictic FOR  
*wa' naa xoo pox rid*  
 vulture fly PROG sky LOC  
 ‘The vulture is flying around up high.’

(231) Absolute FOR  
*wa' naa xoo dâw xut pox day*  
 vulture fly PROG person MASC sky COMP  
 ‘The vulture is flying around above the man.’

The same relation can be observed on the horizontal plane by comparing (232) and (233). Example (232) expresses that the city of Santa Isabel is located downriver with respect to the speaker’s location, which in the case of this utterance was the Waruá community. By using the absolute FOR as in (233), the speaker again overtly expresses the Ground referent in order to establish an absolute spatial relation between Figure and Ground in a comparative construction.

(232) Deictic FOR

*Santa Isabel mēed rid*  
Santa.Isabel downriver LOC

‘Santa Isabel is downriver.’

Lit.: ‘Santa Isabel is downriver from here (where I am).’

(233) Absolute FOR

*Baal Santa Isabel mēed day*  
Manaus Santa.Isabel downriver COMP

‘Manaus is downriver of Santa Isabel.’

Lit.: ‘Manaus is further downriver than Santa Isabel.’

According to Diessel (2010, p. 128), the fact that demonstratives are inherently deictic prevents them from being used in other Frames of References. This can be confirmed for demonstrative spatial adverbs in Dâw, as presented in examples (228) and (229). However, as we have seen in examples (230) – (233), spatial adverbs like *pox*, *mēed*, and *xood* can be used in both absolute and deictic FOR in different syntactic constructions that are necessary to indicate the respective FOR. More specifically, the deictic FOR is expressed through a postpositional phrase headed by the locative marker, whereas the absolute FOR provides a contrastive comparative construction.

Finally, the fact that Ground properties like the presence or absence of a canonical front are not a selective criterion for the direct FOR allows its application to any spatial scene, i.e. with any Ground referent. This and the absence of relative FOR encoding are possible motivations for a pervasive usage of the direct FOR.

### 4.3 Summary

In summary, this chapter has shown how Dâw provides spatial reference through coordinate systems by using the absolute, intrinsic, and deictic FOR. There is evidence from both linguistic and non-linguistic data that Dâw does not express the relative FOR, preferring the deictic one instead. The scope of these three FORs in Dâw seems to depend on distance and on whether the object provides inherently assigned sides. Where the absolute FOR is preferred for locating Figure referents in landscape, the intrinsic and the deictic FOR are more prominent in descriptions of visible and tangible spatial scenes in Dâw. Furthermore, Dâw people favor the intrinsic FOR for spatial scenes with Ground referents whose canonical fronts are identifiable, and the deictic FOR when this is not possible.

With respect to linguistic resources, I have shown that the three FORs in Dâw make use of different lexical items and morphosyntactic strategies for Ground encoding; these are summarized in o below.

Table 15- Dâw FOR terms

	<b>Absolute FOR</b>	<b>Deictic FOR</b>	<b>Intrinsic FOR</b>
<b>Lexical resources</b>	<i>mēed</i> ‘downriver’ <i>xôod</i> ‘upriver’ <i>pox</i> ‘up.high’	<i>mĩg</i> ‘here’ <i>bũg</i> ‘there’ <i>tiid</i> ‘over there’ <i>niid</i> ‘over here’ <i>mēed</i> ‘downriver’ <i>xôod</i> ‘upriver’ <i>pox</i> ‘up.high’	<i>taa</i> ‘in front of: facing’ <i>dôo</i> ‘in front of: not facing’ <i>muxax</i> ‘behind’ <i>wâ</i> ‘beside’ <i>tēen</i> ‘?’
<b>Syntactic resources</b>	Contrastive comparative construction	Locative verbal clause or locative non-verbal clause;	Locative verbal clause or locative non-verbal clause
<b>Ground encoding</b>	Ground referent is overtly encoded and functions as the comparative element	Ground is entailed in the spatial adverb; Arguments of the locative marker	Ground referent is overtly expressed as an argument of a postpositional phrase

As o shows, these systems are formally distinguishable from each other with respect to the lexical inventory and with respect to structural variation. We can observe some overlaps between the lexical inventory of the deictic and absolute FOR (*mēed* ‘downriver’, *xôod* ‘upriver’, *pox* ‘up high’), but these are otherwise distinguishable via their syntactic differences. In other words, where the absolute FOR uses an adverb like *mēed* in comparative constructions involving an overtly expressed Ground nominal, the same adverb functions in the deictic FOR as an unmarked locative adjunct entailing the Ground with respect to the speaker. The intrinsic FOR in Dâw makes use of a small set of spatial postpositions taking a Ground nominal as their argument.

Having examined the linguistic inventory of the three FORs in Dâw we can go back to the question raised at the beginning of this chapter and verify if Dâw reflects the distinction between angular and non-angular specification in the grammar. In short, a comparison of the inventory of both specifications can confirm that Dâw linguistically manifests a difference between spatial coincidence and distance between Figure and Ground. In general, they differ with respect to their lexical inventory and consequently morphosyntactic strategies. For example, the Ground encoding through postpositional phrases headed by configurational spatial postpositions express contact, i.e. spatial coincidence, between Figure and Ground. These cannot apply for FOR situations. Consequently, the Ground referent is always overtly

expressed as an argument of the postposition, whereas in the case for the deictic FOR this is not always necessary. Finally, both forms of expressing spatial relations are similar with respect to the presence or absence of a locative verb, since this depends on the permanency of the Figure-Ground relationship.

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## **5 Predicates expressing static location**

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## 5 Predicates expressing static location

The aim of this chapter is to focus on how spatial notions are expressed through verbal predicates in static spatial situations in Dâw. As we have already seen in the Introduction, locative predicates are very versatile since they can provide information about the Figure's shape, posture and position and identify the spatial relationship between Figure and Ground. These relations can be expressed in the form of simple and complex locative predicates expressing both static location and motion. In this chapter, I will focus on simple predicates expressing static location, noting various aspects of the morphosyntactic and semantic behavior of the copula and existential verb *nĩ* and of positional and posture verbs. This analysis is mainly based on Newman's (2001) and Grinevald's (2006) approaches to posture and positional verbs. Where Newman's approach will help to describe the semantics of posture verbs, Grinevald's typology will work as a framework to classify the system of posture and positional verbs in Dâw in interaction with other elements in the clause.

### 5.1 The locative copular verb *nĩ*

The copular verb *nĩ* was described by Martins (2004, p. 208) as one of the equative verbs in Dâw expressing the notions of existence and locative identification.<sup>20</sup> In this section, I focus on its use as a locative copular verb linking a Figure referent with a Ground referent in space, what Dryer (2007, p. 241) considers the central function of locative copular verbs. I treat the locative copular construction in Dâw as a form of nominal predication due to the nature of the copula complement as shown in the following template:

Locative copula construction template
$\text{NP}_{\text{Figure}} + nĩ + \text{PP}_{\text{Ground}} / \text{AdvP}_{\text{Ground}}$

In locative copular constructions, the copula subject represents the Figure while the copula complement denotes the Ground. Complements of *nĩ* can be spatial postpositional phrases (234), adverbial phrases (235) or unmarked locative noun phrases (236).

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<sup>20</sup> According to Levinson and Ameka's (2007, p. 854) typological generalization, the employment of the same verbs for locative and existential constructions is common in the languages of the world.

- (234) *dâw yun nĩ waan pis rēd*  
 person blood be.located knife small at  
 ‘The man’s blood is on the knife.’
- (235) *waan pis nĩ bug*  
 knife small be.located over.there  
 ‘The knife is over there.’
- (236) *waan pis nĩ tuu*  
 knife small be.located ground  
 ‘The knife is on the ground.’

Results from TPRS elicitation have shown that the use of the locative copula competes with the usage of posture and positional verbs. In detail, this means that one older Dâw speaker (>50 years) used the locative copular construction in 47% (of 71 answers in total), while two younger speakers (<30 years) used it in 76% and 77% of their answers. The difference between older and younger speakers is probably a result of more intense bilingualism with the contact language Portuguese in the case of younger Dâw speakers. In Portuguese, copula constructions with the copular verb *estar* would apply for the respective TPRS scenes and could therefore be a possible reason for the usage of Dâw locative copular construction among younger speakers. With respect to the difference between the usage of locative copula constructions and constructions with locative verbs in general, we must consider what kind of spatial scenes can be described with the locative copular construction in Dâw.

Copula constructions in Dâw are used for spatial scenes in which the Figure’s posture or position is not salient, for spatial scenes that are uncommon for Dâw speakers (e.g. stamp on the letter; ribbon on the candle) or for non-permanent spatial scenes. The most generic description of spatial scenes in Dâw consists in a copula construction in which the Ground is encoded in a postpositional phrase with *rēd* ‘at’ as its head. As illustrated in (237) – (240), posture, position and support information is consequently provided through the verbal predicate and not through the postposition. Constructions like these function therefore to merely indicate that a Figure is located at a certain Ground without overtly providing further spatial information.

- (237) *laço nĩ bel rēd*  
 ribbon be.located candle at  
 ‘The lace is on the candle.’

(238) *sob dâk nĩi dâw sob pis rēd*  
 [finger be.attached] be.located person finger small at  
 ring be.located person finger small at  
 ‘The ring is on the small finger of the man.’

(239) *bee nĩi pas rēd*  
 tree be.located mountain at  
 ‘The tree is on the mountain.’

(240) *bee’ ket nĩi bee mii rēd*  
 tree leaf be.located tree twig at  
 ‘The leaf is on the twig.’

However, Grounds in copula constructions can also be expressed through postpositional phrases headed by any spatial postposition. In these cases, more specific information about the Figure-Ground relation is provided, as illustrated in (241) – (243).

(241) *xig nĩi meij wâ’*  
 cup be.located table on  
 ‘The cup is on the table.’

(242) *las nĩi nâax mĩ’*  
 boat be.located water in.liquid  
 ‘The boat is in the water.’

(243) *bol nĩi xadel bũut*  
 ball be.located chair under  
 ‘The ball is under the chair.’

The generic locative copular verb is not sensitive to the Figure’s animacy and can therefore be used with any Figure referent. However, it is sensitive to more abstract Figure nominals that are unlikely to be described with a posture or positional verb. In other words, the selection of the locative copular construction and a posture/positional verb depends on the speaker’s choice to say a) *where* a Figure is located or b) what it looks like, as Ameka and Levinson (2007, p. 854) put it. The authors (ibid., p. 858) also add that languages with posture/positional verbs and a more generic locative verb will employ the latter for the description of large scale spatial scenes, which does not hold for Dâw. As I show in section 8.2.2, large scale spatial scenes in Dâw are predominantly encoded through verbless clause constructions because they are not resultative states.

## 5.2 Existential construction with *nĩ*

The locative copular verb *nĩ* also functions as an existential verb. Epps (2012) observes that *nĩ* in its use as a copular verb and existential can be considered an areal feature of the Upper Rio Negro region, as it exists in many languages from different linguistic families of the region. This is shown in o.

Table 16- Copular verbs in languages from the Upper Rio Negro region

Naduhup				East-Tukano			Aruak	Língua Geral
Dâw <sup>21</sup>	Hup	Yuhup	Nadëb	Desano	Kotiria	Tukano	Tariana	Nheengatú
<i>nĩ</i>	<i>ni-</i>	<i>di-</i>	<i>nang</i>	<i>~adi</i>	<i>hi</i>	<i>nĩ</i>	<i>alia</i>	<i>iku</i>

Aikhenvald (2003, p. 568) describes the use of copula structures as an outcome of heavy language contact with Tukanoan languages as they cannot be found in archaic narratives in Tariana and older speakers prefer verbless locative clauses. Epps (2008, p. 387) confirms this hypothesis for Hup and mentions the very frequent occurrence of this structure in everyday discourse as a reason for diffusion.

In locative contexts, *nĩ* indicates the existence of a Figure at a certain place expressed by a non-obligatory locative adjunct (compare (244) and (245)). In its existential function, *nĩ* shows different syntactic behavior, occurring in clause-initial position and therefore resulting in VS order which is typologically common for existential clauses (see GIVÓN, 2001, p. 257).

(244) *nĩ*    *woor*                    *top*    *xâaw*  
 EXI    tukano.people house old.house.sight  
 ‘There were Tukanoan houses.’

(245) *nĩ*    *dâw*                    *nĩr*    *xoot*    *bɥg-ɥ'*  
 EXI    dâw.people    [live    place]    there-FOC  
 EXI    dâw.people    village                    there-FOC  
 ‘There were house sites of the Dâw people.’

<sup>21</sup> For more information on this topic see: Epps (2008, p. 387) for Hup; Ospina Bozzi (2002, p. 138) for Yuhup; Silva (2012, p. 207) for Desano; Stenzel (2004, p. 199) for Kotiria; Ramirez (1997, p. 116) for Tukano; Aikhenvald (2003, p. 250) for Tariana and Cruz (2011, p. 474) for Nheengatú.

Existential clauses in Dâw are recurrent in locative adverbial clauses where they function as Grounds. In these cases, the Figure is located with respect to a place at which someone or something exists as illustrated in (246) - (248) (for further discussion see section 8.3).

(246) *abʉg tir rãm ãay nĩi*  
 DISC.CONJ 3SG go women exist  
 ‘He went (to the place) where the girl was’

(247) *tir rãm çâa weed nĩi rid*  
 3SG go [divide.food eat] EXI LOC  
 3SG go party EXI LOC  
 ‘He went (to the place) where there was a party.’

(248) [*abʉg tir õot beey yâa*] [*tir tee nãam nĩi*]  
 DISC.CONJ 3SG cry do.again return 3SG son cadaver EXI  
 ‘He came back crying to where the (dead) body of his son was.’

Example (249) shows the negated existential *mẽr* ‘not exist’ indicating absence of a Figure referent in space. According to Martins (2004, p. 214), *mẽr* derives from the verb *nĩi* and the negation suffix *-ẽr*, however it remains unclear what phonological process is responsible for the change from /n/ to /m/.

(249) *rũm tâg ‘mãg mẽr*  
 avocado tree here NEG.EXI  
 ‘Here (there) is no avocado tree.’

### 5.3 Posture Verbs

Besides the verb *nĩi* in its locative and existential uses, Dâw possesses a set of posture verbs expressing the location of an entity in space, or in metaphorical extensions (see LEMMENS, 2002). The following description (examples (250) - (256)) of a spatial scene (see Picture 7) that was built with small toy animals will give us a first impression of the inventory of posture verbs in Dâw.



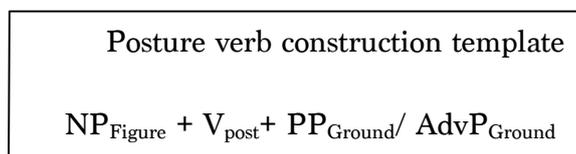
Picture 7 - Elicitation task: Description of a spatial scene

- (250) *mãg nĩ nãax taax*  
 here be.located [water tapir]  
 here be.located capybara  
 ‘Here is the capybara.’
- (251) *tir nĩ bee pej*  
 3SG be.located tree next.to  
 ‘He is next to the tree.’
- (252) *çõkwêt pẽem bee pej*  
 toucan sit tree next.to  
 ‘The toucan is sitting next to the tree’
- (253) *waas nĩ xãd bee xax*  
 monkey be.located DUR tree between  
 ‘The monkey is staying between the trees.’
- (254) *pã yêt tuu*  
 frog lie ground  
 ‘The frog is lying on the ground.’
- (255) *yãm x# kãt bee pej*  
 jaguar stand.hum tree next.to  
 ‘The jaguar is standing next to the tree.’

- (256) *xet*                    ***nĩi***                    *xun*                    *muxax*  
alligator                  be.located              anteater                behind  
‘The alligator is behind the anteater.’

The data confirm that the prototypical use of posture verbs is based on human body postures that are sitting/standing/lying (see NEWMANN, 2002; GRINEVALD, 2006). Furthermore, they describe the Figure’s orientation in space, i.e. the sentence ‘The frog is lying on the ground.’ implies both a lying position and, at the same time, a horizontal orientation of the Ground. Grinevald (2006, p. 38) mentions the fact that many Amazonian languages add a fourth posture verb describing the posture of *hanging*, that goes back to the cultural fact that people make use of hammocks and that daily objects are usually hanging rather than stored in furniture. This may be also confirmed for Dâw.

From the syntactic point of view, posture verbs are intransitive stative verbs that often co-occur with locative complements, as we will see in detail in the upcoming examples. The sentential structure resembles the locative copula construction that I have shown in the last section and can be outlined in the following scheme:



The inventory of basic posture verbs in Dâw is summarized in o below. It provides information about the relationship between Figure and Ground that each posture verb reveals, the configuration of the Ground as well as the configuration of the Figure which corresponds to Newman’s (2002, p. 2) so-called *spatio-temporal domain*. Those criteria serve as a framework to describe the semantics and distribution of each posture verb in the following sections.

Table 17- Basic Posture Verbs in Dâw

Posture Verb	Figure-Ground relationship	Ground configuration	Figure Configuration
<i>yêt</i> - 'lie'	Ground is sustained <i>under</i> the Figure	horizontal support	horizontal elongated position
<i>ka'</i> - 'lie.in.hammock'			horizontal elongated position
<i>pēm</i> - 'sit'			compact position
<i>kât</i> - 'stand.hum'			vertical elongated position
<i>xâa</i> - 'stand.Nhum'			vertical elongated position
<i>dâk</i> - 'hang'/ 'be in adhesion'/ 'stick'	Ground in partially or entire contact with one part of the Figure	variable	vertical elongated/ compact position
<i>yay</i> - 'hang:horiz.'	Ground is sustained above the Figure	horizontal support	vertical elongated position
<i>lox</i> - 'hang:vert.'	Ground is sustained on Figure's lateral	vertical support	vertical elongated position

o shows that Dâw possesses the three basic posture verbs sit, stand and lie, adding a verb to express *hanging*. Furthermore, there are different verbs for lying (*yêt* and *ka'*) and for standing, (*xâa* and *kât*). The notion of hanging can be expressed through *dâk*, *yay* and *lox*. Their semantic properties will be discussed in the following sections, however, it can be anticipated that this kind of extension of posture verbs differs in languages and can be traced back to the fact that the language differentiates between [+human] nouns or even extends its set of basic posture verbs according to physical properties of the Figure – a fact that Aikhenvald (2000) compares with classificatory elements.

### 5.3.1 Basic posture verb: *yêt* 'lying'

The first posture verb to be discussed is *yêt* 'lying' that in general refers to the horizontal orientation of a Figure that is in alignment with a horizontal support. Examples (257) and (258) show that Dâw does not make any difference with regard to the animacy of the Figure

referent. This implies that the basic human body postures expressed by Dâw posture verbs are extended to describe the position of animals and inanimate objects.<sup>22</sup>

(257) *yãm yêt bee dur xax*  
 dog lying tree piece between  
 ‘The dog is lying between the logs.’

(258) *João yêt tuu*  
 João lying ground  
 ‘João is lying on the ground.’

For some languages, such as Lipke (a Kwa language), it has been said that posture verbs are selected according to the shape of the Figure (see AMEKA, 2007). Here inanimate Figures with an elongated shape such as pencils or tubes do not make use of the posture verb *lying*. A positional verb like ‘be on’ is used instead. In Creek (Muskogean family), there are various forms of *lying* depending on the shape of the Figure, i.e. if we are talking about a round, long or flexible object for example (see HAAS, 1948, p. 244). This can be observed in Dâw for non-human Figure referents with distinct inherent shapes such as round or cylindrical that are compatible with different posture or positional verbs. Where elongated cylindrical entities can be the subject of *yêt* ((259) and (260)), round referents are preferred to be subjects of the positional verb *wôob* ‘be.on’ (261). The restriction for round objects derives from the impossibility of taking a lying posture and from the fact that the entire objects needs to be contact with the surface in this meaning.

(259) *galap yêt mej wâ’*  
 bottle lying table on  
 ‘The bottle is lying on the table.’

(260) *yak yêt çax wâ’*  
 manioc lying earth on  
 ‘The manioc is lying on the earth.’

(261) *yak yêt çax wâ’*  
 manioc lying earth on  
 ‘The manioc is lying on the earth.’

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<sup>22</sup> Newman (2002, p. 20) mentions that languages differ in the way (how and if) human body posture verbs are allowed to be used with non-human referents. French, for example, does not allow posture verbs to refer to non-human referents, whereas in English this is partly possible.

Within the Nadahup language family equivalent forms for *ka* were reported in Hup and Yuhup. For Hup, Epps (2008, p. 407) mentions the verb *g'ãʔ*- and assigns the semantics of 'hanging' or 'be suspended with free movement', adding the information that this verb is used for hammocks and floating canoes. Yuhup, shows the cognate form *~kaʔ* carrying the notion of 'be in suspension' according to Ospina Bozzi (2013, p. 152). Another metaphorical extension in Dâw, Yuhup and Hup is the usage of being the last person in a row (see 3.1.3).

### 5.3.2 Posture Verb: *pẽem* - 'sit' and *xaa* 'sit.AP'

The next posture verb in discussion is *pẽem* 'sit', that refers to an animate entity located on its buttocks with support from below (see ATINTONO, 2013, p. 186). The Figure usually has a compact posture but with its torso in an upright position which, in general, is possible for [+human] referents. Elicited and natural speech confirmed that Dâw speakers make use of *pẽem* in cases of humans or animals as Figure referents as illustrated in (262) - (264).

(262) *sãan pẽem tapete wã'*  
 cat sitting carpet on  
 'The cat is sitting on the carpet.'

(263) *yãm pẽem cesto ked*  
 dog sit basket in  
 'The dog is sitting in the basket.'

(264) *tir pẽem bãagn wã'*  
 3SG sit bench on  
 'He is sitting on the bench.'

The fact that Dâw does not extend the use of the verb *pẽem* to inanimate entities reflects a common pattern among languages that can be traced back to the fact that 'sitting' is often a posture restricted to humans or higher animate subjects such as animals since only they are able to assume this kind of body posture (see LICHTENBERK, 2002, p. 305). We can therefore conclude that *pẽem* has a classificatory function in regard to shape and animacy properties of the Figure.

Basic Locative Constructions with *pẽem* show locative adjuncts expressing the Ground, which functions as horizontal support underneath the Figure (see examples (262) - (264)). However, in spatial situations such as (265) the notion of horizontal support is implied while the Figure-Ground relation is a non-contiguous one.

- (265) *dâw pẽem pogelo pej*  
 person sit bonfire next.to  
 ‘The person is sitting next to the bonfire.’

Clauses with posture verbs like *pẽem* that lack locative adjuncts, such as example (30), have a stative reading instead of a locative (see DANZIGER, 1995). Foley (1986) adds that situations encoded by basic posture verbs, locative copulas and existential verbs are inherently durational actions, which implies that the selection of aspectual morphology expresses extended aspect. This is illustrated in example (266) in which the speaker chose the durative indicating auxiliary *xâd*. This characteristic of denoting durational events makes posture verbs prone sources for grammaticalization into aspect morphemes.

- (266) *abug Maria pẽem xâd*  
 DISC.CONJ Maria sit DUR  
 ‘Then, Maria kept sitting.’

When the notion of sitting is being associated with another synchronus action in complex predicates, Dâw makes use of the verb *xaa* instead of *pẽem*. In opposition to *pẽem*, *xaa* does not occur in simple predicates making reference to bodily orientation. This resembles the concept of Associated Motion (GUILLAUME, 2016) where a set of verbal affixes associate a motion component to an event expressed by a verb. By making use of *xaa* in complex predicates, the speaker expresses a similar notion of what was described for associated motion with respect to posture : that is, doing V while sitting (see (267)). With other words, *xaa* associates the notion of sitting to the event expressed by the preceding verb, corresponding to Enfield’s (2002) understanding of Associated Posture. I tested if further basic posture verbs show a different counterpart when used in complex predicates, which could not be verified in Dâw.

- (267) *tir redçid xaa tir xaaw*  
 3SG clean sit.AP 3SG rifle  
 ‘He cleans his rifle (while) sitting.’

### 5.3.3 Posture Verbs: *kât* - ‘standing.hum’ and *xâa* - ‘standing.Nhum’

Dâw has two posture verbs to express the concept of ‘standing’ - *kât* refers to humans and higher animate referents while *xâa* occurs only with non-human referents. However, both verbs refer to a Figure that is in a vertical position projected from their feet or their base. Typically, [-human] referents used as subjects of *xâa* are objects whose shape is long and thin

such as a bottle (268), a twig (269) or a rifle. When speakers were asked to describe for example the posture of a bulbous vase that was in upright position, they preferred the locative copula construction or the positional verb *wôob* ‘be on’. At first sight it seems that shape is a selective criterion for this posture verb. On the other hand, it seems obvious that Dâw speakers have extended the use of this verb to objects having a similar shape to humans in an upright standing position.

(268) *galap xâa paas wâ’*  
 bottle stand.Nhum stone on  
 ‘The bottle is standing on the stone.’

(269) *bee mir xâa bee n#d wâ’*  
 tree twig standing.Nhum tree stub on  
 ‘The twig is standing on the stub.’

Example (270) demonstrates the prototypical use of *kât* ‘stand.hum’, that describes [+human] Figure referents in an upright position. In contrast, example (271) was judged ungrammatical since the Figure is represented by a non-human referent. Interestingly, this verb applies also to animals whose ‘standing’ posture is not fully erected, for example jaguars who usually stand on their four extremities, and therefore do not have a vertical body position. However, this verb refers to the prototypical posture of standing for animals of this species and moreover shows the counterpart to the postures ‘lying’ and ‘sitting’.

(270) *‘yãm x#’ kât bee pej*  
 jaguar stand.hum tree next.to  
 ‘The jaguar is standing next to the tree.’

(271) *\*xaaw kât top b##t*  
 rifle stand.hum house under

In contrast, the use of its counterpart *xâa* ‘stand.Nhum’ shows a grammatical reading with inanimate referents in example (272), while example (273) with an animate Figure referent was judged ungrammatical by Dâw speakers.

(272) *xaaw xâa top b##t*  
 rifle stand.Nhum house under  
 ‘The rifle is in the house.’  
 Lit.: ‘The rifle is standing under the house.’

(273) \**Pedro xâa*                      *top*      *b#ut*  
 Pedro stand.Nhum    house    under

Finally, *kât* additionally shows the semantic extension of ‘be alive/survive’ as exemplified in (274). In this context, the posture verb is modified through a durative aspectual auxiliary *xâd*. This literally indicates that the action of standing is extended for long period in time, which can be interpreted at the same time as ‘being alive’ or ‘staying’.

(274) ‘*aa*’                      ‘*yãm x#*’                      *kasãam rũ*  
 ANAPH                      jaguar                      die      UNIV.QUANT  
 ‘All those jaguars died.’

‘*yãm x#*’                      *mẽ*’                      ***kât***                      *xâd*      *mãr*  
 jaguar                      NMRL:I                      stand.hum      DUR      RPT  
 ‘They say just one jaguar survived’  
 Lit.: ‘They say, only one jaguar kept standing.’

### 5.3.4 Posture Verb: *dâk* ‘be attached’, *yay* ‘hang.horiz’ and *lox* ‘hang.vert’

As Grinevald (2006, p. 38) states, it is common for Amerindian languages to add the notion of hanging as a fourth posture to the three basic posture verbs. Dâw has three different posture verbs encoding the notion of hanging or being attached: *dâk* ‘be attached’<sup>23</sup>, *yay* ‘hang.horiz’ and *lox* ‘hang.vert’. Their usage differs with respect to degree of contact with the Ground: where *dâk* refers to Figure entities hanging from a single point of contact and without the help of gravity (e.g. a hook), *yay* and *lox* apply when the entire Figure referent is in contact with a horizontal or vertical oriented Ground.

Examples (275) and (276) show that the Figure object is in contact with a vertical oriented Ground. In contrast, in (277) the Figure is located below the Ground and vertically attached to it. The topological relation between Figure and Ground in Basic Locative Constructions with *dâk* is usually established through a PP with *rẽd* ‘at/in.adhesion’ as its head.

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<sup>23</sup> For Dâw’s sister languages the cognates *dak* in Yuhup (OSPINA BOZZI, 2013, p. 155) and *d’ak-* in Hup (EPPS, 2008, p. 407) were observed and described as ‘being attached’, which corresponds to its employment in Dâw.

(275) *telefone*      ***dâk***      *top*      *rêd*  
 telephone      be.attached      house      at  
 ‘The telephone is attached to the wall.’

(276) *kedrêê*      ***dâk***      *dâw*      ‘*ây*      *nûrûnh*      *rêd*  
 necklace      be.attached      person      FEM      neck      at  
 ‘The necklace is hanging from the women’s neck.’

(277) *xop*      ***dâk***      *puleg*      *rêd*  
 cup      be.attached      nail      at  
 ‘The cup is hanging on the nail.’

A further context of *dâk* is the location of insects on horizontal supports such as trees or people, as illustrated in (278). That notion was often understood by Dâw speakers as ‘leaning’. All these configurations share vertical support and Figures that are attached without the help of gravity. This could be additionally verified when the picture below was rotated. For this spatial scene, Dâw speakers provided example (279) with the positional verb *wôob* ‘be on’ and the Ground constituent is indicated through the postposition *wâ* ‘on’ making reference to a non-vertical Ground.

(278) *meem*      ***dâk***      *bee*      *rêd*  
 butterfly      be.attached      tree      at  
 ‘The butterfly is leaning on the tree.’



(279) *meem*      ***wôob***      *bee*      *wâ*  
 butterfly      be.on      tree      on  
 ‘The butterfly is on the tree.’



Additionally, *dâk* frequently appears in complex predicates in combination with the verbs *yay* ‘hanging horizontally’ and *lox* ‘hanging vertically’ that refer to the spatial orientation of the Ground referent. Example (280) was provided to describe the posture of a sloth that clung tightly to a trunk, whereas in example (281) the monkey was hanging from a horizontal oriented branch. We can therefore conclude that a selective criterion for these posture verbs is the spatial orientation of the Ground (vertical or horizontal).

(280) *peen* | ***lox***      ***dâk***      *bee*      *rêd*  
 sloth hang.vert      be.attached      tree      at  
 ‘The sloth is hanging on the tree.’



- (281) *waas* [*yay* *dâk*] *bee* *rêd*  
 monkey hang.horiz' be.attached tree at  
 'The monkey is hanging from the tree.'



In both examples, *lox* and *yay* occupy the first verb slot and are followed by *dâk*, providing explicit information about the posture and position of the Figure referent. When combined with the positional verb *wôob* 'be on' a different complex spatial situation is described in (45). That is, a part of the rope is lying on the table, with the end dangling off the table. The speakers used *yay* as the rope was hanging from a horizontal oriented Ground represented by the table and *wôob* to indicate that some part of the rope was in contact with the table.

- (282) *yagtít* [*yay* *wôob*] *mej* *wâ'*  
 rope hang.horiz be.on table on  
 'The rope is on the table, hanging from it.'



Another remark should be made with reference to language change, as we are able to observe that younger speakers predominately made use of *dâk* to express any kind of spatial situation that can be interpreted as hanging or being attached. Older Dâw speakers showed more variation in their choice of posture verb to express these notions. Again, this may be traced back to the strong influence of Portuguese on younger speakers.

### 5.3.5 Further posture verbs in Dâw

This section briefly presents more posture verbs that appear frequently in the data. As presented in 0, these postures do not refer to canonical human body postures but to postures that both human and non-human referents are able to perform. Syntactically, they behave in the same way observed for posture verbs described in the last section, being intransitive stative verbs that often co-occur with locative oblique arguments. However, these verbs rarely occur in simple predicates but frequently occupy the first slot in complex predicates (see section 7.3.2.1 for a discussion on that topic).

Table 18 - Further Posture Verbs (non-canonical)

Posture Verb	Figure-Ground Relation	Ground configuration	Figure Configuration
<i>loy</i> - 'be.inclined'	Ground is sustained <i>under</i> the Figure	horizontal orientation	vertical elongated position with inclination of the torso (if human)
<i>waa</i> - 'be.rolled.up'			compact position
<i>son</i> - 'be.crouching'			compact position
<i>tuk</i> - 'be.facing.down'			vertical elongated position, upside down

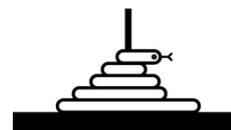
The verb *loy* 'be inclined' was only selected for spatial scenes with [+human] Figure referents. In (283), for example, a person was sitting on a table with his/her torso in inclined position similar to (284) where the speaker described a monkey standing on his rear legs with an inclined torso.

(283) *dâw* [*loy* *pēm*] *mej wâ'*  
 person be.inclined sit table on  
 'The person is sitting (with torso) inclined on the table'

(284) *waas* [*loy* *kât*]  
 monkey be.inclined stand.hum  
 'The monkey is standing (with torso) inclined'

The employment of the posture verb *waa* 'be rolled up' is best understood in comparison with positional counterpart *pâd* 'be wrapped around'. *Waa* was used to describe a Figure referent that is rolled up on its own axis such as a snake, a flexible tube or a rope. This implies a Figure referent of flexible shape and a certain length that enables the Figure entity to perform this posture. Examples like (285) with *pâd*, in contrast, refer to identical Figure referents that are instead wrapped around a support.

(285) *rêr* [*pâd* *wôob*] *bee rēd*  
 snake be.wrapped.around be.on tree at  
 'The snake is rolled up on the tree.'



- (286) *naa'*            *tit*    [*waa*            *wôob*] *tuu*  
 DEM:prox    rope   be.rolled.up   be.on ground  
 'The rope is rolled up on the ground.'



Finally, the verb *tuk* 'be facing down' indicates a Figure referent in an upside down position located on a horizontally oriented Ground underneath the Figure referent. *Tuk* applies for Figure referents with a canonical upper and lower end that enables the speakers to recognize if the Figure referent is in its canonical position or turned upside down. Some examples are bottles as in (287) or vases as in (288). Similar to non-basic posture verbs, *tuk* occurs in the form of complex compounds as well, as illustrated in the examples below in which it precedes a canonical posture verb or a positional verb. The latter describes the basic notion of posture or position of the Figure, whereas *tuk* in the first slot provides additional information about the Figure's posture.

- (287) *galap* [*tuk*                                    *yêt*] *bây*    *ked*  
 bottle be.facing.down            lie    basket in  
 'The bottle is lying in the basket turned around.'

- (288) *vaso* [*tuk*                                    *wôob*] *bee*    *mĩ*    *wâ'*  
 vase   be.facing.down            be.on tree   twig   on  
 'The vase is upside down on the twig.'

In examples (289) and (290) *tuk* and *xâa* are juxtaposed creating a new semantic unit through a co-lexicalization that corresponds to the notion of 'spike'. This is an outcome of root serialization in complex predicates that is a productive source for new functional and lexical items.

- (289) *bee*    *mĩ*    *tuk*                                    *xâa*                    *bee*    *n#d*                    *wâ'*  
 bee    twig   [be.facing.down            stand.Nhum]   tree   stub            on  
 bee    twig   spike    tree   stub            on  
 'The twig is spiked in the stub.'

- (290) *t#m*                    *galap*    *tuk*                                    *xâa*                    *tuu*  
 NMRL:2            bottle [be.facing.down            stand.Nhum]   ground  
 NMRL:2            bottle spike    ground  
 'Two bottles are spiked in the earth.'

### 5.3.6 Positional Verbs

Another resource to describe static spatial events in verbal predicates is positional verbs that describe the spatial disposition of a Figure in relation to a certain Ground (see EVANS, 2014, p. 1). Positional verbs are stative intransitive verbs and have the same sentential structure as has already been observed for copula constructions and posture verb constructions:

<p>Positional verb construction template</p> $\text{NP}_{\text{Figure}} + \text{V}_{\text{positional}} + \text{PP}_{\text{Ground}} / \text{AdvP}_{\text{Ground}}$
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According to Grinevald (2006, p. 42), positional verbs are characterized by the extensive conflation of different semantic information about the Figure such as shape, texture, size or disposition but do not provide information on the the topological relation between Figure and Ground. However, Dâw positional verbs do express topological relations indicating Ground orientation, as we will see in this section. In (291), for example, the topological relation of Figure and Ground is conflated in the verb root as the positional verb *wôob* already indicates that the Figure object is located on a horizontal surface. For that reason, the selection of a postposition is not random and consequently needs to be *wâ'* ‘on.top’ as the positional verb *wôob* already determines the topological relation between Figure and Ground.

- (291) *bol wôob mej wâ'*  
 ball be.on table on  
 ‘The ball is on the table.’

o lists the most frequent posture verbs in Dâw that derive mostly from Ameke and Wilkins’ (1999) Positional Stimuli Set, which was developed to test possible encodings of Basic Locative Constructions (BLC) with an emphasis on possible positional issues rather than on topological relations. Therefore, the authors selected Figure objects according to a number of factors like *axis* (whether the object is I-Dimensional ‘stick’, II-Dimensional ‘cloth’, III-Dimensional ‘pot’), *canonical orientation* (for example, bottle have such an orientation and balls do not) and *physical properties*, i.e. whether the object is rigid (stick), flexible (rope) or squat (pot). Factors defining the different Ground referents are also related to the physical properties such as container (basket) or a flat surface (table) (see AMEKA and WILKINS, 1999).

Table 19- Some positional verbs in Dâw

Positional Verb	Figure-Ground relation	Ground configuration/contact level	Figure configuration-shape
<i>xaa</i> - 'be.leaning'	Ground as support for the Figure	horizontal/vertical support/ partial contact	+/- vertical elongated /erected
<i>tâg</i> - 'be.laid.across	Ground sustained below the Figure	horizontal/vertical support/ partial or full contact	+/- horizontal elongated
<i>s#n</i> - 'be.contained		vertical support/ full contact/containment	+/- horizontal elongated
<i>çee</i> - 'be.spread'		horizontal support/ full contact	+/- horizontal elongated
<i>wôob</i> - 'be.on		horizontal support/full contact	horizontal elongated (not for round objects)
<i>pâd</i> - 'be.rolled.around'	Ground as axis of the Figure	partial or full contact	+/- compact

A look at o shows a division with respect to semantic information such as disposition, distribution and adhesion as well as configurational properties of Figure and Ground and the degree of contact between them. Positional verbs expressing the notion of disposition in Dâw are *tâg* 'be laid across', *xaa* 'be leaning' and *wôob* 'be on'. In the case of *tâg* and *wôob*, the verbs are used to describe a spatial situation in which the Ground is sustained horizontally below the Figure. Both positional verbs require a Ground that has clear limits and is bounded in space in order to locate a Figure referent with respect to it. *Tâg* additionally adds the information that the Figure referent is in a diagonal or crossing position with respect to the Ground, which restricts Figure referents to objects with an elongated shape (e.g. sticks, bottles, rifles, etc.).

- (292) *bee* [*tâg* *wôob*] *mej wâ'*  
 tree be.laid.across be.on table on  
 'The stick is lying across the table.'



- (293) *galap* [*tâg* *wôob*] *paas wâ'*  
 bottle be.laid.across be.on stone on  
 'The bottle is lying crossed on the stone.'



In examples such as (292) and (293), the positional verb *tâg* only occurs in combination with the positional verb *wôob* in a complex predicate and is rarely found in simple predicates. A

possible reason might be that the verb root is in a process of losing its ability to appear in isolation.

Another positional verb focusing on disposition is *xaa* ‘be leaning’<sup>24</sup> which is used to describe a spatial situation in which Figure is in partial contact with a Ground at only one specific point which serves as a support for the Figure. In contrast to *tâg* and *wôob*, the Ground is always represented by a vertically oriented referent, as illustrated in (294).

- (294) *bee xaa bee rēd*  
 tree be.leaning tree at  
 ‘The tree is leaning on the tree.’



The positional verb *wôob* ‘be.on’ refers to Figure referents in a lying posture on horizontally oriented Ground, as earlier described for the posture verb *yêt* ‘lying’ (examples (295) – (296)). Yet the difference here is that *wôob* focuses on the topological relation between Figure and Ground, that is *be on something*, instead of indicating posture. Consequently, this verb requires the postposition *wâ’* ‘on’ as a logical consequence of the fact that it already indicates the topological relation of being located *on* something.

- (295) *yak wôob bee n#d wâ’*  
 manioc be.on tree stub on  
 ‘The manioc is on the stub.’

- (296) *tit wôob bee n#d wâ’*  
 rope be.on tree stub on  
 ‘The rope is on the stub.’

According to Ameka (2007, p. 1073), positional verbs can also have the function of indicating the notion of distribution like ‘be spread’ or ‘be covered’. Dâw shows one positional verb with these semantics: *çee* ‘be spread’. This positional verb only functions for spatial scenes with multiple Figure referents such as beans or manioc roots that are found spread on a certain Ground. This is illustrated in (297).

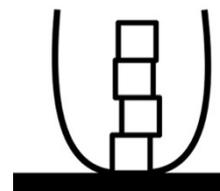
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<sup>24</sup> The verb *xaa* is a case of verbal polysemy in Dâw since it denotes both the notion of ‘sitting’ in associated posture constructions and the positional notion of ‘leaning’. A semantic relationship between both posture and positional meaning cannot be found.

- (297) *peijao [çee yêt] tuu*  
 bean be.spread lie ground  
 ‘The beans are lying on the ground.’  
 Lit.: ‘The beans are lying spread on the ground.’

Finally, Dâw has one positional verb expressing the notion of being contained in a container: *sɬɬɬɬ* ‘be contained’. Interestingly, this positional verb does not conflate Figure information but Ground information and requires Ground nominals in locative adjuncts that have the form of a container, as illustrated in (298) and (299). Nevertheless, *sɬɬɬɬ* rarely appears in natural speech data and is often substituted with posture verbs depending on the Figure referents.

- (298) *naa’ yak sɬɬɬɬ bây ked*  
 DEM:prox manioc be.contained basket in  
 ‘This manioc is stacked in the basket.’



- (299) *naa’ galap sɬɬɬɬ bây ked*  
 DEM:prox bottle be.contained basket in  
 ‘The bottles are stacked in the basket.’

In sum, the examples given here provide evidence to establish the difference between the semantic employment of posture and positional verbs. We are able to observe that the former refer exclusively to the posture of the Figure referent whereas the latter refer to the Figure’s disposition in relation to a certain Ground. This implies restrictions on the selection of postpositions indicating the Ground, as for example *wôob* ‘be on’ already determines the topological relation between Figure and Ground. Furthermore, dimensional differences of the Figure object don’t seem to influence the selection of the positional verb as we are able to see in the examples of *tâg* ‘be laid across’ that consultants used for any kind of Figure referents. At the same time, we observed that differences in quantity of Figure referents, (i.e. whether there was one bottle or several bottles for example) does not lead to the selection of a different positional verb. This may be a consequence of the fact that Dâw shows non-obligatory plural marking (MARTINS, 2004, p. 400).

## 5.4 Summary

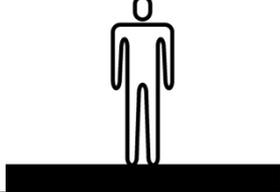
This chapter aimed to describe in detail how Dâw encodes spatial notions in static location within simple predicates. Three ways of linking the Figure referent with the Ground referent were observed: copula and existential constructions with *nîi* and VPs headed by posture or

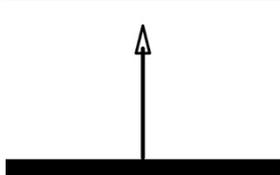
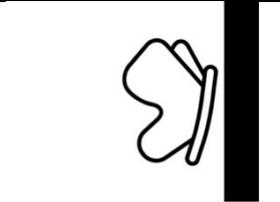
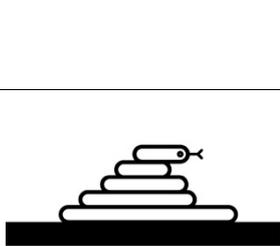
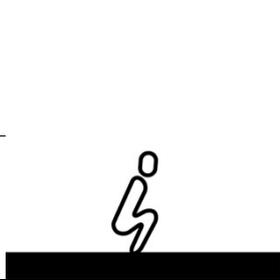
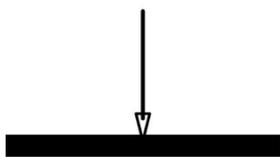
positional verbs. We could add complex predicates as a fourth resource, but they will be discussed in detail in chapter 7.

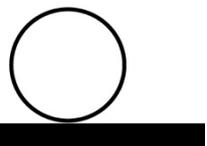
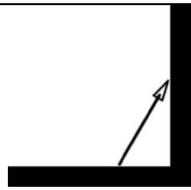
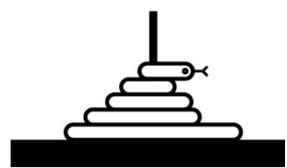
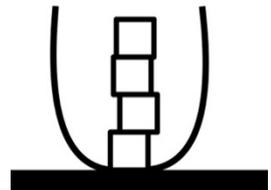
We saw that copula constructions with *nĩ* are used to link Figure and Ground indicating location, without making any specific reference to the configuration of the two. Information about the topological relation in copula constructions is therefore provided in PostPs and AdvPs. Existential constructions in D aw describe the the existence of a Figure referent in space. Ground information in these constructions is often left implicit in discourse.

In contrast to the copula construction, the choice of a set of posture and positional verbs depends on important semantic factors including properties of Figure and the Ground. o shows a summary of stative locative verbs observed in this section, divided according to their semantic properties suggested by Ameka (2007, p. 1073): posture, topological relation, adhesion and distribution. Furthermore, the Table contains information about the properties of the Figure object; support relation, animacy distinction as well as frequent postpositions that are likely to occur together with the locative verb.

Table 20- Summary of static locative verbs in D aw

Verb	Figure properties	Support relation	Animacy distinction	Frequent postpositions
<b>Posture</b>				
<i>y�t</i> - 'lie'	- elongated Figure referents - horizontal elongated position		-	<i>w�</i> 'on'
<i>ka</i> ' - 'lie in hammock'	- horizontal elongated position		-	<i>ked</i> 'in' <i>ked ka</i> 'inside'
<i>p�em</i> - 'sit'	- compact position		only human referents	<i>w�</i> 'on' <i>ked</i> 'in' <i>pej</i> 'next.to'
<i>k�t</i> - 'stand.hum'	- vertical elongated position		only human referents	<i>b�t�t</i> 'under' <i>pej</i> 'next.to'

posture	<i>xâa</i> - 'stand.Nhum'	- vertical elongated position - long, thin objects		only inanimate referents	<i>buuu</i> 'under' <i>pej</i> 'next.to'
	<i>dâk</i> - 'be attached'	- vertical elongated/ compact position		inanimate referents and lower animates	<i>rêd</i> 'at'/ 'in.adhesion'
	<i>yay</i> - 'hang.horiz'	- vertical elongated position		inanimate referents and higher animates	<i>rêd</i> 'at'/ 'in.adhesion'
	<i>lox</i> - 'hang.vert'	- vertical elongated position		animate referents	<i>rêd</i> - 'at'/ 'in.adhesion'
	<i>loy</i> - 'be inclined'	- torso inclined		only human referents	- only in complex compounds with other posture verbs influencing the selection of postposition
	<i>waa</i> - 'be rolled up'	- Figure rolled up on its own axis - animals like snakes or long and flexible inanimate referents		animals and inanimate referents	- only in complex compounds with <i>wôob</i> → <i>wâ</i> 'on'
	<i>son</i> - 'be crouching'	- compact position		only human referents	<i>wâ</i> 'on'
	<i>tuk</i> - 'be facing down'	- vertical elongated position - upside down - object with canonical base		inanimate referents	- only in complex compounds with other posture verbs influencing the selection of postposition

position	<b>Topological Relation</b>				
	<i>nīi</i> - 'be located'	- no restrictions		-	Preference: <i>rēd</i> - 'at'/ 'in.adhesion' - any postpositions depending on the topological relation
	<i>wōob</i> - 'be on'	- no restrictions		-	<i>wā</i> 'on'
	<b>Adhesion</b>				
	<i>xaa</i> - 'be leaning'	- vertical elongated position, inclined - punctual contact with the Ground object		inanimate referents	<i>rēd</i> 'at'/ 'in.adhesion'
	<i>pād</i> - 'be wrapped around'	- Figure wrapped around a vertical support - animals like snakes or long and flexible inanimate referents		inanimate referents	<i>rēd</i> 'at'/ 'in.adhesion'
	<b>Distribution</b>				
	<i>sūun</i> - 'be contained'	- more than one Figure referent piled or vertically		inanimate referents animate referents (?)	<i>ked</i> 'in' <i>ked ka</i> 'inside'
	<i>ḥee</i> - 'be spread'	- more than one Figure referent spread but heaped - usually small objects of grained nature		inanimate referents animate referents (?)	- depends on the Ground NP

<i>tâg</i> - 'be laid across'	- no round Figure referents - horizontal elongated position		inanimate referents	<i>wâ</i> 'be.on'
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According to the information in the Table we can conclude that Figure properties like shape, canonical base, animacy, number, relation to the Ground and bodily orientation have influence on the selection of locative verbs. In terms of Ground properties, Dâw recognizes a difference in vertical or horizontal orientation of support for some verbs as well as Ground conflation in the verb *ka* 'lie in hammock' or *s#n* 'be contained'.

Moreover, there is often a correlation between the locative verb and the spatial postposition expressing the Ground (if overtly expressed) that can be summarized as follows:

- a) *The semantics of the postposition corresponds to the support relation between Figure and Ground expressed by the locative verb:*

example: *yêt* 'lying' > support below the Figure referent > *wâ* 'be.on'

- b) *The postposition corresponds to the disposition of Figure and Ground expressed by the positional verb:*

example: *wôob* 'be.on' > Figure referent located upon the Ground > *wâ* 'be.on'

- c) *The postposition depends on the Ground NP:*

example: *s#n* 'be contained' > Ground as container (basket) > *ked* 'inside'

This interaction should not be understood as a restrictive relation between locative verbs and postpositions, but more as a pervasive pattern in our data. In locative copula constructions, spatial postpositions are selected according to inherent physical properties of the Ground referent or with respect the topological relation between Figure and Ground.

Finally, these observations enable a cross-linguistic classification of Dâw's locative predicates within the typology established by the Max Planck Institute (see Annual Report 1999, 2001 and AMEKA and LEVINSON, 2007). This typology is an outcome of long-term research including the comparison of locative predication in various languages that has led to four different types presented in o below.

Table 21- Four basic types of locative predication in an unmarked locative statement (AMEKA and LEVINSON, 2007, p. 852)

Type	Predicate	Language
Type O	No verb in basic locative construction	Saliba
Type I	Single locative verb (or suppletion under grammatical conditioning)	English, German, Tamil Locative/ existential predicate: Yucatec Japanese, Chinese (Turkish)
Type Ia	Copula (i.e., dummy verb used in many other constructions)	
Type Ib	Locative verb determined by grammatical categories	
Type II	Small, contrastive set of Posture or Positional verbs (3-7)	Guugu Yimithirr, Rossel, Dutch, Arrernte
Type III	Large or unlimited set of positional verbs (7-100)	Likpe, Tzeltal, Zapotec

A first look on this typology reveals that Dâw is best placed between type II and III, since predicates in such languages encode detailed spatial information in the verb (see VAN GEENHOVEN and WARNER, 1999, p. 62). In terms of quantity of the posture and positional verb inventory, Dâw seems to be a type III language, but a closer look on the description of predicates of both types classifies Dâw as a type II language. One reason can be that the inventory of type II languages presents a basic set of posture verbs (sit, stand, lie and hang), as well as a copula verb used when none of the posture verb can be applied and, finally, a set of contrastive positional verbs (see AMEKA and LEVINSON, 2007, p. 858). Furthermore, the abstract geometric properties of the Figure partly or largely determine the use of the verbs in type II languages whereas predicates of type III languages show much more detailed properties of Figure object, using language-specific discriminations (see *ibid.*). Another point that leads us to identify Dâw as a type II language is that the authors predict a lack of spatial adpositions in type III languages. They assume that all referential functions are carried out by locative predicates such as in Tzeltal, a typical type III language, which is not the case for Dâw. One last remark must be made in relation to what the authors call ‘usage character’ referring to the *assertional* and *presuppositional* use of locative predicates. As presuppositional usage they describe “the default collocation of the nominal concept and positional, either by convention, or in the case of physical objects by their canonical position” (AMEKA and LEVINSON, 2007, p. 859). For example, if the language assigns ‘standing’ as the canonical position for a bottle, the speaker will use the same verb even if the bottle is in a lying a position primarily in type II languages. In contrast, the assertional use of the locative verb refers to the non-default position of the Figure object and therefore asserts a non-canonical

position in type III languages. Dâw has shown much more assertional than presuppositional usage of locative verbs and is in that point more similar to a type III language. This fact confirms again that Dâw is an intermediate type located between type II and III in Ameka and Levinson's typology. Grinevald (2006, p. 33) proposes a revision of the typology that includes a type of languages that she renames as 'Locative stems of some Amerindian languages' including languages of an intermediate type such as Dâw.

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## **6 Predicates expressing motion**

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## 6 Predicates expressing Motion

The last chapter focused on how spatial information about Figure and Ground in static locations is encoded in simple predicates. However, locative constructions can also apply when the Figure referent is involved in a motion event. For example, if one asks ‘Where is Mary?’ the answer might be ‘Mary is sitting on the chair’ or one can answer ‘Mary went to the supermarket’ representing a motion event. In contrast to the examples we have seen in the last chapter, the task here is to localize a *moving* Figure entity with respect to a certain Ground referent. This corresponds to Talmy’s (2007, p. 70) definition of a basic motion event that contains a Figure and a Ground while the former is *moving* in relation to the latter.

Recalling the terminological notes on motion from section 1.2.4, I have introduced Talmy’s (ibid.) typology of motion events, which suggests a classification of languages according to lexicalization patterns of the key parts of a motion event (motion, Path and Manner of motion). According to the author (ibid.), languages will provide *satellite framing* (Path expressed in a non-verbal element) or *verb-framing* (motion and Path are conflated in the verb root). Slobin (2004) proposes a third type including languages that encode Path and Manner in syntactic equivalent forms (e.g. complex predicates), which he calls *Equipollent-framing*. For Dâw, it can be anticipated that all three patterns occur. Evidence comes from the examples (300) – (302). Example (300) shows verb-framing since the notion of Path is conflated in the verb root *sâak* ‘climb up’. Example (301) shows satellite-framing since the verb *lâb* ‘roll’ expresses the Manner of motion. The notion of Path is encoded in the form of a postpositional phrase headed by the locative marker *rid*. Finally, example (302) shows equipollent framing with a sequence of an inherent motion verb *lâb* ‘roll’ and a displacement motion verb *xutu* ‘go down’ in a complex predicate. The verb in the first slot indicates the notion of Manner whereas Path is encoded in the subsequent verb.

(300) Verb framing

<i>Margarete</i>	<b><i>sâak</i></b>	<i>nâk</i>	<i>tâag</i>	<i>rêd</i>
Margarete	climb.up	açai	trunk	at

‘Margarete is climbing up the açai tree.’

(301) Satellite framing

<i>bol</i>	<b><i>lâb</i></b>	<i>Luiz</i>	<i>nîi</i>	<i>rid</i>
ball	roll	Luiz	be.located	LOC

‘The ball is rolling towards Luiz.’  
Lit.: ‘The ball is rolling to the place where Luiz is.’

- (302) Equipollent framing (complex predicate)  
*paas [lâb xutɬ] nâax dōo' rid*  
 stone roll go.down.ground water port LOC  
 'The stone rolled towards the river.'  
 Lit.: 'The stone rolled descending towards the river.'

All three examples taken from Dâw show that Talmy's binary typology and Slobin's extension are not sufficient since they do not take the distribution of motion information in the entire clause into account. For that reason, I follow Beaver's et al. (2009) holistic approach which involves the analysis of morphological, lexical and syntactic resources that are able to encode motion. In that way, options for how motion can be encoded in Dâw can be accessed and a more complete picture can be obtained (see BEAVERS et al., 2009, p. 2). This corresponds as well to Wälchli & Zúñiga's (2006, p. 16), account for the analysis of motion events, in which motion is analyzed on the clausal level and attention is paid to the interaction of verbal, adnominal and adverbial resources.

This chapter begins with an analysis of the semantic and syntactic properties of the basic motion verbs *come* and *go* and Dâw. I will then focus on the description of inherent and directional motion verbs in order to see how the notions of Manner and Path can be encoded in spatial scenes with the respective motion verbs. Finally, I introduce the Source-indicating auxiliary *dōo'* and its alternation as an aspectual auxiliary.

## 6.1 COME and GO

The basic motion verbs 'come' and 'go' are considered to be lexical universals manifesting universal deictic opposition (see WILKINS and HILL, 1995, p. 209). In this regard, it has been assumed that motion towards the speaker (cislocative motion) corresponds to the English verb 'come' whereas movement away from speaker (translocative motion) is expressed by the verb 'go'. However, Wilkins and Hill (1995) observed in their case study on Mparntwe Arrernte (Pama-Nyungan) and Longgu (Oceanic) that the question of a universal prototype must be revised, as their results provided evidence that these motion verbs differ in meaning and usage in languages. Another piece of evidence for this argument comes from Uehara (2006) who claims that when a language has lexical forms for 'come' and 'go' it differs in whether deixis is obligatory or not. For Japanese the author describes that deixis is expressed mostly in the form of Manner or displacement motion verbs that accompany 'come' and 'go', indicating deictic information.

Another interesting point comes from Oshima (2012) who explains the possibility of a so-called *deictic shift*. This means that the deictic center represented by the speaker, can be shifted to the addressee like in example (a). The author mentions that English speaking consultants preferred to use ‘come’ instead of ‘go’, i.e. we can observe a shift from the deictic center (=speaker) to the addressee. In other words, the use of ‘come’ and ‘go’ doesn’t seem to be as rigidly connected with the speaker as the deictic center as was predicted by some authors.

(a) (OSHIRA, 2006, p. 2)

‘Can I {a. go/b. **come**} visit you?’

To investigate if Dâw shows lexical forms for ‘come’ and ‘go’ and how they are employed, Wilkins & Hill’s ‘Preliminary Come and Go Questionnaire’ (1993)<sup>25</sup> was used to collect data in the field (see chapter 1.3.1). The results provided evidence that Dâw shows lexical expressions for these verbs such as *rãm* ‘go’ and *nēed* ‘come’ that correspond to the prototypical usage. Yet, a closer look on our data shows that the usage of *rãm* ‘go’ is frequently modified by functional morphemes in post-verbal position depending on whether the Goal/Source of the motion event is overtly expressed or not. Moreover, *rãm* is often substituted with the displacement motion verb *rōd* ‘leave’ when the Source of motion does not coincide with the place where the speaker was located. The verb *nēed* ‘come’ is used when the movement occurs clearly towards the deictic center i.e. the speaker.

I will now turn to the contexts in which these verbs are used and provide evidence of how information about the level of determinacy of Goal and Source of the motion seems to influence the employment of *rãm* and *nēed*.

### 6.1.1 The verb *rãm* ‘go’

Within the elicitation task, the bare use of *rãm* ‘go’ rarely occurred; it was more likely to appear with functional morphemes or complex predicates. Table 22 provides an overview on the principal structures, all of which express the notion of translocative movement (movement away from the speaker). It also shows if the Source of motion coincides with the deictic center and if the Goal is anchored, that is known, or not for each structure. We will see that these criteria influence the choice of the structures presented in the Table.

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<sup>25</sup> The line drawings representing the spatial scenes in this section are taken from Wilkins and Hill’s (1993) questionnaire. These spatial scenes were acted out in the community and described by the consultants. The deictic center is represented by the white circle in the drawing.

Table 22- Notions of GO in Dâw

Verb (structure)	Source of Path is anchored with the deictic center (=speaker)?	Goal of Path is anchored?
<i>rãm</i> 'go'	yes	yes
<i>rãm</i> + <i>yoow</i> go + PROG	yes	no
<i>rãm</i> + <i>dôo</i> ' go + AUX:source	no	yes
<i>rôd</i> 'leave'	no	yes
<i>rãm</i> + <i>xôo</i> go + circulate	no	no

The first structure is the use of *rãm* 'go' without the addition of any functional items. In (303) and (304) *rãm* shows a clear deictic use, indicating a movement away from the deictic center<sup>26</sup>. In (303) the place of the deictic center (the speaker) coincides with the Source of motion of the Figure. The Figure in motion is then leaving this place in order to approach a Goal that is known to the speaker (the tree). The same situation applies in example (304) with the difference that the deictic center itself carries out the motion. In both examples the Goal of motion is indicated through a postpositional phrase headed by the locative marker. However, as mentioned in chapter 3, *rid* expresses location, Goal and Source which implies that the Goal reading derives from the inherent Goal-orientation of *rãm*. Motion events with locative predicates consisting in *rãm* describe then motion events with spatial coincidence of the deictic center and Source of motion and anchored Goals that are known by the deictic center

- (303) *Ester rãm bee rid*  
 Ester go tree LOC  
 'Ester is going to the tree.'

- (304) *buu b̃r rãm bood top rid*  
 tomorrow 1SG go oven house LOC  
 'Tomorrow I will go to the manioc cooking house.'



Another structure is the combination of *rãm* and the progressive aspectual auxiliary *yoow* indicating the notion of 'to go away'. This construction usually applies to spatial scenes in which the Goal of motion is indeterminate or unknown and in which the deictic center and Source of motion were aligned. In (305), for example, the Figure in motion slowly

<sup>26</sup> These line drawings represent the spatial scenes that were described by Dâw speakers in the respective example sentence. The drawings derive from Wilkins and Hill's (1993) 'Preliminary Come and Go questionnaire'.

disappeared into the forest triggering the absence of a locative adjunct indicating the notion of Goal. In examples like (306), the PP merely indicates the notion of trajectory which should not be confused with the notion of Goal that remains unknown. This pattern has probably reached an idiomatic status expressing the notion of ‘go away’ like idioms in English or particle verbs in German that form a semantic unit with a particle - a preposition, an adverb, an adjective or a noun.

- (305) *Ester rãm yoow*  
 Ester [go PROG]  
 Ester go.away  
 ‘Ester went away.’



- (306) *abug id rãm yoow tãw ked*  
 DISC.CONJ 1PL [go PROG] path in  
 DISC.CONJ 1PL go.away path in  
 ‘So we went away on the path.’  
 Lit.: ‘So we went away inside the path.’

The next structure consists of *rãm* and the Source-indicating auxiliary *dôo’*. Spatial situations that are composed of this construction overtly express the Source of the motion event in locative adjuncts. The difference between the simple use of *rãm* and *rãm dôo’* lies in the fact that in the latter the deictic center is *not* aligned with the Source of the motion event. In other words, the motion event happens directed to the deictic center, i.e. cislocative.

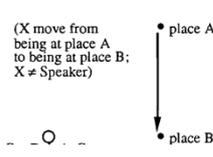
- (307) *João nêed dôo’ top rid*  
 João come AUX:source house LOC  
 ‘João is coming from the house (in my direction).’



As observed above for [*rãm* + *yoow*], [*rãm* + *dôo’*] has lexicalized into an idiomatic expression as well, resembling German particle verbs formed by the spatial particle *hin*-V (ex. *hin-gehen* ‘go towards’, *hin-rennen* ‘run towards’, *hin-schwimmen* ‘swim towards’). According to Dewell (2011, p. 69), this particle has deictic function and describes movement towards a Goal other than the speaker’s location. Another similarity between *dôo’* and verb particles like in German is that they predominantly co-occur with motion verbs for indicating direction.

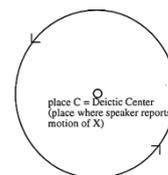
A similar encoding of this spatial setting was provided by using the verb *rôd* ‘leave’ instead of *rãm*. In general, the verb *leave* is not inherently deictic, since someone can leave a place in direction to the speaker or away from the speaker. In examples (308) and (309), this root co-occurred with the Source-indicating auxiliary *dôo’* and overtly expressed Source-

denoting locative adjuncts. As illustrated in the drawings, in none of the spatial scenes the deictic center coincides with the ground or Source of motion, which could be understood as a defining factor for the usage of *rõd*. A further observation must be made with respect to the complexity of the grounds in examples (308) and (309). Both spatial scenes express the notion of ‘from place X to place X’ that Dâw speakers indicate through a coordinate construction. The preceding clause expresses the notion of Source that is implied in the locative predicate while the subsequent clause expresses the notion of Goal indicated through the verb *rãm*.

- (308) [*Ester rõd dôo’ nãk tâag pej*]  
 Ester leave AUX:source açai tree next.to
- [*tir rãm tiid bee rëd*]  
 3SG go to.that.place tree at  
 ‘Ester left from the açai tree and went over there to the other tree.’
- (309) [*Ester rõd dôo’ rul tâag pej*]  
 NP leave AUX:source cupuaçu tree next.to
- [*tir rãm nãk tâag b#g*]  
 3SG go açai tree there  
 ‘Ester left from the cupuaçu tree and went to the açai tree there.’
- 
- 

The last structure to be observed is the combination of *rãm* and *xõo*, as illustrated in examples (310) and (311). Martins (2004, p. 128) describes *xõo* as a motion verb with the semantics of a circular movement when used as a main verb. According to the author (ibid.), when serialized with *rãm* as in [*rãm + xõo*] the semantic notion conveyed is to *walk around/wander*, that is, motion without a specific Goal or Source, corresponding to the spatial settings in both examples. (310) refers to a situation in which a person is walking around the consultant, who reports the motion event as a circular movement. In example (311) a person was going around randomly changing their direction. For this situation the deictic center made use of the verb *naam* ‘stagger’ with *xõo* in post-verbal position, where the former indicates the Manner of the motion and the latter makes reference to the trajectory of the motion event. Since this movement shows no clear Path anchoring, no Goal/Source-indicating adjunct occurs in example (311). Yet, in (310) the ground is encoded in a PostP as the movement can be related to a Ground referent.

- (310) *Ester rãm xôo id tâa'*  
 Ester go circulate 1PL around  
 'Ester is walking around us.'



- (311) *Karol naam xôo*  
 Karol stagger circulate  
 'Karol is staggering around.'



Again, the combination of *rãm xôo* is best understood as lexicalized, denoting motion events without Path anchoring like the English expression 'walk around' or 'wander', as illustrated in (312). However, when combined with non-motion verbs such as *kâr* 'be hungry', its function seems to be an aspectual one indicating habituality in past tense. As mentioned earlier, grammaticalization<sup>27</sup> from locative verbs (posture, position, motion) into aspectual morphemes is cross-linguistically common, since their physiological aspects can motivate the development of the relative degrees of extendedness-in-time meanings of the corresponding verbs (see LICHTENBERK, 2002, p. 306).

- (312) *rid kâr xôo kâr xôo waa dâr*  
 3PL be.hungry circulate be.hungry circulate ancient.person PLZ  
 'They used to be hungry. The ancients used to be hungry.'

### 6.1.2 The verb *nêed* 'come'

The notion of 'to come' is expressed by the verb *nêed* in Dâw. Unlike 'to go', it indicates cislocative movement, that is, movement towards the speaker. As presented in 0, the Source of motion can therefore *not* be aligned with the deictic center. In example (313), no overt Goal-encoding can be encountered but, as the drawing shows, the Goal of motion is the deictic center. In other words, *nêed* inherently carries the notion of a Goal that is aligned with the deictic.

Table 23- Notions of COME in Dâw

Verb (structure)	Source of Path is anchored with the deictic center (=speaker)?	Goal of Path is anchored?
<i>nêed</i> 'come'	no	yes
<i>nêed</i> + <i>dôo</i> come + AUX:source	no	yes
<i>yâa</i> 'return'	no	yes/no

<sup>27</sup> For Dâw this grammaticalization process has already been observed for a range of aspect morphemes (see MARTINS, 2004; STORTO and CARVALHO, 2016; EPPS and ANANTHANARAYAN, 2018).

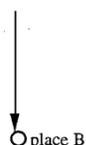
In both (313) and (314) *nēed* clearly expresses a motion event that happens directed to the deictic center. Where in example (313) the Source is anchored the same is unknown in (314). In this case, the consultant added Goal information through the spatial adverb *niid* ‘to this place’ indicating movement is going towards the deictic center.

- (313) *Ester nēed*  
 Ester come  
 ‘Ester is coming.’



○ place B

- (314) *Ester nēed niid*  
 Ester come to.this.place  
 ‘Ester is coming here.’



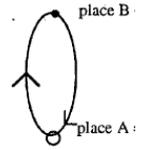
Also, *nēed* was likely to occur with the Source-indicating auxiliary *dôo*’ in the data. This pattern occurred in spatial scenes in which Dâw speakers overtly express the Source of motion in a locative adjunct, as illustrated in (315) and (316). Moreover, in these spatial arrangements the deictic center is *not* aligned with this Source, however the motion event occurs directed to the deictic center.

- (315) *João nēed dôo’ top rid*  
 NP come AUX:source house LOC  
 ‘João is coming from the house.’

- (316) ‘*aa’ nēed dôo’ baal’ rid*  
 ANAPH come AUX:source Manaus LOC  
 ‘Ela chegou ontem lá de Manaus.’

Finally, Dâw speakers make use of the verb *yâa* ‘return’ in order to indicate cislocative motion. This is tied to cyclic motion events that involve movement away from the deictic center and a subsequent return to the deictic center, as illustrated in (317). Motion events of this type in Dâw can be described in two consecutive clauses of which the preceding clause describes motion away from the deictic center and the subsequent clause refers to the act of returning to the place of the deictic center. Movement away from the speaker is indicated here through the motion verb *râm* ‘go’ and the spatial directional adverb *tiiid* ‘to that place’. The act of returning is then expressed by the verb *yâa* and the spatial directional adverb *niid* ‘to this place’ expressing proximity.

- (317) [Ester rãm tiid] [Ester beey yâa niid]  
 Ester go to.that.place Ester ITER return to.this.place  
 ‘Ester is going to that place. Ester is coming back here.’



It is worth noting that the speaker made use of the iterative *beey* in pre-verbal position which indicates that the speaker knows that the motion event started and ended at the same place, that is, the location of the deictic center. A typical context for this pattern of *beey yâa* is when Dâw speakers asked me when I would return to the community, as illustrated in (318). If the starting point of the motion is unknown to the speaker, *beey* does not occur, as illustrated in (319).

- (318) Karol, rata' ãm beey yâa?  
 Karol WH:when 2SG ITER return  
 ‘Karol, when will you return again?’

- (319) dâw xut yâa tir top rid  
 person MASC return 3SG casa LOC  
 ‘The man returned to his house.’

## 6.2 Displacement motion verbs

Literature on motion events often focuses on a semantic division of motion verbs. One of the first important contributions for a contrastive analysis of lexicalization patterns comes from Tesnière (1959) who distinguished between *movement* and *displacement* verbs. Verbs of the former type refer to a motion activity that does not necessarily involve a change of place such as *swim* and *roll*. Displacement verbs, in contrast, involve the change of a place caused by the motion activity such as *enter*, *descend* and also *come* and *go*. Talmy’s (1972, 1985 and 2000) division into *translational motion* and *self-contained motion* can be seen as an adaption of Tesnière’s terms in order to develop the taxonomy of verb-framing and satellite-framing languages.

Tesnière’s term *displacement verbs* will be adapted for this work, since it unambiguously refers to the semantics of the respective motion verbs. For motion verbs corresponding to Tesnière’s *movement* we will apply the term *inherent motion verbs*; these are verbs like *swim* and *roll* that inherently involve movement without the necessity of changing place.

Furthermore, motion verbs can be oriented to certain local roles such as Goal and Source, which are more likely to apply for displacement verbs whereas inherent motion verbs are place oriented. Wälchli & Zúñiga (2006) show the importance of these local roles in Mapudungun (isolate, Chile and Argentina) as this language lacks the semantic distinction

between Source and Goal in adnominal encoding (adpositions, case marking). For Dâw this division is important as well since there is only ageneric locative marker indicating both Goal and Source. The aim of this section is therefore to show how verbs of displacement in Dâw assume the task of indicating Goal and Source through their local roles.

o presents a list of the most frequent displacement verbs in Dâw. All of them are Goal-oriented and express a movement towards a certain point. However, it is necessary to mention Berthele's (2004, p. 7) claim that a verb encoding a downward Path, for example, can be combined with either the Source, the Goal or even both. In other words, by assigning the local role Goal to the verbs from o, I assume that these are *predominately* used to express Goal-oriented motion events but can change their local role depending on the presence of a Source-indicating element.

Table 24- Goal-oriented displacement verbs in Dâw

<b>Motion Verb</b>	<b>Translation</b>	<b>Local role</b>	<b>Cardinal kinds of displacement (F=Figure; G=Ground)</b>
<i>rãm</i>	go	Goal	F displace to G
<i>nêed</i>	come	Goal	F displace away from G
<i>saak</i>	climb.up	Goal	F displace up
<i>pee</i>	go.upstream	Goal	F displace up
<i>x#</i>	go.down	Goal	F displace down
<i>xut#</i>	go.down.to.ground	Goal	F displace down
<i>soop</i>	go.up.from.river	Goal	F displace up
<i>dôob</i>	go.towards.river	Goal	F displace down
<i>kutu</i>	get.off.hammock	Goal	F displace down
<i>xâyâ</i>	enter	Goal	F displace into G
<i>nôk</i>	fall	Goal	F displace down
<i>waan</i>	follow.trace:animal	Goal	F displace along
<i>yoot</i>	follow.trace:human	Goal	F displace along
<i>bâs</i>	cross.waterway	Goal	F displace along
<i>w#ud</i>	arrive	Goal	F displace to G
<i>nôox</i>	embark	Goal	F displace into G

Evidence for the local roles comes from spatial descriptions of scenes that provide identical locative adjuncts with distinct interpretations, as illustrated in (320) and (321). Where (320) expresses the notion of Goal 'into the house', in (321) the locative adjunct is understood as the Source of motion. Consequently, Goal and Source orientation of the motion event are implied by the displacement verbs. This corroborates Wälchli & Zúñiga's (2006, pp. 5-6) hypothesis that languages without distinctive adnominal markers tend to encode the notions of Source and Goal through displacement verbs.

(320) *João xâyâ top b̃tt*  
 João enter house under  
 ‘João enters the house.’

(321) *João rod top b̃tt*  
 João exit house under  
 ‘João goes out of the house.’

This also holds for vertically oriented motion events such as in (322). Here the PP provides information about the ground (açái tree) that the Figure is climbing up. Again, the notion of Goal is expressed by the displacement verb *saak* ‘climb up’, that indicates a bottom-up movement along a certain ground support.

(322) *Margarete saak nãk tâg rēd*  
 Margarete climb.up açái tree at  
 ‘Margarete is climbing up the açái tree.’

As mentioned at the beginning of this section, Goal-oriented displacement verbs are compatible with Source-indicating locative adjuncts. In these cases, the Source-indicating auxiliary *dôo’* occurs in post-verbal position triggering a Source-oriented motion event such as in (323). Here, the PP *yeg ked* ‘in hammock’ indicates the Source from where the motion event started.

(323) *Karol xttt dôo’ yeg ked*  
 Karol go.down AUX:source hammock in  
 ‘Karol gets off the hammock.’  
 Lit.: ‘Karol goes down from inside the hammock.’

o shows a small set of Source-oriented displacement verbs in Dâw. The inherent Source orientation can be confirmed by the fact that they do not require the Source-indicating auxiliary *dôo’* when overtly expressing a locative adjunct expressing source of motion such as in (323).

Table 25- Source oriented displacement verbs in Dâw

Motion Verb	Translation	Local role	Cardinal kinds of displacement (F=Figure; G=Ground)
<i>rod</i>	go.out	Source	F displace out of G
<i>yâa</i>	return	Source	F displace to G from X

Spatial scenes with *rod* describe boundary crossing motion events such as the transition from inside a house to outside as illustrated in (324) and also in (325). The usage of *yâa* has already

been discussed in the previous section where we have seen that this motion verb implies cislocative motion.

(324) *João rod top bɪtɪt*  
 NP go.out house under  
 ‘João goes out of the house.’

(325) *mĩs rod pãanh' xax*  
 tortoise.go.out mud between  
 ‘The tortoise got out of the mud.’

The discrepancy between Goal-oriented and Source-oriented displacement verbs is not very surprising, since Goal encoding is considered to be more salient in languages than Source encoding (cf. STEFANOWITSCH and ROHDE, 2004). The authors refer to Verspoor, Dirven and Radden (1999, p. 98) who explained the *goal-over-source principle* as being motivated by a hierarchy of human actions in which Goal is usually more important than the Source. Another hypothesis can be made with respect to discourse strategies in Dâw narratives. Here, Dâw speakers provide emphasis on Goal encoding in motion events and consequently assume that the interlocutor knows the Source of a subsequent motion event since this was previously mentioned.

## 6.2.1 Displacement motion verbs and Path

The examples in the last section already showed how verbs of displacement in Dâw assume the task of indicating Goal and Source through their local roles. In this section I will provide a brief summary of how Dâw encodes the notion of Path in the following three ‘loci’ proposed by Wälchli (2001, p. 301): verbal encoding (i.e. by the verb stem), adnominal encoding (i.e. adpositions or case marking) and adverbial coding (i.e. verb affixes or particles).

### 6.2.1.1 Verbal and adverbial encoding of Path

The verbal encoding of Path was the topic of the last section, in which we focused on the question of how *components* of Path (Source, Goal and Ground) can be found conflated in displacement verbs in Dâw. According to Talmy’s typology of motion verbs (2007, p. 99) the notions of motion and Path can be found conflated in one single verb root. The verb ‘enter’ can then be analyzed as following  $\sqrt{\text{MOVE}} + \text{IN}$ . The author (ibid., p. 100) also mentions conflation patterns where motion is combined with two semantic components. A verb like ‘to

shelve’ can consequently be understood as  $\sqrt{\text{MOVE}}$  onto a shelf, showing conflation of Motion + Path(onto) + Ground (shelf). For Dâw displacement verbs we will see that they present Motion + Path conflation as well as Motion + Path + Ground conflation. The following displacement verbs can be analyzed through the pattern Motion + Path in the following way:

- |    |                         |                        |
|----|-------------------------|------------------------|
| a) | <i>rām</i> ‘go’:        | $\sqrt{\text{MOVE-}i}$ |
| b) | <i>nēed</i> ‘come’:     | $\sqrt{\text{MOVE-}f}$ |
| c) | <i>saak</i> ‘climb up’: | $\sqrt{\text{MOVE-}u}$ |
| d) | <i>x#</i> ‘go down’:    | $\sqrt{\text{MOVE-}d}$ |
| e) | <i>xājā</i> ‘enter’:    | $\sqrt{\text{MOVE-}i}$ |
| f) | <i>rod</i> ‘go out’:    | $\sqrt{\text{MOVE-}o}$ |
| g) | <i>yāa</i> ‘return’:    | $\sqrt{\text{MOVE-}b}$ |
| h) | <i>xād</i> ‘pass’:      | $\sqrt{\text{MOVE-}t}$ |

Patterns a–h show that Path (represented above in italics) is inherent to the verb root since it is not expressed through affixes or particles like those mentioned for languages like German. In this respect, Dâw resembles Romance languages where Motion and Path conflation is salient. Recalling the terminological notes from the Introduction of this work, this lexicalization pattern corresponds to Talmy’s (2007) verb-framing pattern.

On the other hand, Dâw shows displacement verbs like *dôob* ‘go towards river’, *pee* ‘go upstream’ and *x#t#* ‘go down to ground’ that seem to encode the notions of Motion + Path + Ground in the verb root. These semantic components can be represented as follows:

- |    |                                    |   |
|----|------------------------------------|---|
| i) | <i>dôob</i> ‘go.towards.river’:    | $\sqrt{\text{MOVE-}d.i.towards:\mathbf{river}}$ |
| j) | <i>pee</i> ‘go.upstream’:          | $\sqrt{\text{MOVE-}u:\mathbf{river}}$           |
| k) | <i>x#t#</i> ‘go.down.ground’:      | $\sqrt{\text{MOVE-}d:\mathbf{ground}}$          |
| l) | <i>kutu</i> ‘get.off.hammock’:     | $\sqrt{\text{MOVE-}d:\mathbf{from.hammock}}$    |
| m) | <i>waan</i> ‘follow.trace:animal’: | $\sqrt{\text{MOVE-}a:\mathbf{trace:animal}}$    |
| n) | <i>yoot</i> ‘follow.trace:human’:  | $\sqrt{\text{MOVE-}a:\mathbf{trace:human}}$     |
| o) | <i>noox</i> ‘board’:               | $\sqrt{\text{MOVE-}i:\mathbf{boat}}$            |
| p) | <i>soop</i> ‘go.up.from.river’:    | $\sqrt{\text{MOVE-}u:\mathbf{from.river}}$      |
| q) | <i>bās</i> ‘cross.waterway’:       | $\sqrt{\text{MOVE-}a:\mathbf{waterway}}$        |

The displacement motion verbs in i–p express a movement along a certain Path (in italics) in relation or direction to an established Ground (in bold). Evidence for this analysis comes from the absence of a PP indicating exactly this notion of Ground. Note that the conflated Ground of the majority of these motion verbs makes reference to waterways – a central topographical feature of the Upper Rio Negro region. Example (326) consists of a NP - the

agent of the motion event - and the motion verb *kutu* ‘get off hammock’ indicating a downward movement that initiated in a hammock. The Source reading derives thus from the verb without being overtly expressed in a locative adjunct. A similar situation can be observed in example (327). In this spatial scene, the Ground of the motion event (river) is conflated in the displacement verb *pee* ‘go upstream’ and the PP has merely an instrumental function ‘by boat’.

(326) *Luciana kutu*  
 Luciana get.off.hammock  
 ‘Luciana got off the hammock.’

(327) *dâw pee las ked*  
 person go.upstream boat inside  
 ‘The man goes upstream by boat.’  
 Lit.: ‘The man goes upstream in the boat.’

Some of the Motion + Path + Ground verbs can be understood according to their compositional properties. The verbs *x#t#* ‘go down to the ground’ and *kutu* ‘get off the hammock’, for example, are a results of agglutinating word formation processes providing compound verbs with the following syllabic structure CV.CV(V) showing two identical vowels according to Martins (2004, p. 179):

<i>x#t#</i> ‘go down towards ground)	=	<i>x#</i>	+	<i>t#w</i>
		go.down	+	path
 <i>kutu</i> ‘get off hammock’	=	<i>ka’</i>	+	<i>tuu</i>
		lie.in.hammock		ground

In both verbs the notion of Ground is expressed by the noun *t#w* ‘path’ and *tuu* ‘ground’, that occur to the right of the verb. Moreover, *kutu* inherently expresses both Source and Goal of motion through conflation of the verb as *ka’* ‘lie in hammock’ (Source) and *tuu* ‘ground’ (Goal).

Motion + Path + Ground motion verbs can also be denominal such as *dôob* ‘go towards river’ deriving from the noun *dôo* ‘port’. In comparison to the compositional properties of *x#t#* and *kutu*, *dôob* does not overtly show agglutination of a motion verb and a Ground complement. Nevertheless, it conflates the notions of motion (go), Path (downwards) and Ground (port).

In general, Martins (2004, p. 284) describes for Dâw that it is very common to encode more than one semantic property in one single verb root. This analysis confirms this claim, but some restrictions have to be made. The author provides a list of motion verbs that were

presented to Dâw speakers during fieldwork. Many of these verbs could not be recognized by the consultants as they seem to be taken from very specific contexts. This is the case for *bee won* [stick + fall] that the author translated literally ‘stick about to fall’. If we consider *bee won* a verb this would imply Figure conflation in the motion verb, which may have the absence of an agent as a consequence. In general, it is not easy to test the semantic status of these verbs especially in the case of *pee* ‘go upstream’, *waan* ‘follow trace of an animal’ or *yoot* ‘follow trace of a human’, where no lexical evidence of the Ground can overtly be found in the verb root. Nevertheless, these verbs present an intriguing part of the lexical inventory of Dâw which challenges Talmy’s (2007, p. 101) view on conflation systems with multiple components. These were considered to be rare by the author as this would demand an enormous lexicon.

Adverbial encoding of Path has already been introduced in sections 6.1.1 and 6.1.2 where *rām* ‘go’ and *nēed* ‘come’ were analyzed. These basic motion verbs were found to frequently co-occur with functional items in post-verbal position such as *yooow* (PROG), *xôo* (‘circulate’) and *dôo* (AUX:source) that influence Path configurations.

### 6.2.1.2 Adnominal encoding of Path

Adnominal coding of Path (Source and Goal) involves case marking and adpositions according to Wälchli (2001, p. 301). Both resources were already introduced in chapter 3 where a rich system of distinctive spatial postpositions, spatial adverbs and the generic locative marker could be observed. The question that arises is to examine if and how Path is encoded in adnominal resources once it is already present in displacement verbs?

As discussed in chapter 3, Dâw presents the generic locative marker *rid* that in motion events expresses both Source- and Goal-oriented Paths (328) and (329). According to Wälchli and Zúñiga (2006), languages showing Source-Goal indifference in adnominal coding will then encode these notions elsewhere in the clause, especially in verbs. The authors’ generalization holds for Dâw as we have seen in the last section that presented an inventory of Goal and Source-oriented motion verbs that are consequently indicate the orientation of Path.

- (328) *ār*      *rām*      *kaaw*                      ***rid***  
 1SG    go        manioc.garden            LOC  
 ‘I am going to the manioc garden.’

- (329) *tir nêed dô' kaaw rid*  
 3SG come AUX:source manioc.garden LOC  
 'He comes from the manioc garden.'

The inherent Goal or Source semantics of displacement verbs in Dâw allow Ground-denoting adjuncts to be headed by a range of spatial postpositions indicating location. For example, the displacement verb *saak* 'climb.up' encodes motion and Path decomposing an upward movement  $\sqrt{\text{MOVE-up}}$ , i.e. the Path is expressed through the verb root. As illustrated in (330), the locative adjunct functions thus to indicate a topological relation (in adhesion) between Figure (ant) and the Ground (Pedro) while Path is implied through the verb.

- (330) *kaçõw saak Pedro rêd*  
 ant climb.up Pedro at  
 'The ant climbs up on Pedro.'

Displacement verbs encoding motion, Path and Ground in the verb root behave slightly differently. In (331), the verb *xutu* ( $\sqrt{\text{MOVE-down:ground}}$ ) expresses a downward movement towards the ground (floor). Additionally, the predicate shows the Source-indicating auxiliary *dô'* triggering a locative adjunct that indicates the Source of motion. Consequently, the PP in this example does not express the Ground of the motion event but refers to the place where the Figure object was located when the motion event started (on the table). Hence, the fact that Path is already encoded in the verb roots of displacement verbs appears to open a slot for adnominal coding of further information about the motion event such as another Ground (Source, Goal or Landmark). This allows the production of more complex descriptions of spatial scenes in a single clause.

- (331) *João xutu dô' mej wâ'*  
 João go.down.ground AUX:source table on  
 'João goes down from the table.'

A possible generalization is that the more information is encoded in the verb root, the more information about the motion event (additional Ground or Source-encoding) is likely to be encoded in adnominal categories. On the other hand, the density of motion event information encoded in a single verb root can lead to an intransitive construction consisting only in the Figure and the motion verb such as in (332) that is, nevertheless, conceived of by Dâw speakers as a complete motion event containing Figure, Motion, Path and Ground.

- (332) *Luciana*            ***kutu***  
 Luciana            get.off.hammock  
 ‘Luciana got off the hammock.’

## 6.2.2 Displacement motion verbs and Manner of Motion

Displacement motion verbs in Dâw inhere the notion of Path corresponding to Talmy’s verb-framing pattern. In these patterns, the notion of Manner of motion, if expressed, is then found outside the VP. In this section, I verify if this can be confirmed for Dâw by presenting strategies of Manner encoding in motion events with displacement verbs.

For Dâw, two main resources can be observed: (i) complex predicates in which the verb from the second slot adds the notion of Manner of motion and (ii) adverbs modifying the VP. Expressing Manner of motion in complex predicates is very productive in Dâw for several domains of spatial language as shown in detail in chapter 7. In this chapter we see that complex predicates of this function show strict ordering principles in which the Manner-indicating verb precedes the displacement verb such as in (333). There are no restrictions with respect to semantic verb class that can occur in the first slot. The sole criterion here seems to be pragmatic appropriateness. This discussion will be resumed in chapter 7.

- (333) *dâw*    *ãay*    [***õot***    ***xâjâ***]  
 person FEM    cry    enter  
 ‘The women entered crying.’

Another strategy in Dâw is the encoding of Manner of motion through nominal resources such as temporal and spatial adverbs (see sections 3.3 – 3.4). These function as modifiers of the VP and show syntactic mobility in the clause. Manner adverbs are rarely found in Dâw. This can probably be traced back to the fact that adverbial expressions of Manner are simply adjectives/attributive verbs used in an adverbial role. In example (334), the adverbial-like ‘*yẽew*’ ‘be slowly’ occurs in a pre-verbal position that is uncommon for adverbs and should therefore best be considered an attributive verb. Hence, example (334) again shows a complex predicate with the Manner-indicating verb preceding the displacement verb.

- (334) ‘*aa*’                    ‘*yẽew*’                    *x##*    *nẽed*  
 ANAPH                    be.slowly                    descer    come  
 ‘She came down slowly.’

Dâw also presents the intensifier *yêd* in post-verbal position indicating that a motion event happened with the manner of intensity. This can refer to speed or even duration of the displacement. In example (335), *yêd* intensifies the motion of following the trace of a person in a very fast way. For that reason, *yêd* seems to have more adverbial than aspectual value, as Martins (2004, p. 303) describes, since it refers to the Manner of motion expressed by the VP.

- (335) *abug tir yoot yêd mâr*  
 DISC.CONJ 3SG follow.trace:human INTS RPT  
 ‘Then, they say, she followed him (curupira).’

In sum, Talmy’s prediction that verb-framing languages (Motion and Path conflation in the verb) express Manner of motion outside the predicate holds only partially for Dâw. Complex predicates are a productive strategy for providing reference to the motion, Path and Manner through two independent roots acting in a single predicate. Likewise, the intensifier is syntactically part of the predicate. The lexicalization pattern for Manner and Path in Dâw should therefore be best considered as equipollent-framing in motion events expressing notions of both Path and Manner.

### 6.3 Inherent motion verbs

In contrast to displacement motion verbs, inherent motion verbs do not result in a change of place. Typical examples for these motion verbs are intransitive verbs like ‘swim’ or ‘run’. According to the locative roles proposed by Wälchli & Zúñiga (2006), inherent motion verbs are considered Place-oriented since they denote motion events in which a Figure referent remains in situ as in (336) and (337). In both examples the locative adjuncts indicate the Place where the motion event is taking place. A spatial postposition is used to express the topological relation between Figure and Ground.

- (336) *nee yok nâax mĩ*  
 Mateusswim water in.liquid  
 ‘Mateus swims in the water.’

- (337) *tõ wâg bee rêd*  
 bird bob tree at  
 ‘The bird bobs on the tree.’

o provides a list of frequent inherent motion verbs in Dâw that were taken from Martins (2004, p. 260) and verified during fieldwork. These verbs inherently express Manner of

motion, i.e. *yok* ‘swim’, for example, can be analyzed as  $\sqrt{\text{MOTION}}$  with the MANNER of swimming.

Table 26- Place-oriented inherent motion verbs

Motion Verb	Translation	Local role
<i>ox</i>	run	place
<i>wuut</i>	run.fast	place
<i>ew</i>	walk.spread.legs	place
<i>yenh</i>	walk.duck	place
<i>mêm</i>	walk.first.time	place
<i>kui</i>	walk.ducked	place
<i>yok</i>	swim	place
<i>xop xutu</i>	dive	place
<i>wâg</i>	bob	place
<i>çak</i>	jump	place
<i>nâa</i>	fly	place
<i>lâb</i>	roll	place
<i>pâd</i>	do.somersault	place
<i>râmtu</i>	crawl	place

These inherent motion verbs presented can show very specific Manner of motion semantics such as ways of walking as, for example, *ew* ‘walk with spread legs’, *y’enh* ‘walk like a duck’, *mêm* ‘walk for the first time’, *kui* ‘walk ducked’ or *wuut* ‘run fast’. In these cases, it is not always easy to decompose the Manner semantics that the root encodes as only a few inherent motion verbs show this overtly. Inherent motion verbs like *xop xutu* ‘dive’ and *râmtu* ‘crawl’ are results of verb compounding or noun-verb compounding. Hence, *xop xutu* ‘dive’ can be segmented in [*xop* (immerse) + *xutu* (go down to ground)] forming the semantics of diving while *râmtu* ‘crawl’ consists of [*râm* (go) + *tuu* (ground)].

### 6.3.1 Inherent motion verbs and the role of Path

Since inherent motion verbs encode Manner in the verb root, it is necessary to verify how the Path of the motion is then expressed in such events. Wälchli (2001) suggests that only adnominal and adverbial encoding of Path is possible for clauses with inherent motion verbs, since Path cannot be encoded in the verb root when it already encodes Manner. Two main strategies can be observed: i) Path encoding through the locative marker *rid* and again ii) through complex predicates in which the verb from the rightmost slot encodes Path.

Example (338) shows the inherent motion verb *lâb* ‘roll’ and a locative adjunct headed by the locative marker assigning a Goal-oriented Path. This reading derives from the locative

adjunct *xaay rid* ‘outside’. As discussed in chapter 3, the postpositional phrase *xaay rid* is used here in a metaphorical way expressing the notion of outside, which literally derives from the notion of ‘to the forest’. Motion here need not to entail Path, but express a Goal directional Path.

- (338) *paas lâb xâd xaay rid*  
 stone roll DUR forest LOC  
 ‘The stone rolls out (of the house).’  
 Lit.: ‘The stone rolls towards the forest.’

Another adnominal resource for indicating Path with inherent motion verbs is *têer*, which occurred in spontaneous speech. This morpheme seems to be a loan word from Portuguese corresponding to the preposition *até* ‘to’ (in spatial use) or ‘until’ (in temporal use). However, it is unclear if *têer* has entered directly from Portuguese into Dâw or via contact with other languages of the region for which a similar form has been reported (Patience Epps p.c.). Example (339) shows how Dâw speakers encode a Goal-oriented Path through *têer*. Note that *têer* in this example occurs to the left of its argument *jow pej* similar to Portuguese prepositions.

- (339) *bug rid ‘ox têer jow pej*  
 DISC.CONJ 3PL run to João next.to  
 ‘Then they ran close to João.’

Path encoding in complex predicates is identical to the process of Manner encoding described for displacement verbs in the previous sections. Here, the inherent motion verb precedes a displacement motion verb encoding Path information, as illustrated in (340). The displacement verb *xutu* ‘go down to the ground’ clearly indicates a downward movement, i.e. Path, while the inherent motion verb *lâb* ‘roll’ express Manner of motion.

- (340) *paas [lâb xutu] nâax dôo’ rid*  
 stone roll go.down.ground water port LOC  
 ‘The stone rolled towards the river.’  
 Lit.: ‘The stone rolled descending towards the river.’

Likewise, inherent motion verbs can be followed by the positional verbs in complex predicates such as in (341) and (342). In these examples, *wâap* ‘be in water’ and *wôob* ‘be on’ do not convey motion semantics, although they make reference to the Figure’s location: in case of *wâap* ‘to be in water’, and in the case of *wôob* ‘to be located on something’. These structures resemble what Aikhenvald (2006, p. 44) considers to be *Resultative Serial Verb Constructions*. In these constructions, the verb in the second slot is usually intransitive and

describes the result of the action expressed by the first verb. When the result of jumping in (341) is ‘to be in water’, we can conclude that the Path of motion is Goal-oriented and downwardly directed. Likewise, the result of the motion event in (342) is ‘to be on a certain ground’; the Path of motion represents an upward movement. Additionally, both examples express the Ground in the form of PPs indicating location that is crucial for the understanding of Path.

(341) *dâw* [**çak wâap**] *nâax mĩ*  
 person jump be.in.water water in.liquid  
 ‘The man jumps into the water.’

(342) *was* [**çak wôob**] *mēenh wâ*  
 monkey jump be.on 1SG.POSS on  
 ‘The monkey jumps on me.’

In sum, Path encoding in motion events with inherent motion verbs in complex predicates in Dâw can be schematized as follows:

$[NP_{\text{Figure}} + [V_{\text{[Motion+Manner]} VP_{\text{[Path]}}] + PP_{\text{Ground/ AdvP}_{\text{Ground}}}]_{\text{Motion event}}$

Within Talmy’s binary typology, the examples discussed in this section show satellite framing as Manner of motion is expressed in the verb root whereas Path is found encoded in a so-called satellite. According to Talmy’s (2000, p. 102) definition of a satellite being any complement that is in “a sister relation” with the verb root, we believe it is possible to analyze the verbs of the second slot indicating Path as satellites. However, it is necessary to verify what the author understands as *sister relation* in order to define if these Path verbs can be regarded as satellites due to a syntactic dependency of the type head-complement or not (see discussion in chapter 7).

#### 6.4 Adding direction through *dôo*’

Throughout this chapter the post-verbal auxiliary *dôo*’ occurred in Source-oriented motion events. We have seen that *dôo*’ disambiguates Goal or Source orientation of motion events in which the Ground is encoded by the generic locative marker *rid*, as illustrated in (343) and (344). When present such as in (343), the motion event is clearly Source-oriented, which is also overtly expressed in a locative PP (*top rid*). In contrast, when absent the motion event is Goal-oriented.

(343) *João nēed dōo' top rid*  
 João come AUX:source house LOC  
 'João is coming from the house.'

(344) *João nēed niid*  
 João come to.this.place  
 'João is coming here.'

Consequently, *dōo'* is a central resource for Path encoding in Dâw. However, in different contexts *dōo'* shows aspectual functions indicating inchoative aspect as shown in (345). Such a motion event shows no Path anchoring, which seems to trigger its function as an inchoative aspectual auxiliary. In non-motion situations, such as in (346), *dōo'* also indicates incipency of an event.

(345) *ār 'ox dōo'*  
 1SG run INCHO  
 'I began to run.'

(346) *ār 'âg dōo'*  
 1SG drink INCHO  
 'I began to drink.'

The alternation between aspectual and directional auxiliary can therefore be subsumed as following:

$V_{\text{activity}} + d\hat{o}o'$	→	aspectual auxiliary
$V_{\text{mov}} + d\hat{o}o'$	→	aspectual auxiliary
$V_{\text{mov}} + d\hat{o}o' + \text{locative adjunct}$	→	directional auxiliary

This aspectual and directional interaction is very interesting from a typological point of view since it provides insides on both spatial and temporal domains. Therefore, this section aims to show the properties of *dōo'* in its aspectual and directional function. This can be furthermore understood as a case study that represents a general pattern in Dâw and in the Naduhup languages: functional and semantic alternations between verbs/auxiliaries deriving from complex predicates.

#### 6.4.1 Etymological notes on *dōo'*

According to Martins (2004), *dōo'* is a very versatile morpheme in Dâw as it can act as a main verb with the semantics of 'to carry', 'to extract (a plant)' or 'to take' as in example (347).

- (347) *abug dâw ddo' toow' tâag*  
 DISC.CONJ dâw take molongó trunk  
 'Then we took the molongon tree.'

Furthermore, when pre-posed to intransitive or transitive verbs, *ddo'* triggers analytic causativization introducing a new argument (the causer) in agent function (see MARTINS, 2004, p. 562; COSTA, 2014, p. 157), as illustrated in (348). The grammaticalization from the verb 'take' to a causative item is cross-linguistically common according to Aikhenvald (2006, p. 32).

- (348) *João ddo' rod dâw ãay-ũuy' xoo ked*  
 João CAUS go.out person FEM-DOM canoe in  
 'João made the women leave the canoe.'

In both functions, main verb and causative, *ddo'* is cognate to Hup's *d'oʔ*- where it also occurs in compound initial position (see EPPS, 2008, p. 421). Similar, Ospina Bozzi (2002, p. 387) describes *-deh* in compounds indicating caused posture deriving from the verb 'send'. Moreover, in post-verbal position *ddo'* functions as inchoative or directional auxiliary of which functions will be explored in this chapter.

#### 6.4.2 Aspectual - directional overlap

Michael (2017) proposes an analysis for Matsigenka (Arawak, Peru) which shows analogies between aspectual and directional morphemes based on their similarities of encoding viewpoints: where aspects encode viewpoints on temporal extensions of events, directionals likewise encode viewpoints of spatio-temporal extension in motion events (see MICHAEL, 2017).

The system of aspectuals has been briefly discussed in the Introduction but it is still not completely understood due its complexity and to co-existing semi-grammaticalized locative verb roots that also provide aspectual interpretations. Furthermore, some aspectual roots function as TAM auxiliaries. With respect to directionals, we have seen that *Dâw* does not provide a system of grammaticalized directional items. Instead, *Dâw* indicates direction through displacement verbs and the generic locative marker in PPs. However, the most prone candidate for a grammaticalized directional morpheme may be *ddo'* in the contexts mentioned in the previous section.

Turning now to the alternation between aspectual and directional use of *ddo'* we can observe that this is triggered by the verb class of the pre-posed verb and by the presence of a

locative adjunct (in cases preceding locative verbs). Hence, examples (349) and (350) show non-locative verbs modified by *dôo'* expressing incipient eventualities.

(349) *ãr      ãa      dôo'*  
 1SG    sleep    INCHO  
 'I began to sleep.'

(350) *tir      weed      dôo'              rĩu      dep*  
 3SG    eat      INCHO            game    meat  
 'He begins to eat the game.'

Likewise, incipient motion eventualities that do not overtly show Path anchoring in locative adjuncts show the same encoding, as illustrated in (351) and (352).

(351) *abug                  rid      'yãm      waan                  dôo'                  'yãm x#'*  
 DISC.CONJ    3PL    dog    follow.trace:animal    AUX:source    jaguar  
 'And then their dog began chasing the jaguar.'

(352) *ãr      dôob                  dôo'*  
 1SG    go.towards.river            INCHO  
 'I began to go down to the river.'

Source-oriented motion events with overtly expressed Grounds in locative adjuncts obligatory show *dôo'* in its directional function such as in (353) and (354). In other words, Source-Path anchoring of a motion event seems to be the principal factor for triggering this alternation in function.

(353) *'aa'                  nêed      dôo'                  baal'                  rid*  
 ANAPH                  come    AUX:source    Manaus                  LOC  
 'He came yesterday from Manaus.'

(354) *woor                  nêed      dôo'                  taaw                  rid      comunidade      wã'*  
 tukano.people    come    AUX:source                  São.Gabriel    LOC    community    on  
 'The Tukanoans came from the town to the community.'

Interestingly, motion events that are both Source-oriented and incipient like 'He starts to return from Manaus.' present the same constructions as for *dôo'* in its directional use, as illustrated in (355). The interpretation is consequently ambiguous and depends on the context. For these cases one could assign a portmanteau status to *dôo'* indicating both Source direction and inchoative aspect.

- (355) *tir*     *yâa*             *dôo'*   *baal'*  
 3SG    return                    INCHO Manaus  
 'I began to return from Manaus.'

Comparing the functions of inchoative aspect, that is, denote the beginning of an event in time, and the one for the Source indicating directional, we can observe overlaps in time and trajectory as schematized in o. Considering example (355), the motion event expressed with *dôo'* indicates motion directed to the deictic center (cislocative) by overtly expressing a part of the trajectory, that is the Source (Manaus). The temporal beginning of this event corresponds consequently to the initial location of the motion event while the end of the motion event is anchored close to the deictic center. In other words, the diagram shows that temporal extension coincides with spatial extensions, i.e. the Source of motion corresponds to the beginning of the motion event. *Dôo'* in its aspectual use frames the event temporally while in its spatial use it provides a spatial frame.

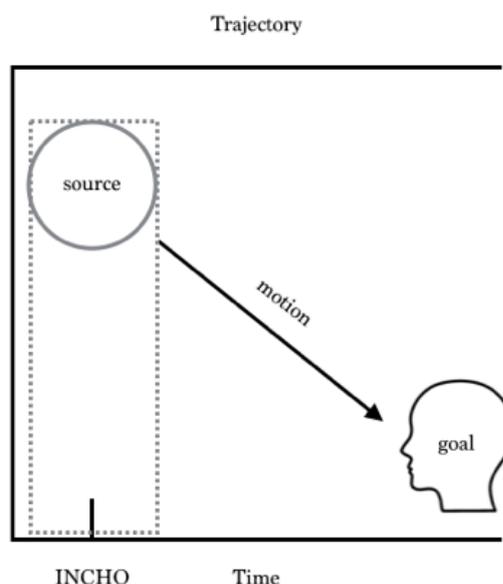


Figure 10- Directional-aspectual overlap

This discussion corroborates Michael's (2017) claims that directionals can be understood as the spatio-temporal counterparts of aspectuals for denoting overlapping viewpoints in time and space.

## 6.5 Summary

The aim of this chapter was to describe the inventory of Dâw motion verbs in order to see how the language encodes motion in the verbal complex of a sentence. Therefore, the components of a motion event like Path and Manner were analyzed according to their

morphosyntactic and lexical distribution in order to determine how this information is spread out through the clause.

First, Dâw's equivalents of the basic motion verbs 'come' and 'go' were analyzed. As predicted, they indicated translocative motion (go) and cislocative motion (come). They were found to usually combine with functional items in post-verbal position expressing aspectual, directional and deictic notions that can indicate the level of Path anchoring of a motion event.

Subsequently, I analyzed displacement and inherent motion and examined how they encode the Manner and Path of motion in the clause. Displacement verbs were analyzed in order to understand to what extent they encode components of a motion event. We found that some of them overtly encode the notion of motion of Path whereas others encode the notions of motion, Path and a specific Ground in a single verb root. Dâw speakers are consequently able to express a complex motion event with only a Figure NP and such a displacement motion verb. On the other hand, we could see pleonastic constructions where Path is additionally encoded through locative adjuncts headed by very specific spatial postpositions or spatial adverbs. Manner of motion could be found expressed either in complex predicates or in adverbs, where the former is much more common in Dâw.

Inherent motion verbs, in contrast, reveal information about the Manner of motion without making reference to the Path. Path expression happens then through the addition of a displacement motion verb in order to indicate the direction of motion. Combinations of inherent motion verbs and positional verbs also lead to Path encoding, indicating results of motion events.

In sum, I have shown that the verbal complex is highly productive in terms of encoding the basic components of a motion event as it can reveal information about Manner, Path and Ground in a single verb root or through complex predicates. This corresponds to the findings from chapter 7 where we saw that additional information about posture and position of a Figure is encoded in complex predicates as well. The usage of these constructions is a central mechanism since Dâw is an isolating language with a relatively small lexicon of CVC words. For that reason, the next chapter will explore this strategy in order to discover the ordering principles of verb roots as well as the semantic functions of these constructions.

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## **7 Complex predicates expressing space**

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## 7 Complex predicates expressing space

The previous chapters showed that predicates with more than one verb are very common in Dâw. First, they appeared in the chapter on static location where the combination of posture and positional verbs leads to a detailed description of the Figure's bodily configuration with respect to a Ground. In the previous chapter on motion verbs, I have shown that predicates can also consist of two verbs in order to express Motion, Path and Manner of motion with respect to a certain reference point. The role of verbs in spatial expressions proves thus to be even more interesting upon the observation of languages that make use of complex predicates such as Serial Verb Constructions (henceforth SVC) that function as mono-clausal sequences of inflected verbs or several verb roots (HASPELMATH, 2016). In the last decade, these constructions have frequently been described in Creole languages as well as languages of West Africa, Southeast Asia, Oceania and New Guinea (AIKHENVALD, 2006a, p. 1). In Northwest Amazonia many languages also appear to have developed this phenomenon as a result of intense linguistic contact. In examples (356) – (359) below, multi-verb constructions in these language families encode motion events or a description of posture and position.

(356) Tariana (Arawak)

*di-ka*            *di-ruku*  
 3SG.NF-see    3SG.NF-go.down  
 'He looked going down.'

[AIKHENVALD, 2006b, p. 186]<sup>28</sup>

(357) Kotiria (Tukano Oriental)

*pita-~ba-p#*            *bu'a-wa'a-ga*  
 port-CLS:river-LOC    descend-go-ASERT.PFV

'They went downwards to the port (from their house).'

[STENZEL, 2007, p. 278]

(358) Kakua (Kakua-Nukak)

*kãn*    *fâ=bũ*  
 3SG.M    down.river=EMPH

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<sup>28</sup> In case of citing examples from different authors, I maintain the glosses provided by the authors. All abbreviations can be found at the end of this paper.

ʔã=ti-**mě̃n-hã** h-beh-min=tagã

3SG.M=EVID-to.paddle-go.down.river-go-IMM.FUT=INF.EVID

‘it seems he is going to paddle down river.’

[BOLAÑOS, 2016, p. 261]

(359) Dâw

rid 'ox **rãm** nâax dôo rid

3PL run go water port LOC

‘They are running towards the port.’

All four examples refer to translational motion events expressing both Path (e.g. *to go downriver*) and Manner of motion (e.g. *to row*) by verb chaining. Furthermore, the ordering principles are identical in all four languages, since the Manner of motion verb always precedes the directional motion verb, adding adverbial-type information. Another similarity is that the Goal adjunct (e.g. *port*) is headed by generic locative markers and not by a specific adposition expressing, in this case, translocative (movement away from the speaker) semantics.

In this chapter<sup>29</sup>, I show how these complex predicates function in Dâw by providing a semantic and syntactic typological description of this feature in order to show their responsibility for the encoding of spatial information like directionality, bodily disposition and orientation, and Manner of motion. At first, I describe the difficulties for labeling complex predicates with respect to morphosyntactic properties. Subsequently, I provide a brief overview of the previous analyses of complex predicates in Dâw and its sister languages and their defining characteristics. In section 7.3, I show the morphosyntactic properties of complex predicates in Dâw. We will see that it is not easy to decide whether we call these constructions SVCs, as they were analyzed by Martins (2004). Then I provide a brief summary of verb classes involved in these constructions. And finally, I propose a typology of complex predicates showing how these verbs combine to express adverbial, aspectual and Manner information in static and non-static spatial events. I will focus on their ordering principles in order to better understand the function of each pattern.

## 7.1 Complex predicates – the problem of labeling

In this work, verbal predicates with more than one verb were called complex predicates mainly because this term encompasses several kinds of multi-verb constructions including

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<sup>29</sup> This chapter is an adapted version of a paper “Complex predicates and space in Dâw (Naduhup language, AM)” accepted for publication in *Language Typology and Universals* (2020; (73): p. 1–28).

SVCs, dependent verb constructions and auxiliary constructions. Most of them were described as SVCs in Dâw by Martins (2004; 2007). Yet, a closer look on the definition can reveal that not all verbal predicates with two verbs in Dâw should be automatically considered SVCs, such as for instance V-AUX constructions that do not correspond to the common definition of SVCs. The boundaries between the several types of complex predicates seem to be fuzzy and furthermore seem to depend on the linguistic profile of each language. For example, gerund constructions that were described for Awetí (Tupí: Mawetí-Guaraní) by Drude (2011) are constructions consisting of a content verb, typically marked as the gerund through the suffix *-aw*, and a light verb. In terms of verb classes that are involved in the gerund construction and their semantic properties, Awetí gerund constructions strongly resemble the SVCs that were described by Martins for Dâw. On the other hand, these structures have much in common with converb constructions, described by Haspelmath (1995, p. 3) as a nonfinite verb form whose main function is to mark adverbial subordination. The following three examples showing a complex predicate in Dâw (360), a gerund construction from Awetí (361) and a prototypical converb construction from Modern Greek (362) will provide evidence for the semantic similarities between these structures:

(360) Dâw: Complex Predicate

*ãr* [ *weed* *ka* ] *yeg* *ked*  
 1SG eat lying.in.hammock hammock inside  
 ‘I ate lying in the hammock.’

(361) Awetí: Gerund Construction

*wej-’ataka* *ti* *kitã noatsat* *o-tan-taw*  
 3-confront RPRT that combatant 3-run-GER  
 ‘(They say) he confronted that combatant running.’ [DRUDE, 2011, p. 80]

(362) Modern Greek: Converb Construction

*I* *kopéla* *tón* *kítak-s-e* *xamojel-óndas*  
 the girl him look-AOR-3SG smile-CONV  
 ‘The girl looked at him smiling.’ [HASPELMATH, 1995, p. 1]

One striking similarity between the three examples is that the second Verb (henceforth:  $V_2$ ) adds the notion of Manner to the main action expressed by the first Verb ( $V_1$ ). Cross-linguistic studies assigned this as one of the main functions of these constructions. However, the most important difference between them is that Dâw lacks morphology on the dependent element that is *-taw* in example (361) and *-óndas* in example (362). Since Dâw shows a very low incidence of affixes, the absence of a morpheme marking the syntactically dependent element can be expected. The question that arises here is whether this structure in Dâw could be

analyzed as a gerund or converb construction if all three structures present similar semantic and functional properties. Or should the lack of morphology marking the dependent constituent be considered a criterion that isolating languages like Dâw are unable to show gerund or converb constructions?

It seems necessary to compare the most recurrent complex predicates in order to discover their semantic, functional and syntactic properties. This will help to classify complex predicates in Dâw and to get closer to a reanalysis of what Martins (2004; 2007) subsumed under SVCs.

Aikhenvald (2011) provides an overview of multi-verb constructions that she divides in SVCs, multi-verb constructions with dependent verb forms (gerunds, infinitives and converb constructions) and constructions with auxiliary verbs/ support verb constructions. Of course, it is difficult to generalize characteristics of these constructions in order to compare them cross-linguistically, since language-specific peculiarities can lead to the differences in some characteristics. However, all three types of multi-verb constructions presented by Aikhenvald (2011) can be described as verbal sequences having mono-clausal properties (see DRUDE, 2011; HASPELMATH, 1995; BISANG, 1995). Hence, they share tense, aspect and mood values as well as their arguments. In terms of compositionality, they also show similarities. SVCs and multi-verb constructions with dependent verbs are commonly considered to consist of a verb from an unrestricted class and a verb from a restricted class, corresponding to what Aikhenvald (2006) called *asymmetric* SVCs. These can be contrasted to *symmetric* SVCs in which verbs of unrestricted classes combine to express a unitary event. Multi-verb constructions with auxiliaries combine a verb from an unrestricted class with an auxiliary showing similar properties to asymmetrical SVCs. According to Aikhenvald (2011, p. 15) there is a diachronic relation between asymmetric SVCs and verb-AUX constructions, as the minor verb seems to be prone to grammaticalizing into auxiliaries.

The most striking difference seems to be found in the dependency relation between the roots as Aikhenvald (2006, p. 4) claims that verbs of SVCs are unable to appear with markers of syntactic dependency. In contrast, the presence of morphology is one of the main criteria described for gerund, participle and converb constructions.

In sum, SVCs, gerund and converb constructions present very similar functions and differ at first sight with respect to morphological markedness. Labeling multi-verb constructions as SVCs may be an outcome of research on isolating languages that lack morphology marking dependency between the roots. However, all three structures can be

described as verb serializing as they indeed show more or less contiguous sequences of verbs. They may best be differentiated according to their morphosyntactic and semantic properties.

## 7.2 Previous work on complex predicates expressing space within the Naduhup family

Examples (356) – (359) above show complex predicates that were analyzed as SVCs due to syntactic and phonological criteria and mostly in opposition to structures showing subordination. Recent descriptions of SVCs (see AIKHENVALD, 2006a; AIKHENVALD, 2011; DURIE, 1997; HASPELMATH, 2016) share the following characteristics: a sequence of verbs which act together as a single predicate without any overt marker of coordination, subordination, or syntactic dependency of any other kind. Syntactic approaches show that SVCs can be reanalyzed as subordinating structures, as the second verb can be seen as an argument of the first verb (SEBBA, 1987) or an adjunction structure (LAW and VEENSTRA, 1992). Thus, the widespread criterion that there is no syntactic dependency between the roots is not commonly accepted. Providing evidence for the syntactic status of SVCs in Dâw still remains difficult due to its isolating profile which lacks inflectional morphology. For that reason, I consider the constructions examined in this paper to be complex predicates, while observing that they do display properties associated with Haspelmath's (2016, p. 6) comparative criteria of SVCs: *monoclausal constructions, independent verbs, no linking element* and *apparently no predicate-argument relation between the verbs* (HASPELMATH, 2016, p. 6).

Having these key concepts in mind, a look at the examples of complex predicates within the Naduhupan language family (363) - (366) can be interpreted as SVCs at first sight since both verbs share the same subject, both elements are independent verbs, and there is no linking element indicating subordination.

- (363) *paas lâb xutu nâax dôo' rid*  
 stone roll descend water port LOC  
 'The stone is rolling towards the river.'

- (364) Yuhup  
*câ ˆ dɨʔ hâj wêdʰ ~ɨdʰ wêdʰ dédʰ-ɨ*  
 anything forest food 1P eat come-CONCOMITANT-PREDICATIVE2  
 'We are about to eat [coming] any food from the forest.' [OSPINA BOZZI, 2002, p. 347]

According to these criteria, Martins (2004; 2007) analyses complex predicates in Dâw as SVCs and Ospina Bozzi (2002; 2013) does the same in Yuhup. Both Martins (2004, pp. 621-622)

and Ospina Bozzi (2013, p. 156) describe them as morphosyntactic and semantic units, showing characteristics of simple predicates such as the same intonational properties as well as sharing the same subject, TAM and negation. Martins (2007, p. 159) mentions that SVCs commonly occur with up to three verbs, whereas SVCs with four to six verbs are considered rare. Recent data from elicitation as well as from narratives showed another picture: complex predicates frequently occurred with a maximum of two verbs. I consider this to be a consequence of intense language contact with Portuguese causing changes on the structural level such as replacing complex predicates with coordinate constructions.

(365) Hup

*tih*      ***wan-yé-ay-áh***

3SG    spy-enter-INCH-DECL

‘He entered, spying around.’

[EPPS, 2008a, p. 411]

(366) Nadëb

*Subih*    ***i-hob-wúúnh***

NP      ASP-take.bath+NI-go.to.river+I

‘Subih is going to the river taking a bath’

[WEIR, 1984, p. 48]

For Hup, Epps (2008a, p. 393) proposes arguments that analyze these structures as complex compounds due to phonological word-hood. However, the author mentions that verb compounding can be understood as a type of verbal serialization and considers the possibility that Hup complex compounds may have developed from an earlier process of serialization.

For Nadëb, Weir (1984, p. 43) describes the existence of a second verb root that is a positional or a directional motion verb resembling complex predicates observed in its sister languages. The author analyzes this process as a form of coordination due to subject sharing.

This short introduction shows again that boundaries between SVCs and other verb compounding structures are not clear-cut, as the latter are often understood as a type of SVC. All four Naduhup languages make use of these constructions to provide a detailed description of a unitary event that is anchored in space. Examples (363) - (366) provide evidence that complex predicates expressing static and non-static spatial events show similarities in the semantics of the verb classes involved in the predicate. Furthermore, they show identical ordering principles where the directional motion verb (e.g. ‘descend’, ‘come’, ‘enter’ and ‘go to the river’) appears in the second slot of the complex predicate.

### 7.3 The encoding of space in complex predicates in Dâw

A closer look at both natural discourse and elicited data of Dâw provides evidence for the preference in discourse of complex predicates consisting of two verb roots expressing spatial events, static or non-static, over simple predicates. In narratives, their function is to give explicit information about Manner and Path of a motion event, whereas static spatial descriptions provide a detailed description of the posture and position of a Figure in relation to a certain Ground.

With respect to their structural properties, these constructions act as a single predicate showing monoclausal behavior such as subject sharing (367) that is not required in bi-clausal structures (368).

(367) *dâw* *ãay* *puun* *pẽem* *tir* *tee*  
 person FEM breastfeed sit 3POSS child  
 ‘The woman breastfeeds her baby sitting.’

(368) [*têen* *rid* *par*] [*watir* *dôo'* *dôob* *uy*]  
 now 3PL know Valteir CAUS go.towards.river because  
 ‘Now they (Dâw people) know because Valteir brought them (to the community).’

Another consequence of two or more verbs acting as a single grammatical unit is the use of a single negation marker since this is recognized as an important feature to define clausehood (BOHNEMEYER et al., 2007, p. 501). Negation in complex predicates in Dâw usually appears on one element only with scope over the entire predicate in peripheral position. The repetition of the negation suffix *-ẽr* on both roots (369) or postposed to the first verb root (370) was judged ungrammatical by Dâw speakers.

(369) \**Uç* *rõkẽr* *xaa-ẽr* *yak yaa*  
 NP cut-NEG sit-NEG bitter.manioc

(370) \**Uç* *rõk-ẽr* *xaa* *yak yaa*  
 NP cut-NEG sit bitter.manioc

Similar to the single negation criterion, sharing TAM morphology also applies as a criterion for monoclausal constructions, as we can see in example (371), where the aspectual auxiliary expressing durative aspect occurs postposed to the predicate.

- (371) *tir*    *âg*    *rood*    *xâd*    *sibêe*  
 3SG    drink    go.out    DUR    soaked.manioc.meal  
 ‘He went out eating *sibêe* (soaked manioc meal).’

Despite the similarities with SVCs, these criteria are cross-linguistically consistent with other monoclausal constructions and not exclusively for SVCs. Additionally, Haspelmath (2016, p. 14) mentions the syntactic criterion that SVCs do not show a predicate-argument relation between the verbs, which in turn excludes complement clause constructions. On the other hand, complement clause constructions such as V-auxiliary constructions in Dâw show identical behavior, since both construction share one subject, TAM values and show inflectional morphology occurring in peripheral position.

Consequently, it is difficult to define the head of these complex predicates in Dâw. Law (1996) explains that, for SVCs in Chinese, the verb suffixed with aspect markers is the head of the SVC, because verbs that are not the head are usually bare. A similar observation was made by van Gijn (2011, p. 174) for Yurakaré (isolate, Bolivia) SVCs, claiming that the rightmost verb functions as the head of the construction since it carries TAM information. However, Paul (2008) assigns the possibility that both verbs can be the head depending on whether the SVC is understood as a purpose clause structure or an adjunct structure. By applying these concepts to Dâw complex predicates, the rightmost verb can be considered the syntactic head of the construction if it carries inflectional morphology identical to other multi-verb constructions such as the ones with modal or aspectual auxiliaries. In these constructions, the auxiliaries also occupy the right slot and carry tense and negation morphology. Furthermore, Dâw is a head-final language, so the syntactic head is expected to occupy the second verb slot.

### 7.3.1 Semantic verb classes involved in complex predicates

Dâw complex predicates expressing space make use of certain semantic types of verbs that have a fixed position within the predicate. These verbs can be static locative verbs such as posture and positional verbs or motion verbs that are all intransitive. Locative verbs can also be combined with intransitive non-motion verbs in order to express coincidence of posture/position or motion and another non-spatial event. Locative verbs were already introduced in chapter 5 and 6. However, in order to facilitate the comprehension of ordering principles in the subsequent section, I provide a sample of these verbs in the following Tables. A detailed semantic description is provided in the respective chapters.

o lists some frequent motion, posture and positional verbs in Dâw. Motion verbs are divided according to Wälchi and Zúñiga’s (2006) classification in *inherent motion verbs* such as ‘run, jump, fly’ and *displacement motion verbs* having directional semantics like ‘go, come, exit, enter’ all of which have already been analyzed in chapter 6. This division is important, as the next section will show that it is relevant for ordering principles. As we will see, complex predicates can consist in a combination of motion verbs, a combination of posture/positional verbs or show a combination of a non-motion verb and one these motion verbs.

Table 27- Example of Dâw locative verbs

Semantic verb class	Dâw	Translation
displacement motion verb	<i>rãm</i> <i>nēed</i> <i>yâa/ xâjâ</i> <i>saak</i>	to go to come to return to climb
inherent motion verb	<i>‘ox</i> <i>çak</i> <i>nâa</i> <i>lâb</i>	to run to jump to fly to roll
posture verbs	<i>yêt</i> <i>pēm</i> <i>kât</i> <i>son</i>	to lie on ground to sit to stand (only for humans) to be crouching
positional verbs	<i>xâa</i> <i>dâk</i> <i>tâg</i> <i>wôob</i>	to be supported to be attached to be crossed over sth. to rest on another object

Non- locative verbs in Dâw complex predicates can be transitive and intransitive and semantically belong to the class of activity verbs. Similar to Hup complex compounds, this semantic class comprises verbs expressing bodily functions, sensations, emotions, activity and manner, but also states and transitions (see EPPS, 2008, p. 504-508). Some examples are listed in o below.

Table 28- Example of Dâw activity verbs

Semantic verb class	Dâw	Translation
activity	<i>yūt</i> (transitive)	to kill
	<i>çêe</i> (intransitive)	to whisk
	<i>xaa</i> (transitive)	to cook
	<i>puun</i> (transitive)	to breastfeed
manner	<i>sê</i> (transitive)	to carry on the hips
	<i>sêet</i> (transitive)	to carry on the head
	<i>sōoy'</i> (transitive)	to poke with a stick
	<i>ton</i> (transitive)	to hold on the back
bodily functions, sensations, emotions	<i>wēed</i> (transitive)	to eat
	<i>'āa</i> (intransitive)	to sleep
	<i>âg</i> (transitive)	to drink
	<i>sur</i> (intransitive)	to menstruate
states and transitions	<i>çii (rām)</i> (intransitive)	to be sour
	<i>çik</i> (intransitive)	to be dirty
	<i>'çôy</i> (intransitive)	to be thin
	<i>wât #b</i> (intransitive)	to dawn

### 7.3.2 Combination patterns of complex predicates expressing space

In this section, I focus on the combination patterns frequently found in the discourse of Dâw speakers. In contrast to what scholars often have described as a central criteria of SVCs, Dâw complex predicates show a low degree of iconicity, i.e. they do not describe a temporal sequence of several actions but reflect synchronous actions. Dâw shows four patterns (o) expressing these synchronous actions, in which the root at the right seems to modify the main event by adding information (DURIE, 1997, p. 336).

Table 29- Frequent complex predicate patterns in Dâw

1st slot	semantic class	2nd slot	semantic class
V <sub>INTR</sub>	posture verb	V <sub>INTR</sub>	positional verb
V <sub>TRANS</sub> /V <sub>INTR</sub>	activity verb	V <sub>INTR</sub>	posture/positional verb
V <sub>INTR</sub>	inherent motion verb	V <sub>INTR</sub>	directional motion verb
V <sub>TRANS</sub> /V <sub>INTR</sub>	activity verb	V <sub>INTR</sub>	directional/ self-contained motion verb

These four patterns obey strict ordering principles that seem to be semantically and syntactically motivated, since verbs from different classes have fixed slots where they are allowed to occur. That is, transitive verbs precede intransitive verbs, implying that activity verbs usually precede motion and posture/positional verbs. The remainder of this section

examines how Dâw combines roots in complex predicates to express space as well as their ordering principles and resulting functions.

### 7.3.2.1 Complex predicates involving posture and positional verbs

The first pattern involves two intransitive verbs with posture and positional semantics. The first slot consists of a posture verb, as mentioned in chapter 7, providing a description of the body posture of the Figure referent, whereas the verb in the second slot provides specific information about the bodily orientation of the Figure. The result is a semantically detailed description of localization, direction, bodily disposition, and support mechanisms as seen in (372) and (373). In these examples the verbs *yay* ‘be in horizontal suspension’ and *lox* ‘be in vertical suspension’ provide an explicit description of the Ground that is either vertically or horizontally oriented. These verb phrases are completed with the posture verb *dâk* ‘lean’ adding the notion that the Figure’s body is in partial contact with the Ground (tree). This combination occurs frequently in data from elicitation tasks and natural speech.

- (372) *waas*            ***yay***                            ***dâk***            *bee*    *rêd*  
 monkey    be.in.suspension:horiz be.attached    tree    at  
 ‘The monkey is hanging from the tree.’  
 Lit.: ‘The monkey is hanging from the tree with horizontal support.’

- (373) *peen*    ***lox***                            ***dâk***            *bee*    *rêd*  
 sloth    be.in.suspension:vert be.attached    tree    at  
 ‘The sloth is hanging from the tree.’  
 Lit.: ‘The sloth is hanging from the tree with vertical support.’

With respect to the ordering principles, we can observe that verbs involved in the complex predicate cannot be inverted since speakers judged all such cases as ungrammatical (375). Thus, posture verbs must always precede positional verbs.

- (374) *yeg*            *tit*            ***yay***                            ***wôob***    *mej*    *wâ’*  
 hammock    string hanging.horiz be.on table on  
 ‘The hammock string is thrown on the table’  
 Lit.: ‘The hammock string is on table, hanging from it.’

- (375) \**yeg*            *tit*                            ***wôob***    ***yay***                            *mej*    *wâ’*  
 hammock    string                            be.on hanging.horiz table on

Complex predicates of this type resemble *complex locative verbs* in Yuhup, with the function of reporting complex events of localization, direction, bodily disposition and describing support mechanisms (see OSPINA BOZZI, 2013).

The next pattern involving posture and positional verbs shows the following ordering principle:  $V_{\text{TRANS/INTR}}(\text{activity}) + V_{\text{INTR}}(\text{posture/positional})$ . Similarly, to the last pattern, in this case the inversion of the verbs leads to ungrammatical sentences. The valency of the predicate derives from the non-locative verb in the first slot. The second verb, here the posture or positional verb, carries the meaning of manner of the action expressed by the first verb. In (376), the speaker uses the verb *xaa* ‘sit’ to give additional information about the manner of the main action, expressing the bodily posture of the Figure while doing the action expressed by  $V_{\text{T}}$ . The description of the Figure’s posture while doing another action is very common in the discourse of Dâw speakers. If a Dâw speaker is asked, for example, about an action that another person is doing (“What is he doing?”) most of the answers involve a complex predicate in which the first root expresses the action and the following root expresses the posture of the Figure. This can sometimes lead to pleonastic constructions like in (377) in which a speaker was asked what his wife was doing and he answered the question with “She sleeps lying in the hammock”, though in the cultural context of Amazonian lowland, this is the only position and place in which people sleep.

(376) *tir redçid xaa tir xaaw*  
 3SG clean sit.AP 3SG rifle  
 ‘He cleans his rifle’  
 Lit.: ‘He cleans his rifle (while) sitting.’

(377) *tir ãa ka’*  
 3SG sleep lie.in.hammock  
 ‘She is sleeping (lying in a hammock).’

Example (378) shows another function that is often attributed to complex predicates of this type, to encode internal aspectual values of the action. Aikhenvald (2006a, p. 23) claims that posture, positional, and motion verbs are especially able to indicate aspect and are therefore prone to grammaticalizing into auxiliaries, which has previously been observed for aspectual morphemes in Dâw by Martins (2004), Storto and Carvalho (2016) and Obert et al. (2018). The posture verb *kât* ‘stand’ in example (378) can be interpreted as durative aspect, since the speaker explained that the act of listening to the noise of the animals lasted for some time.

- (378) *dâw xut wa kât taax*  
 person MASC hear stand tapir  
 ‘The man hears the tapir.’  
 Lit.: ‘The man keeps hearing the tapir.’

### 7.3.2.2 Complex predicates involving motion verbs

A common strategy in Dâw is to express the direction or the Manner of motion through complex predicates. The first pattern consists of two intransitive verbs where the first slot is occupied by an inherent motion verb followed by a directional motion verb. In contrast to simple predicates, complex predicates of this kind are able to express both Manner of motion ( $V_1$ ) and direction of motion ( $V_2$ ) at the same time.

Examples (379) – (381) show cases of simultaneous actions. However, the second verb adds adverbial-type information to the main action of the first verb by indicating the direction of the whole action or a composite notion like *flying thither* or *flying hither*.

Constructions in which the directional motion verb is *rãm* ‘go’ as in example (30) usually indicate translocative motion (a movement away from the speaker) whereas constructions with *nêed* ‘come’ indicate cislocative motion (movement towards the speaker). Within the translations into Portuguese made by Dâw speakers, the directionality does not appear overtly, which is evidence of semantic bleaching, common for these constructions (HALE, 1991, p. 8). Consequently, the focus in these constructions lies on the event expressed by the inherent motion verb in the first slot.

- (379) *bug wa' nãa yãa tir pox day*  
 DISC.CONJ vulture fly return 3SG sky COMP  
 ‘The vulture flew above him.’  
 Lit.: ‘The vulture returned flying above him.’

- (380) *rid 'ox rãm nãax dôo rid*  
 3PL run go water port LOC  
 ‘They are running towards the river port.’

- (381) *paas lâb xutã nãax dôo' rid*  
 stone roll descend water port LOC  
 ‘The stone is rolling towards the river.’

Inherent motion verbs express the main action of the motion event. Since these verbs refer to motion but not to displacement, the directional motion verb in the second slot indicates the direction of motion with respect to a certain Ground (Source, Goal, Landmark) that is overtly expressed by PostPs or AdvPs. Complex predicates of this pattern are the most frequent complex predicates in Dâw.

The second pattern discussed here shows the following syntactic order:  $V_{\text{TRANS/INTR}}(\text{activity}) + V_{\text{INTR}}(\text{motion})$ . Motion verbs occurring in the second verb slot can be both directional or inherent motion verbs. Nevertheless, they seem to trigger a different reading of which action can be considered the main action with respect to the expression of manner. If we take a look at examples (382) – (384), we see that the activity verbs from the first slot are followed by directional motion verbs. According to the other patterns described until this point, we could expect that the  $V_1$  functions as the semantic head expressing the main action, whereas  $V_2$  adds the notion of manner. Yet, examples (384) – (385) show the opposite, since  $V_2$  is modified by the  $V_1$  expressing the manner of this motion event.

(382) *dâw xut ãot xâjâ*  
 person MASC cry enter  
 ‘The man entered crying.’

(383) *dâw xut tôoj yâa xaaw*  
 person MASC carry.on.shoulder return rifle  
 ‘The man came back carrying the rifle.’

(384) *dâw xut tôoj yâaẽr xaaw*  
*dâw xut tôoj yâa-ẽr xaaw*  
 person MASC carry.on.shoulder return-NEG rifle  
 ‘The man did not came back carrying the rifle.’

(385) *kas êe' n#k dâw yẽm ta' bâay*  
 to.be.bad PST formerly dâw.people world entire basket  
  
*sêet xôo*  
 carry.on.hips circulate  
 ‘In the old days, the Dâw were ugly and walked around everywhere carrying a basket.’

In contrast, if the second slot is occupied by an inherent motion verb such as ‘ox ‘run’ in (386), this verb adds the notion of manner to the main action expressed by the verb from the first slot as in the positional/posture verb pattern mentioned earlier.

- (386) *dâw xut ãn' 'ox*  
 person MASC smoke run  
 ‘The man smoked running’

These ordering principles for complex predicates involving motion appear to have a consistent semantic interpretation in Dâw that differs from their neighboring languages. Stenzel (2007, p. 287) shows that in two East-Tukanoan languages, Kotiria and Waikhana, SVCs involving motion verbs can have a purposive reading indicating intention (387). This corresponds to what Epps (2008a, p. 517) observed for Dâw’s sister language Hup in (388). In contrast, examples like these in Dâw have the reading of ‘go looking’ expressing simultaneity of the two events instead of purpose.

- (387) Waikhana (Tukano)  
*ti ~baa-de ~i'yaã wa'a-ya*  
 ANAPH stream-OBJ see/look-NOM go-IMPER  
 ‘You go to check (look at) the stream.’ [STENZEL, 2007, p. 287]

- (388) Hup (Naduhup)  
*ʔayũp=ih [key]-[wɔn-hám]-ay-áh*  
 one=MSC see-[follow-go]-INCH-DECL  
 ‘A man followed after in order to see (where the spirit went)’ [EPPS, 2008a, p. 517]

In our corpus on Dâw narratives, examples like these (389) are rarely found. Instead, Dâw makes frequent use of complex clauses in which the predicate expressing the purpose is contained in the subordinate clause marked by purposive subordinator *nã* as in (390) (see also section 8.3).

- (389) *bũg rid nũ mãr rid ãa yêt xoot mãr*  
 there LOC EXI REP 3PL sleep lie place REP  
 ‘There, they say, was a place where they lay down (in order) to sleep.’

- (390) *nũ' 'wat id ten*  
 other day 1PL kill.fish.with.poison  
  
*duus rẽd id yũt nã 'yoog*  
 fish.poison INSTR 1PL kill SUB piaba  
 ‘Another day we went fishing with timbó to kill piaba (fish)’

In all patterns of Dâw observed here, the different verb classes have a specific slot where they can occur that is semantically and syntactically motivated. That is, verbs with posture,

positional and motion semantics always occur in the second slot when combined with activity verbs and transitive verbs always precede intransitive ones. To corroborate this hypothesis, I collected data showing that an inverse order of the roots causes ungrammatical utterances such as in (391) - (394).

(391) *dâw xut ãot xâjâ*  
 person MASC cry enter  
 ‘The man entered crying.’

(392) \**dâw xut xâjâ ãot*  
 person MASC enter cry

(393) *dâw xut ãn’ rãd*  
 person MASC smoke exit  
 ‘The man went out smoking.’

(394) \**dâw xut rãd ãn’*  
 person MASC exit smoke

In sum, I have shown that all patterns express simultaneous actions, where one root seems to modify the main event (see DURIE, 1997, p. 336). This information involves the semantic notions of positions/posture and bodily orientation of the Figure while doing something. In the case of complex predicates involving motion verbs, the semantic notions of direction and Manner of motion are found encoded through the two roots. In terms of their compositional characteristics we saw that complex predicates expressing space obey strict ordering principles that cannot be inverted. These correspond to the ones observed for languages from different linguistic families of the region and from the Naduhup language family. Hence, they differ in terms of the impossibility to provide a purposive reading such as in Dâw’s sister language Hup.

## 7.4 Summary

This chapter provides evidence that complex predicates are productive syntactic and semantic strategies for the encoding of spatial information since they reveal information about direction, bodily disposition and orientation, and Manner of motion in Dâw. As a first step, I described these constructions in comparison with SVCs as they were first labeled by Martins (2004; 2007). According to the common criteria in the literature, Dâw complex predicates could be considered SVCs. However, I have shown that these criteria are also applicable to other kinds of complex predicates showing syntactic dependency between the roots. While

Haspelmath’s (2016) criterion that excludes structures showing a predicate-argument relation between these roots appropriately separate SVCs from complement clause constructions, because of Dâw’s typological profile it is difficult to apply here. Furthermore, we saw that complex predicates behave exactly in the same way as complex predicates showing syntactic dependency, as inflectional morphology occurs on the last root.

The main function of complex predicates in Dâw is to provide semantic descriptions of motion events and static spatial events that reveal detailed information about the Figure’s posture and position. Especially for the expression of complex motion events that contain information about Manner and Path of motion, complex predicates display an appropriate solution to combine this semantic information in a clause. This seems necessary since Dâw does not provide a distinctive set of directional locative postpositions that indicate Source (‘from’) and Goal (‘to’) in order to describe the direction of motion with respect to the Ground (see section 3.2). In other words, with the addition of a directional motion verb to an inherent motion verb, the interlocutor knows in which direction a motion event occurred.

Finally, I summarize the examined patterns with their respective functions in o below.

Table 30- Complex predicates - patterns and functions

	<b>Pattern</b>	<b>Function</b>
I	V <sub>INTR</sub> (posture) + V <sub>INTR</sub> (positional)	description of: localization, direction, bodily disposition and support mechanisms
II	V <sub>INTR</sub> (inherent motion) + V <sub>INTR</sub> (directional motion)	indication of: direction of motion
III	V <sub>TRANS/INTR</sub> (activity) + V <sub>INTR</sub> (posture/positional verb)	codification of: aspectual information, manner of the main action
IV	V <sub>TRANS/INTR</sub> (activity) + V <sub>INTR</sub> (directional/self-contained motion verb)	addition of: manner of motion

A final remark must be made with respect to the parallels between complex predicates involving motion and the concept of *Associated Motion* (GUILLAUME, 2016). In his work on *Associated Motion* (AM) in South-American languages, Guillaume (2016, p. 81-82) describes this strategy as consisting of a set of grammaticalized verbal affixes with the function to associate translational motion to a verb event. The author shows that languages with elaborated AM systems are structured with respect to the moving entity (subject vs. non-subject) and temporal relation between motion component and the verb event that he divides into prior, concurrent and subsequent events (GUILLAUME, 2016, p. 126). One prominent difference between complex predicates of type IV and the complex predicates analyzed in this chapter is that the latter consist of two lexical verbal roots rather than grammaticalized

elements expressing motion. However, considering the semantic properties of type IV complex predicates, there are striking similarities to the concept of AM. Recall examples that express a notion like *enter (while) crying* or in (391) *come back (while) carrying* (383); these clearly show temporal concurrency of a motion and a non-motion event, which, in other words, can be interpreted as associated motion. Thinking about AM as a category rather than a concept, we could argue that Dâw is a language that displays complex predicates expressing the notion of associated motion. On the other hand, we can consider complex predicates that frequently involve the basic motion verbs *rãm* ‘go’ and *nêed* ‘come’ in the last slot at an intermediate stage on a grammaticalization scale with lexical complex predicates on one end and associated motion morphemes on the other end. Pattern III involving a verb event of non-spatial semantics and a posture or positional verb can be considered as expressing the idea of associated posture for also expressing temporal simultaneity and for associating a bodily orientation of the Figure while doing the verb event, but further research is needed here. By considering associated motion and associated posture as two possible next steps on the grammaticalization scale, the Dâw case provides evidence that complex predicates are a highly productive source for the development of new grammatical morphology through the loss of semantic content and the change into a functional item.

Finally, with respect to the broader regional context, this chapter provided evidence for the fact that Dâw has salient similarities with the other languages of the linguistic area of the Upper Rio Negro Region, where many languages seem to rely on verbal constructions in order to express spatial notions.

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## **8 Syntactic resources expressing space**

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## 8 Syntactic resources expressing space

Until this point, I have examined the parts of speech that encode spatial notions. As Levinson (2004) puts it, there is strong cross-linguistic evidence for the fact that these notions can be found spread out through the clause and not exclusively through adpositions. Consequently, it is interesting to focus on different clause types and how these spatial notions can be distributed. This chapter will therefore focus on the syntax of spatial expressions, examining the following three clause types: interrogative clauses, the Basic Locative Construction, and adverbial clauses. My main goal is to verify if these clause types present different syntactic characteristics when expressing spatial content.

The first part (section 8.1) addresses locative interrogative clauses that are interesting for triggering the production of utterances involving spatial information. We will see different constituent orders for polar locative questions and WH-questions and again the importance of locative verbs in order to differentiate between questions that request static spatial information (*Where?*) or non-static spatial information (*From where?* and *To where?*).

In section 8.2, I observe possible answers to locative interrogative clauses in the form of simple clauses or the so-called Basic Locative Construction (BLC). In my data, I examined four different types of BLCs that can function as an answer to *Where*-questions: the default BLC, the locative equational clause, the reduced BLC, and the focused BLC. This division is based on the different syntactic profiles that these clauses provide with respect to the different figure-ground relations that they express.

Section 8.3 examines complex clauses with a focus on locative adverbial clauses as a process of subordination. I show that locative adverbial clauses are an important resource to express grounds that are composed of an event rather than of a landmark (e.g. ‘They go (to the place) where there are many fish’). Furthermore, I will analyze the position of the subordinated clause within a complex clause and its different functions in discourse. This chapter aims to contribute to a better general understanding of these clause-types in *Dâw* and to point out their characteristics when conveying spatial semantics.



(400) *liw'*                    *mĩ*                    *mãay*    *çeeb*                    *pee*  
 Kariwa.creek    in.liquid                    not.be    change.place    go.upriver

*bug*    *dâw*                    *êe'?*  
 there    *dâw*.people    PST

‘Wasn’t it the Kariwa creek where the Dâw moved along upriver?’

The following sections provide a description of locative interrogative clauses in Dâw with an emphasis on spatial semantics.

### 8.1.1 WH-questions

WH-questions are also known by the name ‘constituent interrogatives’ or ‘information questions’. According to König and Siemund (2007, p. 291), they aim to receive an answer related to a specific constituent or to information related to a semantically specified interrogative word. In other words, by beginning an information question with the interrogative particle *rid* ‘where’ in Dâw, such as in *rid nĩ ãm top?* ‘Where is your house?’, the interlocutor expects to receive spatial information as an answer.

In terms of their formal properties, locative information interrogatives differ from declarative clauses with respect to word order and the clause-initial interrogative particle *rid* /hid/<sup>30</sup> ‘where’ (401). The locative interrogative particle *rid* in Dâw has polysemous counterparts such as the locative marker (402) described in § 2.2 and the subordinator of locative adverbial clauses (403) described in § 1.4.2.8. All of these morphemes provide spatial semantics, however they differ in terms of their distributional properties in different clause types.

(401) *dêew#*                    ***rid***                    *nasceu*                    *id?*  
 Deolinda                    WH:where                    be.born                    1PL  
 ‘Deolinda, where were we born?’

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<sup>30</sup> The locative interrogative particle *rid* is probably a cognate form to Hup’s locative interrogative particle *hĩt* (EPPS, 2008, p. 778) and to *hĩhúd* in Yuhup (OSPINA BOZZI, 2002, p. 165). In Nadëb, the locative interrogative particle is a complex form consisting of the particle *nĩid* ‘which’ that is combined with a locative postposition like *bũ* ‘ablative’ to make *nĩid bũ*, specifying the exact location that a person is asking for (WEIR, 1984, p. 110-111).

(402) *ãr nasceu daad rid*  
 1SG be.born marié.river LOC  
 ‘I was born at the Marié river.’

(403) *tir rãm [rũur nĩ rid]*  
 3SG go game EXI LOC  
 ‘He goes (to the place) where there is game’

Similar to the function as a locative marker, *rid*, in its function as an interrogative particle with locative semantics, is used for locative questions involving directionality that can be Goal (404) or Source-oriented (405) and for stative locations (406). Once again, Dâw does not show a distinctive set of locative question particles reflecting different directional orientations such as English *Where...to?* and *Whence?*, for example. This distinction is implied through the semantics of directional motion verbs with intrinsic Goal or Source semantics like in (404) and (405) in opposition to the use of non-motion verbs or verbless interrogatives as in (406). In (404) the interrogative clause displays the directional motion verb *rãm* ‘go’ indicating that the consultant requests the Goal of the motion event, whereas in (405), the directional motion verb *nẽed* ‘come’ followed by the source-indicating directional auxiliary *dôo*’ (see section 6.4) provides a Source-oriented reading of the locative question.

(404) *rid rãm ãm?*  
 WH:where go 2SG  
 ‘Where are you going to?’

(405) *rid nẽed dôo’ dâw?*  
 WH:where come DIR:source person  
 ‘Where are you coming from?’

(406) *rid nâax taax nâax?*  
 WH:where [water tapir] water  
 WH:where capybara water  
 ‘Where is the capybara creek?’

In directional interrogatives in which motion is expressed by an inherent motion verb, Dâw makes use of complex predicates as a morphosyntactic strategy to indicate that the interrogative clause requests directional information. Hence, in (407) the verb ‘ox ‘run’ is followed by the directional verb *rãm* ‘go’ leading to a question that requests information of the Goal of the motion event. In comparison, example (408) shows how the absence of a directional motion verb component leads to questions that request static spatial information, i.e. the place in which the children are running.

(407) *rid*                    *ox*     *rãm*     *ãm?*  
 WH:where     run     go     2SG  
 ‘Where are you running to?’

(408) *rid*                    *ox*     *dâw*                    *tee?*  
 WH:where     run     dâw.people     child  
 ‘Where/in what place the kids are running?’

WH-questions requesting information about static location show the same formal properties as the ones that request directional information. However, they differ on the basis of the semantics of the verbs displayed in the interrogative clause. Hence, these interrogative clauses are marked by the absence of a copula like in (409), by the presence of the copula *nĩ* in its function as a locative copular verb (‘be located’) (411) or as an existential like in (412). Furthermore, they can involve stative locative verbs with posture and positional semantics (13a) or from any semantic class (14a) and (15a) except directional motion verbs. In elicitation contexts like Bowerman and Pederson’s *Topological Relation Picture Series* (1992), Dâw speakers predominantly used locative interrogative clauses with a copula, which is probably a result of constant repetition within this task. Verbless locative questions like in (409), in contrast, are more frequent in everyday discourse and narratives, especially if the required locative information refers to place names or landscape terms (410). This reflects the pattern of locative non-verbal clauses (see section 8.2.3).

(409) *rid*                    *ãm?*  
 WH:where     2SG  
 ‘Where are you?’

(410) *rid*                    *bukuu?*  
 WH:where     bukuu.creek  
 ‘Where is the Bukuu creek?’

(411) *rid*                    *nĩ*     *top?*  
 WH:where     be.at     house  
 ‘Where is the house?’

(412) *rid*                    *nĩ*     *top?*  
 WH:where     EXI     house  
 ‘Where is there a house?’

Examples (413), (415) and (417) show locative WH-questions asking for a place in which a specific action, expressed by the verb in the interrogative clause, is carried out. Usually this

verb is repeated in the answer with a locative adjunct (adverbial or postpositional phrase) in focused clause initial position (414), by a postpositional phrase alone (416), or by a spatial adverb (418).

(413) *rid pẽem dâw tee?*  
 WH:where sit dâw.people child  
 ‘Where is the kid sitting?’

(414) *tuu tir pẽem*  
 ground 3SG sit  
 ‘On the ground, he is sitting’

(415) *rid ‘wĩnh-êe’ dâw?*  
 WH:where work-PST dâw.people  
 ‘Where did the Dâw people used to work?’

(416) *xaay rid*  
 forest LOC  
 ‘In the forest’

(417) *rid ‘ox dâw tee?*  
 WH:where run dâw.people child  
 ‘Where are the kids running?’

(418) *bũg-ũ!*  
 there-FOC  
 ‘There!’

Turning now to constituent order in WH-questions with locative semantics, one can observe different ordering principles than in declarative clauses. Basic word order in unmarked declarative clauses like in (402) (here repeated as (419)) is SVO[Adj<sub>loc</sub>] whereas in locative interrogative clauses we find the clause initial locative interrogative particle followed by (O)VS order such as in (401) (here repeated as (420)) or OSV such as in (421).

(419) Declarative clause: SVAdj<sub>loc</sub> ordering  
*ãr nasceu daad rid*  
 1SG be.born marié.river LOC  
 ‘I was born at the Marié river’

(420) WH-question: VS ordering  
*dêew rid nasceu id?*  
 Deolinda WH:where be.born 1PL  
 ‘Deolinda, where were we born?’

(421) WH-question: OSV ordering  
*rid taax ãm yũt?*  
 WH:where tapir 2SG kill  
 ‘Where did you kill the tapir?’

This flexible word order in Dâw WH-questions has an emphatic function as Martins (2004, p. 553) puts it but seems more related to focus in my data. Comparing sentences (422) and (423) reveals that the former presents the VS constituent order described for interrogative clauses, whereas the latter shows the basic word order for declaratives, which is SV. The locative interrogative in (422) with VS order merely requests spatial information, that is, the place where the woman is lying down, since this question presupposes the knowledge that the woman is already lying down. In contrast, in (423) the context in which this question can be asked is different. Here, the Figure referent (woman) is not lying down yet at the moment of asking. However, by asking a question like (423) the speaker presupposes that the action expressed by the verb is going to happen immediately. Therefore, the speaker requests the information about which place the Figure is *going to* lie down. Hence, the constituent order of locative WH-questions order can be interpreted as connected to tense and aspect variation, since they seem to encode immediate future<sup>31</sup> or prospective aspect referring to an inception of a situation. However, to support this hypothesis more investigation is needed and must be left for further research.

(422) WH-question: VS ordering  
*rid yêd dâw ãay?*  
 WH:where lie person FEM  
 ‘Where is the woman lying?’

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<sup>31</sup> Martins (2004, p. 238) describes the morpheme *-êj* for immediate future describing an interval that begins right after the utterance time. However, the use of *-êj* in Dâw seems to function also as a continuous future like in example (1).

(1) *‘aa’ pitaa id tee pẽn êj xâd*  
 ANAPH stay 1PL child ? FUT DUR  
 ‘This (place here) will stay for our children’

- (423) WH-question: SV ordering  
*riḍ                    dâw    âay    yêḍ?*  
 WH:where    person FEM    lie  
 ‘Where is the woman going to lie down?’

### 8.1.2 Polar locative questions

In Dâw everyday discourse it is very common to ask a person about an action that he or she is currently engaged in. That means, if an addressee is eating, for example, it is part of social interaction to ask a question like *weed âm?* ‘Are you eating?’ that is going to be answered with the verb phrase *weed!* ‘I am eating’. These pairs of polar questions and answers are considered a central element of phatic language of this type. Polar interrogatives, or ‘yes/no questions,’ provoke an answer that provides a truth value, which can additionally be biased by the usage of interrogative tags (see KÖNIG and SIEMUND, 2007, p. 291-292). König and Siemund (ibid., p. 292) describe the following six strategies found in the languages of the world to express polar questions: special intonation patterns, interrogative particles, the addition of special tags, disjunctive-negative structures, a change in the relative order of constituents, and particular verbal inflection.

Polar interrogatives in Dâw are predominantly marked by the addition of tags expressed by the affirmative *tii*, negative copula *mâay*, and also by the dubitative particle *aa’ êe* that I will describe later in this chapter. Besides this, similar to WH-questions, polar interrogatives display a different constituent order from declarative clauses. A prototypical polar question in Dâw is represented in (424) displaying VS word order.

- (424) *çom                    âm?*  
 take.bath    2SG  
 ‘Are you going to bathe (in the river)?’

This pattern also applies to polar questions with locative semantics that display a locative verb like (425) and (426). These examples do not provide a locative adjunct, which in turn suggests that polar interrogatives of this type focus on the predicate. In other words, speakers intend to solicit information about the truth of the verb event.

- (425) *nêed    âm?*  
 come    2SG  
 ‘Are you coming?’



(429) *reew weed rid tii*  
 a.lot eat 3PL AFFIRM  
 ‘They really ate (the Dâw people a lot).’

(430) *reew m̃ay<sup>33</sup> m̃r weed diid tii yẽm ta’*  
 a.lot INTS RPT eat there:ITG AFFIRM world entire  
 ‘They say, there they really ate a lot, everywhere.’

In polar-interrogatives, *tii* is frequently found in clause final position, which is considered to be one of the identifying criteria for interrogative tags (SIEMUND and KÖNIG, 2007, p. 297). However, when used as an interrogative tag in polar interrogative clauses in Dâw, the speaker expresses doubt and expects a negative answer. This usage corresponds to what Epps (2008, p. 837) described for the cognate form *tĩ* in Hup. According to Dixon (2012, p. 393), it is cross-linguistically common that positive tags, such as the affirmative *tii* in declaratives, presuppose a negative answer and vice-versa. For example, in (431) and (432) the speaker doubts that there was an island or a community of ancestors at the place she was discussing with another person, therefore expecting a negative answer or even no answer, since questions of this type in Dâw are often introspective or rhetorical.

(431) *bũg tũn’ nũ tũg tii?*  
 there island EXI HABIT AFFIRM  
 ‘Was there really an island?’

(432) *dâw nĩr xoot waar ‘aa’ tii?*  
 dâw.people [be.located place] ancestor ANAPH AFFIRM  
 dâw.people community ancestor ANAPH AFFIRM  
 ‘Was there really a community of the ancestors?’

In contrast, there are also negatively biased polar questions implying a positive answer through the employment of the negative copula *m̃ay*, which in declarative clauses functions to contradict assertions or negates the identity of a nominal participant of the sentence, like in (433) and (434).

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<sup>33</sup> It is important to mention that *m̃ay* manifests both the identity negator and a particle with intensifying function. In the special case of example (430), I treat *reew m̃ay* as an idiomatic expression intensifying the quantifier *reew*. This idiomatic expression is a common rhetoric device in emphatic discourse in Dâw narratives.

(433) *dâw*                    *mãay*                    'aa'                    *tii*                    *xaay*    *dee'*  
 person                    not.be                    ANAPH                    AFFIRM                    forest    ORIG  
 'That (one) wasn't a person, it was from the forest.'

(434) *mẽr*                    *mãay*                    *kas*    *pay*  
 NEG.EXI                    not.be                    ugly    REL  
 'There isn't nothing.'

In polar interrogatives, *mãay* follows the fronted constituent, which can be a noun phrase (435), postpositional phrase (436) or adverbial phrase (437). The negated fronted constituent expresses the fact that the speaker is certain about the information that he is expressing, expecting therefore no answer or an answer confirming the question. This resembles English tag questions like 'He is in the village, isn't he?' in which the clause ends with the negated form of a copular verb, causing a positive bias of the question.

(435) *wâan*    *nâax*    *nõr*    ***mãay*** 'aa'    *êe'?*  
 curicuriari.river                    river    mouth    not.be ANAPH    DUB  
 'Wasn't this the mouth of the Curicuriari river?'

(436) *liw'*                    *mĩ'*    ***mãay*** *çeeb*    *pee*  
 Kariwa.creek    in.liquid    not.be    change.place    go.upriver

*bug*    *dâw*    *êe'?*  
 there    dâw.people    DUB

'Wasn't it at the Kariwa creek that the Dâw moved upriver?'

(437) *bug*                    ***mãay*** 'aa'    *êe'*    *waar*                    *nĩr*                    *xoot*  
 over.there                    not.be ANAPH    DUB    ancestor                    [be.located    place]  
 over.there                    not.be ANAPH    DUB    ancestor                    community

*waar*                    *bukar pêeg?*  
 ancestor                    bukar.pêeg.creek

'Wasn't there a community of ancestors, at the Bukar Pêeg creek?'

Moreover, both polar and WH-questions are frequently marked by the discourse particle *êe'* that Martins (2004, p. 553) describes as the dubitative particle that occurs exclusively in interrogative clauses. Similar to other particles, it often occurs in clause-final position like in (435) and (436) but shows flexibility with respect to its syntactic position (437). This particle has a homophonous counterpart the remote past tense suffix *-êe'*. This suffix can be attached to verbs and also to nouns indicating nominal tense like in (438). Similar to *-êe'*,

the dubitative particle is always preceded by nominal elements (see (435) - (437)). Martins (ibid.) adds that the use of *êe'* in some contexts also indicates that the speaker already has an assumption or answer to the question, reflecting rhetorical or introspective questions that comprise the majority of my examples displaying this particle. Consequently, the negatively biased polar questions with *tii* described above usually do not co-occur with *êe'*.

- (438) *woor id lanãaw' êe'*  
 tukano.people 1PL patron PST  
 'The Tukanoans were our patrons.'

Finally, we find short questions with spatial semantics in contexts in which someone wants to assert a place referred to by an action like 'Here?' or 'There?'. In these cases we find spatial adverbs like *mũg* 'here', *bug* 'over there', *bũg* 'there' and *diid* 'there:ITG' suffixed by *-V?* where *V* represents the reduplicated vowel of the adverb (439). This corresponds to focus marking in Dâw that makes use of the same suffix in order to highlight a constituent in discourse (MARTINS, 2004, p. 455).

- (439) *pẽem-õr na'-mũg*  
 sit-imp DEM.prox-here  
 'Sit here!'
- mũg-ũ'?*  
 here-FOC  
 'Here?'

## 8.2 The Basic Locative Construction

The previous section described how Dâw speakers ask about the location of places and entities. This section focuses, in turn, on how Dâw speakers answer such questions. Recalling the terminology from chapter one, I introduced the *where*-question as the starting point to understand the concept of the *Basic Locative Construction* (BLC). A BLC is "the predominant construction that occurs in response to a *where*-question" (LEVINSON and WILKINS, 2006, p. 15). These answers express the spatial relation between a Figure and a Ground and are therefore central for understanding the linguistic encoding of space in a language.

As I have already demonstrated throughout this work, a prototypical BLC in Dâw presents the following structure [NP<sub>FIGURE</sub> + *nĩ/V*<sub>LOC</sub> + PP<sub>GROUND</sub>] represented in example (440). The syntactic structure of a BLC reflects the constituent order of unmarked declarative clauses,

which is SVA,<sup>34</sup> and consists of a noun phrase representing the Figure, a verbal predicate that can be composed of the locative copula verb *nĩ* or an intransitive locative verb and a locative adjunct (postpositional phrase).

(440) *bol nĩ mej wâ'*  
 ball be.located table on  
 'The ball is on the table'

However, as Levinson and Wilkins (2006, p. 15) point out, locative descriptions can also be found outside BLCs like in the example '*The Cathedral stands at the heart of the old city, overlooking the Rhine*'. Since it does not correspond to a prototypical spatial scene, this example can no longer be analyzed as a BLC. In other words, more complex spatial scenes like, for example, the description of a crack in a vase will probably not be described with the structure of the BLC identified for that language (cf. *ibid.*). The authors (*ibid.*, p. 16) establish a hierarchy showing that spatial scenes involving contiguity between Figure and Ground are more likely to be encoded with a BLC than a spatial scene with a Figure impaled on the ground. Dâw confirms this hierarchy, since more prototypical spatial scenes are likely to be expressed in a BLC.

However, data from natural discourse provided two different structures that are functionally motivated by the different types of spatial information that they encode. Spatial information of this type is either permanent spatial relations or spatial situations in which Figure information is not salient. With respect to their morphosyntactic features, I analyze these structures as i) *locative non-verbal clauses* and ii) *locative phrases*. Consequently, what I described as a "prototypical BLC" in example (440) above can be considered a *locative verbal clause*. I consider all three of these constructions BLCs, since they all correspond to *Where*-questions but differ with respect to the type of spatial information that needs to be encoded. o presents their functional properties and syntactic structure and also includes *focused locative verbal clauses*. These can be understood as a variation of locative verbal clauses that are pragmatically motivated. Usually, they occur in emphatic contexts in which a speaker emphasizes Ground information. Analyzing the inventory of possible answers to *Where*-questions offers a fine-grained understanding of how BLCs in Dâw can look in different possible contexts.

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<sup>34</sup>I use the abbreviation 'Adj' to refer to an adjunct.

Table 31- Functional domains of the Basic Locative Constructions in Dâw

Type	Functionality	Structure
Locative verbal clauses	Applies to static spatial situations that are resultative states and usually not permanent (RYBKA, 2015, p. 96). Posture and position can be salient or not.	S + V + Adj <sub>loc</sub> <i>Figure + V<sub>loc</sub>(+V<sub>loc</sub>) + Ground</i>
Focused locative verbal clauses	Applies to any static spatial situation. Ground information is emphasized and therefore in sentence-initial position.	Adj <sub>loc</sub> + S + V <i>Ground + Figure + V<sub>loc</sub>(+V<sub>loc</sub>)</i>
Locative non-verbal clauses	Applies to static spatial situations that report permanent states such as the location of a village with respect to a certain landmark.	S + Adj <sub>loc</sub> <i>Figure + Ground</i>
Locative phrases	Applies to answers in which the figure component is not repeated and/or figure information is not salient.	Adj <sub>loc</sub> <i>Ground</i>

Other important aspects of BLCs are the form classes involved in these constructions (see LEVINSON, 2004). These were already introduced in chapters 3 and 5 on verbal and nominal resources. Their possible distribution within a locative verbal clause is illustrated in o below. Looking at a locative verbal clause from the left to the right, we see that the figure is commonly expressed by a noun that can be modified by demonstrative pronouns making reference to the distance level between the speaker and the figure itself. With respect to the predicate, we see that locative verbs (locative copula; posture and positional verbs) comprise the verb slot in simple or complex predicates. The ground can be expressed by postpositional phrases headed by a set of postpositions with rich spatial semantics, spatial adverbs, adverbial clauses, and noun phrases (see chapter 3). This section thus focuses thus on the interplay of these form classes in the three types of BLCs.

Table 32- Constituent order in a locative verbal clause and form classes

S	V	A
<i>Figure</i>	<i>Locative predicate</i>	<i>Ground</i>
noun phrase	V <sub>cop</sub> V <sub>posture</sub> V <sub>positional</sub> V <sub>motion</sub> V <sub>loc</sub> +V <sub>loc</sub>	postpositional phrase spatial adverb noun phrase ∅

In this section I address the three construction types that I consider to be BLCs in Dâw. The section is structured with respect to the level of markedness of these constructions. Hence, section 8.2.1 presents locative verbal clauses followed by section 8.2.2 addressing their focused variants. In section 8.2.3, I examine locative verbless clauses followed by locative phrases.

### 8.2.1 Locative verbal clauses

Bowermann and Pederson's (1992) *Topological Relation Picture Series* and Ameka and Wilkins' (1999) *Positional Picture Series* (PPS) elicited locative clauses whose constituent order reflects Dâw's default order in intransitive declarative clauses, which is SVA. The subject of locative verbal clauses is always represented by the Figure, while the information about the spatial relation between the Figure and the Ground is encoded by both the predicate and the locative adjunct. The verb slot in all utterances is occupied by an intransitive locative verb, usually followed by a clause-final locative adjunct (SVA), a position which Martins (ibid, p. 549) also describes as the default position for postpositional phrases. This constituent order is pervasive in answers to *Where*-questions in the TPRS elicitation task (95% SVA in the answers of three speakers) as well as in the PPS elicitation task. I consider SVA ordering, because of its straightforwardness in elicitation contexts and its similarity to the default constituent order for declaratives, to be the locative verbal clause in Dâw in unmarked contexts.

The locative verbal clause in Dâw refers to spatial scenes that describe result states, i.e. spatial relations that are temporary. All spatial scenes from the TPRS task show these characteristics, since they present situations that are results of an event like, for example, putting a ring on a finger or a cat sitting on the carpet, and are all temporary. This contrasts with spatial scenes that can be seen as permanent, such as the location of a community, which are commonly expressed through the locative non-verbal clauses (see section 8.2.3).

Figure referents of these clauses are expressed by bare nouns or noun phrases. They can include determiners such as demonstrative pronouns (441), show inalienably possessed forms (442)<sup>35</sup> or even consist only of a demonstrative pronoun (443). Demonstrative pronouns are less common in elicited contexts but very frequent in conversational speech data where

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<sup>35</sup> Martins (2004, p. 148) describes nouns like *dâw* 'person' or *bee* 'tree' as generic nouns that combine with plant and body parts to form 'class-terms' that are compound nouns like *dâw-sob* 'person-hand' or *bee-kef* 'tree-leaf' in order to form semantic relationships of the part-whole kind. However, Epps (forthcoming) suggests analyzing these structures more as generic or default possessors associated with inalienably possessed nouns similar to Dâw's sister languages.

the demonstrative pronoun usually has an anaphoric function and is accompanied by gestures such as lip pointing.

(441) *naa'*            *sâan* *pēm* *mej* *b̃ut*  
 DEM:prox      cat      sit      table      under  
 ‘This cat is sitting under the table.’

(442) *bee*    *ket*    *nĩ*                    *bee*    *mĩ*    *rēd*  
 tree    leaf    be.located      tree    twig    at  
 ‘The (tree-)leaf is at the (tree-)twig.’

(443) *naa'*            *dāk*                    *dāw*    *āay*    *nur*    *rēd*  
 DEM:PROX      be.attached      person FEM      head    at  
 ‘This (thing) is at the women’s head’.

The verb slot in a locative verbal clause can display any kind of locative verb in simple predicates such as posture (444) and positional (445) verbs or the locative copula (446). In Dâw, positional verbs are employed when the posture or position of the figure is salient, like the sitting position of the cat in (444), and are frequently found combined in complex predicates with multiple semantic functions (see chapter 7) (447).

(444) *sâan*    *pēm*    *tapete wā'*  
 cat      sit      carpet on  
 ‘The cat is sitting on the carpet.’

(445) *bee*    *xaa*                    *bee*    *ñd*    *wā'*  
 tree    be.leaning      tree    stump on  
 ‘The tree is leaning on the stump.’

(446) *bee*    *ked*    *nĩ*                    *bee*    *mĩ*                    *rēd*  
 tree    leaf    be.located      tree    twig                    at  
 ‘The leaf is on the twig.’

(447) *dāw*    *loy*                    *pēm* *mej*    *wā'*  
 person be.inclined      sit      table    on  
 ‘The person is sitting (with torso) inclined on the table.’

Locative verbal clauses that employ posture or positional verbs or even a combination of both in complex predicates are also a central resource to additionally specify the spatial configuration between Figure and Ground. This goes back to their property of encoding configurational information like support. In example (448), the positional verb *wōob* ‘be on’

indicates that the Ground is located below the Figure whereas in (449), the verb *pâd* ‘be rolled around’ implies that the ground is the axis of the figure entity, i.e. the snake is coiled *around* a twig.

(448) *bol wôob mej wâ'*  
 ball be.on table on  
 ‘The ball is on the table’

(449) *reer pâd bee rēd*  
 snake be.rolled.around tree at  
 ‘The snake is wrapped around the tree’

In comparison, when the locative copula *nîi* ‘be located’ is used in a locative verbal clause, the spatial configuration between Figure and Ground is implied exclusively by the postposition of the Ground-denoting copula complement like in (450) and positional information about the figure is left implicit. In other cases, the ground-denoting adjunct is composed of a demonstrative adverb like *bug* ‘there’ in (451), for example.

(450) ‘*yâm nîi top ked ka'*  
 dog be.located house inside  
 ‘The dog is inside the house’

(451) *naa' nîi bug*  
 DEM.PROX be.located there  
 ‘This [rake] is there’

Spatial relations between Figure and Ground are established via a large set of locative verbs found in simple or complex predicates, a rich set of postpositions that can be projective or non-projective, and spatial adverbs.

## 8.2.2 Focused locative verbal clauses

One subtype of locative verbal clauses is their focused variants that I call *focused locative verbal clauses*. These clauses are to a lesser extent motivated by a specific figure-ground relation, yet they are much more sensitive to discourse variation and can also reveal insights on information structure. Furthermore, focused locative verbal clauses provide an interesting pattern of syntactic variation within locative verbal clauses, since a *Where*-question can also be responded to with a clause in which ground-denoting adjuncts are found in clause-initial position like in example (452). As with locative verbal clauses, focused locative verbal clauses

apply to any static spatial situation expressing the relation between figure and ground. Fronting the Ground-denoting adjunct seems to have two discursive functions in Dâw: one is to provide new information, and the other is to emphasize this constituent. The former is more prominent in narratives, whereas the latter frequently occurs in everyday discourse, spontaneous conversations, and in some elicited contexts.

- (452) *tapete wâ' sâan p̃em*  
 carpet on cat sit  
 'On the carpet, the cat is sitting'

According to Martins (2004, p. 549), the clause-initial slot in declarative clauses in Dâw can employ focused constituents. The author (*ibid.*, pp. 523-528) refers mainly to focused core arguments that are morphologically marked with the vowel-copying suffix *-V?* in the case of subjects and optionally marked with the suffix for differential object marking *-ũny'* in the case of objects. Grammatical objects in focused contexts are dislocated to the left as in example (453), whereas focused subjects are found in post-verbal position (454).

- (453) *woor-ũny' mĩnõr rid kũnh look dâr mâr*  
 tukano.person-DOM arm 3PL shoot.arrow pierce AGTV EVID  
 'They say, they pierced the arm of the Tukano (person) by shooting with arrow'

- (454) *diid bax koor dâw-â' primēel*  
 there:ITG emerge do.first dâw.people-FOC first  
 'At first the Dâw people emerged there very far away'

With respect to non-core arguments such as locative adjuncts, Martins (*ibid.*, p. 550) describes the possibility of these occurring in clause-initial position when they provide anaphoric reference to anterior information (see section 8.3). In these cases, the ground-denoting noun of an anterior locative postpositional phrase in clause-final position (455) is replaced by the anaphoric pronoun and occurs, consequently, in clause-initial position juxtaposed with the postposition in the following sentence.

- (455) *tir ka' yeg ked paas m̃ây b̃ut*  
 3SG lie.in.hammock hammock in [stone hole] under  
 3SG lie.in.hammock hammock in cavern under  
 'He is lying in the hammock, in the cavern.'

<b>'a-buut</b>	<i>rid</i>	<i>nĩ</i>	<i>tuum</i>	<i>dâw</i>
ANAPH-under	3PL	be.located	NMRL:2	person

'In this (cavern) there were two persons.' [MARTINS, 2004, p. 550]

However, my data additionally provides evidence for the occurrence of locative adjuncts in clause-initial position without anaphoric function but playing an important role for information structure. This corresponds to what Epps (2008, p. 750) describes for the constituent order in Daw's sister language Hup, which is partially determined by pragmatics and the fact that new information is frequently provided in clause initial position. In other words, left-dislocated locative adjuncts in Dâw can also be understood as a strategy of introducing new information without providing corresponding morphological processes as described for core arguments. The introduction of new information is understood as *focus*, that is, according to Matic (2015, p. 96), the element that proffers new content in opposition to *topic*. According to Neeleman et al. (2009, p. 16), focus can be identified through the constituent that corresponds to a WH-expression. With respect to BLCs, which are answers to a Where-questions, the focused constituent is consequently the ground-denoting adjunct. An example comes from a conversation with an elder Dâw woman talking about her past in extractivist work emphasizing how she and her family suffered in those days at several places. In the third line of example (456), she mentions a new place name in a ground-denoting postpositional phrase (*abiu mĩ'*) in clause-initial position. The syntactic process of focusing this constituent helps the interlocutor to identify this place name as new in the story. If not mentioned again, the interlocutor knows that all subsequent events will happen at this place until a new place name is mentioned. This mechanism is recurrent in the discourse of Dâw speakers and we frequently find locative and temporal adjuncts dislocated to clause-initial position, which is cross-linguistically common. A more detailed discussion on the position of locative in adjuncts in discourse can be found in and § 8.3 in this chapter.

(456) *a-duuy*      *rid*      *'wĩnh*    *mõ'*                      *yawarêê*                      *bug*  
 ANAPH-then    3PL    work    far.away                      yawarêê.rapid                      there  
 'After this they worked far away at the Yawarêê rapid.'

*rid*      *kâr*      *bug*  
 3PL    suffer    there  
 'They suffered there.'

***abiu***                      ***mĩ'***                      *dâw*                      *kâr*      *pud*      *yêd*  
 abiu.creek      in.liquid      dâw.people      suffer    a.lot    INTS  
 'At the Abiu creek, the Dâw people really suffered a lot.'

The second function of fronting the ground-denoting adjunct is an emphatic one. This frequently happens in dialogues of Where-question and answer, which usually involves emotionally loaded situations involving fear, impatience, and anger, or when there is a need for repetition of the information to avoid misunderstandings. Consequently, this function differs from the focus function, since it repeats already given information instead of introducing new information. A classic context comes from TPRS elicitation sessions, in which I sometimes asked three times for the place of the figure in the picture to verify the answer. As seen in the dialogue from (457), after having used the locative verbal clauses (SVA) two times, the consultant answers the question by fronting the ground adjunct in order to assure that I finally understood the location of the dog. Situations of warning, like, for example, indicating the place of a poisonous animal, also usually result in the occurrence of ground information in clause initial position (458). Fronting the adjuncts is accompanied by prosodic features such as relatively high pitch, rising intonation, and an audible pause after the adjunct.

- (457) R<sup>36</sup>:    *rid*                    *nĩ'*                    'yãm?  
                   WH:where        be.located        dog  
                   'Where is the dog?'  
  
 C:            'yãm    *nĩ*                    ***top***    ***ked ka'***  
                   dog    be.located        house    inside  
                   'The dog is inside the house.'  
  
 R:            *rid?*  
                   WH:where  
                   'Where?'  
  
 C:            'yãm    *nĩ*                    ***top***    ***ked ka'***  
                   dog    be.located        house    inside  
                   'The dog is inside the house.'  
  
 R:            *rid*                    *nĩ*                    'yãm?  
                   WH:where        be.located        dog  
                   'Where is the dog?'

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<sup>36</sup> R= Researcher; C=Colaborator

C:    **top**    **ked ka'**        'yãm    nĩ  
           house inside        dog    be.located  
           'Inside the house is the dog!!'

(458) **ãm**    **yeg**                **ked**    **bũũ'**            nĩ  
       1SG   hammock        in    tarantula        be.located  
       'There is a tarantula in your hammock!!!'

It is worth mentioning that the different syntactic positions of the ground adjunct in a BLC do not affect the expression of the spatial configuration that exists between figure and ground. I consider the fronting of ground adjuncts as a syntactic process that is pragmatically motivated since it functions as a resource for structuring information in narratives or emphasizing the location of a Figure.

### 8.2.3 Locative non-verbal clauses

The previous section showed that locative verbal clauses are intransitive clauses, describing states, i.e. situations that are temporally limited and therefore changeable (see STASSEN, 1997). These were expressed by locative verbs, such as the locative copula (459), or posture and positional verbs. These can be compared to locative non-verbal clauses that have a more identificational function and are temporarily permanent (460) (RYBKA, 2015, p. 137).

(459) *têen*    *id*        **nĩĩ**                *top*    *xôoy*    *dâr*    **b#g**  
       now    1PL    be.located        house burn    PLZ    there  
       'Now we are here at top *xôoy dâr*<sup>37</sup> (the place of the burned houses).'

(460) *mãan*                **b#g**    *woor*                        *top*    *xâw*  
       amana.creek    there    tukanoan.people        house ugly  
       'There at the Amana creek are ugly houses of the Tukanoan people.'

In contrast to locative verbal clauses, locative non-verbal clauses show no copula or intransitive locative verb. Instead, they are formed by juxtaposing a subject, represented by the Figure, and a locative adjunct. With respect to semantics, locative verbal and non-verbal clauses in Dâw also behave differently, since the former describe the notion of *being* at a place

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<sup>37</sup> The toponym *top xôoy dâr* (Lit. 'burned houses') refers to a historical place at which a Dâw man, possessed by evil spirits, burned down all the houses of this small site. This place is located at a walking distance of two hours southwest from the community.

whereas the latter expresses the notion of *belonging* to place. Using a locative verbal clause or a locative non-verbal clause can thus offer interesting insights into how the Dâw people consider the engagement of a Figure entity with a specific Ground located in space.<sup>38</sup> This section aims therefore to first describe the structural characteristics of the locative non-verbal clause as a subtype of BLCs in Dâw. Subsequently, I discuss the spatial relations in which locative non-verbal clauses are employed.

In order to better understand the morphosyntactic properties of locative non-verbal clauses in Dâw, it is worth briefly examining verbless clauses. Verbless clauses can be understood as a form of nominal predication encoding, among other things, more permanent and time-stable relations such as the identification of two noun phrases (461) or a group membership or classification as in (462) (CURNOW, 1999, p. 2). Dâw expresses these relations through a zero copula construction exemplified in (461) and (462). Here, the copula subject is juxtaposed to the copula complement without any overt element marking this relation.

(461) *naa' waa dâr nir xoot*  
 DEM:prox ancestor PLZ [be.located place]  
 DEM:rprox ancestor PLZ community  
 'This is the village of the ancestors.'

(462) *tir buuy*  
 3SG non.indigenous.person  
 'He is a white person.'

Verbless clauses in Dâw are also a resource for expressing possession or part-whole relationships. Landscape terms, for example, like *nâax nôr* 'rivermouth' (water + mouth) define the inherent engagement between the two nouns also through juxtaposition of the 'whole'-noun and 'part'-noun.

The same structure can be found in locative non-verbal clause. In (463), for instance, the subject *tir kaaw* 'his plantation' refers to the Figure and is juxtaposed with the non-verbal predicate *tûw pej* 'close to the path' representing the Ground. However, there are also locative non-verbal clauses showing an inverted constituent order as in (464) that are pragmatically motivated (see section 8.2.3). Similarly to locative verbal clauses, the subject and complement can both consist of a bare noun or noun phrase, though the copular complement is frequently

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<sup>38</sup> The usage of verbless clause constructions in Dâw challenges Dixon's (2010, p. 161) prediction that these constructions usually do not apply for the expression of spatial relations. In Dâw these are recurrent resources for encoding permanent spatial relations.

found encoded in postpositional phrases like in (463), and (464). Due to the absence of a verbal element in locative non-verbal clauses, TAM information cannot be carried by auxiliaries, since these require a verb as their argument. Instead, TAM information can be pragmatically transmitted or implied through temporal adverbs such as in (465).

(463) *tir kaaw t̩w̩w pej*  
 3SG manioc.garden path next.to  
 ‘His plantation is close to the path.’

(464) *wāan nāax mĩ̃ saaç*  
 curicuriari.river [water in.liquid separate]  
 curicuriari.river river.bifurcation

*mĩ̃ kapawari xusee*  
 in.liquid kapawari.rapid waterfall  
 in.liquid kapawari.rapid waterfall

‘There at the bifurcation of the Curicuriari river is the Kapawari waterfall.’

(465) *nĩ̃kêd mĩ̃g dâw dōo’ bukar pêeg*  
 in.the.old.days here dâw.people port bukaar.pêeg.creek  
 ‘In the old days, here was the port of the Dâw from the Bukaar Péeg creek.’

An understanding of both locative verbal clauses and locative non-verbal clauses as types of locative predication<sup>39</sup> according to Ameika and Levinson (2007), requires clarification of which construction corresponds to what kinds of spatial arrangements. Dixon (2010, p. 162) points out that languages can have different strategies of nominal predication with distinct established semantic effects. Locative non-verbal clauses describe spatial relations that are permanent and denote a place, whereas locative verbal clauses transmit the notion of being at a place. This corresponds to what we find in some Romance languages like Portuguese and Spanish which have two different copula verbs *ser* and *estar*. Example (466) expresses a permanent spatial relation between two places, which leads the speaker to use a locative non-verbal clause. In comparison, in (467) the speaker refers to a situation in which he was spending only a limited amount of time at a place. Consequently, Dâw speakers choose a locative non-verbal clause when they refer to a permanent spatial relation of a Figure with respect to a certain landmark. This can be the location of communities, sacred places such as

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<sup>39</sup> According to Stassen’s (1997) typology on intransitive predication, Dâw can be considered to be a language of mixed encoding since there are two different types of locative predication, one of which corresponds to nominal predication in equative clauses.

cemeteries, places of raw material extraction but also the location of plants in specific parts of the forest. These landmarks frequently include toponyms (466) and landscape terms (468) that can function as the Figure. However, as I show in § 8.2.5.4, the prototypical locus of place nouns is considered to be the Ground since they inherently denote places. In locative non-verbal clauses, on the other hand, these nouns can appear in their function as objects in opposition to places expressing the Figure that is to be located in space.

(466) *woor*                      *nĩr*                      *xoot*    *suaçu*                      *pej*  
 tukanoan.people            [be.located    place]    suaçu.site                      close  
 tukanoan.people            community                      suaçu.site                      close  
 ‘The Tukanoan community is next to the Suaçu site.’

(467) *abug*                      *id*                      ***nĩi***    *suaçu*                      *mug*    *tēn*  
 DISC.CONJ                      1PL                      be.at    suaçu.site                      here    now  
 ‘Now we are here at the Suaçu site.’

(468) *nāax*    *nõr*                      *wāan*                                      *nāax*    *mĩ*  
 river    mouth    curicuriari.river                      water    in.liquid  
 ‘The rivermouth is at the Curicuriari river.’

Locative non-verbal clauses are also used to describe the distance of a Figure from the Ground as in (469). In these cases, we might not call it a prototypical BLC since sentences like (469) do not anchor a Figure referent (*nāp yēe*) to a place. However, when asking the BLC triggering question ‘Where are the *piaçava* trees?’ the answer ‘The (area of) *piaçava* palm is really far away’ is totally legitimate. Hence, locative non-verbal clauses do locate Figure referents at specific distance with respect to a deictic center; however, this is only possible for permanent spatial arrangements.

(469) *'nāp yēe'*                                      *rõt*                      *pũud*    *yēd*  
 piaçava.palm.tree                      far                      a.lot    INTS  
 ‘The (area of) *piaçava* palm is really far away.’

Other contexts for locative non-verbal clauses are statements about a person’s origin. This is plausible if the place where someone is born is considered the place one belongs to. Example (470) makes reference to the homeland of the Dâw people, the Wiç<sup>40</sup> creek. Even though not inhabited by the Dâw anymore, it is still of significant value in narratives and

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<sup>40</sup> According to some elder Dâw speakers, they originally inhabited Wiç creek, a tributary of the Weni river that is in turn a tributary of the Marié river. This creek is the central place of the myth of origin of the Dâw people.

myths. This can be contrasted with (471) in which one refers to a place of someone’s residence and thus the locative verbal clause is used. Another difference comes from the choice of the postposition. In the locative non-verbal clauses in (470) and (472), the postposition *dee* ‘from’ indicates origin and does not bear any spatial or configurational information. In comparison, the locative verbal clause in (471) uses the postposition *wâ* ‘on’ expressing a spatial configuration and frequently occurring when the ground is expressed by a toponym referring to communities, villages, cities, or islands. In other words, locative non-verbal clauses do not express an explicit spatial configuration of Figure and Ground but indicate an intrinsic locative relationship between them.

(470) *rân dâr wiç dee*  
 elder PLZ wiç.creek ORIG  
 ‘The elders are from the Wiç creek.’

(471) *naa’ buuy ãay nĩ São Paulo wâ*  
 DEM:prox non.indigenous.person FEM reside São.Paulo on  
 ‘This white woman lives in São Paulo.’

(472) *naa’ buuy ãay São Paulo dee*  
 DEM:prox non.indigenous.person FEM São.Paulo ORIG  
 ‘This white woman is from São Paulo.’

The same observation can be made for spatial scenes that describe the typical habitat of animals, plants, and spirits. With respect to plant terms, this is employed, for instance, to distinguish native species from non-native ones. In (473), the speaker refers to the *cunuri* (*cunuria*) tree that is native to this part of the Amazonian rainforest and is a traditional source of carbohydrates. Similarly, the Dâw people consider evil spirits to be original dwellers of the forest and consider them in some narratives to be the forest owners<sup>41</sup>. In example (474), the speaker opted for a locative non-verbal clause in order to differentiate the spirit living in the forest from a person. With respect to the typical environment of animals, Dâw speakers frequently make use of locative non-verbal clauses as in (475). In this example, the argument of the postposition *dee* is again a postpositional phrase (*nâax mĩ*) providing explicit spatial information on the typical habitat of a fish that is *inside water* and *from water*. Such examples show how Dâw linguistically manifests the belonging to default places of plants, animals and spirits.

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<sup>41</sup> Etymological note: Interestingly, the postposition *dee* ‘from’ in Dâw seems to derive from the noun for ‘owner’ that is *dee* (without word final glottal stop), transmitting thus the notion of belonging to someone, something or, in the case of space, *somewhere* – with other words, to be owned by a place.

- (473) *nõon* *xaay* *dee'*  
 cunuri.caatinga forest ORIG  
 ‘Cunuri is from the forest.’
- (474) *dâw* *mãay* 'aa' *tii* *xaay* *dee'*  
 person not.be ANAF AFFIRM.PRTCL forest ORIG  
 ‘It wasn’t a person, it was from the forest.’
- (475) *rãap* *nâax* *mĩ* *dee'*  
 fish water in.liquid ORIG  
 ‘The fish is in the water.’  
 Lit.: ‘The fish lives in the water.’

The examples from this section show that locative non-verbal clauses can be understood as linguistic manifestations expressing the engagement of a Figure entity with the space it inhabits that is to some degree inherent to it.

#### 8.2.4 Locative Phrases

Another type of BLC that frequently occurs in conversations is what I call in this work *Locative Phrases*. These consist only of the Ground indicating element, usually a postpositional phrase, and omit both the subject (Figure) and the verbal element. However, this is a very common process that allows, for example, a question like ‘*Where is your wife?*’ and the answer ‘*at work*’ for pragmatic reasons. From a syntactic perspective, these locative phrases cannot be treated as clauses, since the subject and verbal predicate are omitted. Nevertheless, example (476) represents a totally acceptable answer in Dâw to the question ‘*Where is the dog?*’ by providing only a postpositional phrase. The same question can be answered with an adverb if the speech act participants share the same place at utterance time, like (477). This is generally accompanied by gestures like lip pointing.

- (476) *tir* *top* *pej*  
 3SG house close  
 ‘next to his house’

- (477) *bʷg*  
 there  
 ‘There!’

The question that arises is whether these locative phrases can be considered merely a result of ellipsis or whether the relation between Figure and Ground influences subject and

verb omission. According to Levinson and Wilkins (2006, p. 16), locative phrases in some languages are a systematic way to indicate a canonical or stereotypical relation between Figure and Ground. However, this seems not to be the case for Dâw since locative phrases are in general composed of a postpositional phrase headed by postpositions with very specific spatial semantics (see chapter 3) establishing the configuration of the omitted Figure and the Ground. What seems to be more influential for the omission of subject and predicate is the degree of postural and positional saliency of the Figure. As seen in the chapter on locative predicates, Dâw encodes the notions of posture and position through a rich set of posture and positional verbs in simple and complex predicates. These predicates can convey spatial configurational information like support relations. Hence, omission of subject and verb seems more likely in contexts in which the *posture or position* of the Figure is not salient. Such situations are, for example, the placement of a person in the city of São Gabriel da Cachoeira as in (478) or a person at home (479) in which bodily configuration of the Figure is not of interest. In comparison, if two hunters are talking about the location of a monkey in order to kill it, they will probably make use of a locative verbal clause with a posture or/and positional verb since it is crucial to know if the monkey is hanging from the branch or if it is embracing the tree trunk (480).

(478) *taaw rid*  
 city LOC  
 ‘in the city’

(479) *tir top bunt*  
 3SG house under  
 ‘in his house’  
 Lit.: ‘Under his house’

(480) *waas yay dâk bee rēd*  
 monkey hanging.horiz’ hanging tree at  
 ‘The monkey is hanging from the tree.’

Bringing these facts together allows a response to Ameka and Levinson’s (2007, p. 885) prediction on verbless locative constructions, which is: “*Languages which favor unmarked Ground nominals (no case or adposition) will not permit verb deletion (otherwise no marker of locativeness will be left).*” Based on the examples, we have seen that Dâw is a language that obligatorily marks Ground denoting nominals through a set of spatial postpositions or the generic locative marker *rid* (see section 3.2). Verb deletion in locative phrases is consequently allowed in Dâw, confirming the authors prediction. However, verb and subject deletion seems to depend on how salient the figure’s posture and/or position is in a given spatial setting. In other words, when

information about the Figure’s position or posture is less relevant, deletion of the subject and the verbal part leading to locative phrases is more possible. This relation is expressed in below, showing all three core types of BLCs discussed in this chapter.

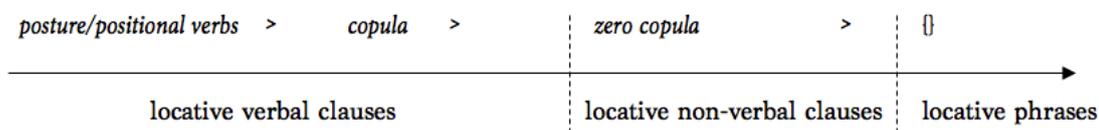


Figure 11 - BLC continuum

Starting at the left end, locative verbal clauses whose verbal part can be composed of posture and/or positional verbs can provide a detailed description of the Figure’s bodily orientation. The locative copula implies a temporally limited presence of the Figure at a certain place. In the middle are locative non-verbal clauses displaying a zero copula structure establishing a permanent and inherent spatial relation between Figure and Ground without referencing the Figure’s bodily orientation. Finally, subject deletion is not possible in locative non-verbal clauses since this would lead to locative phrases that have a different function. The latter are located at the right end of the continuum and are short versions of locative verbal clauses. They differ with respect to the specific conversational contexts in which Figure information is not requested and therefore omitted.

### 8.3 Locative adverbial clauses

In 6.1, I demonstrated that questions like ‘Where is the X?’ generating BLCs, are mostly answered with monoclausal constructions in which the Ground is represented by adjuncts in the form of postpositional phrases or adverbs. In some cases, Dâw speakers respond to these questions with complex clauses like in example (481). In these clauses, the Ground is expressed by an adverbial clause modifying the VP or the entire main clause.

(481) *tir nĩ [rõom tâag nĩ rid]*  
 3SG be.located abiú tree EXI LOC  
 ‘He is (at the place) where the abiu tree is.’

Questions involving motion like ‘Where are you going’ can be equally responded to with complex clauses, like in (482). In comparison to examples from the previous section, the Ground in (481) and (482) semantically describes a place where something happened, which in turn is expressed by an adverbial clause displaying a subject and a VP. In other words,

instead of relating a Figure to a Ground represented by an adverb or a postpositional phrase, these clauses express an event that happened at a place (e.g. *where the Dâw people used to walk*).

- (482) *Karol rãm [dâw rãm xôo-êe' bũg]*  
 NP go dâw.people go circulate-PST there  
 'Karol is going (to the place) where the Dâw people used to walk around.'

I understand these complex clauses as a process of subordination in which the adjoined clause (here represented in square brackets) functions as a locative adverbial clause due to its morphosyntactic and functional properties. In the subsequent section, I will provide arguments to classify these constructions as such by describing their properties and function in spatial discourse.

### 8.3.1 Locative adverbial constructions in Dâw – formal and functional properties

To begin, it is necessary to clarify that subordination is understood as a syntactic process in which two or more clauses combine so that one clause is a constituent (subordinate clause) of the other (main clause) (cf. VAN GIJN et al., 2011, p. 3; THOMPSON et al., 2007, p. 238). According to these authors, there are three types of subordination: complement clauses, relative clauses, and adverbial clauses. Despite being subsumed as subordinating structures, the separation from coordinating structures seems to be problematic especially for adverbial clauses. These seem to occupy an intermediate place on a continuum with coordinate clauses at one end and subordinate clauses at the other (see LEHMANN, 1988). One reason for this is that adverbial clauses are considered to be a more hypotactic clause-combining strategy since they refer to the main clause as a whole (see MATTHIESSEN and THOMPSON, 1988). In comparison, relative clauses and complement clauses are considered to be more subordinating for being embedded structures (THOMPSON et al. 2007, p. 238). Van Gijn et al. (2011) support this view, stating that the boundaries between coordination and subordination are rather fuzzy and suggesting the following continuum according to the criteria represented in o.

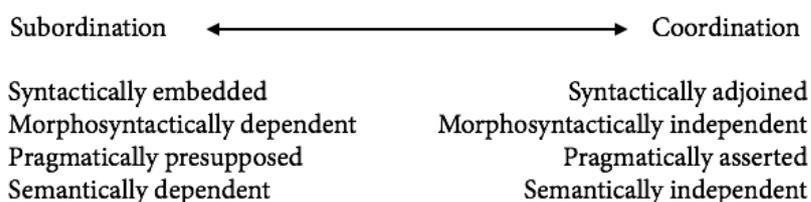


Figure 12- Subordination versus coordination (VAN GIJN et al., 2011, p. 6)

Another reason for the specific position of adverbial constructions (and also relative constructions) within the group of subordinating structures is the fact that adverbial clauses are adjuncts and not core arguments such as complement constructions (see DIESEL, 2013). Consequently, adverbial and relative clauses can be omitted, like coordinated clauses, whereas complement clauses cannot. However, adverbial clauses are usually marked by an adverbial subordinator that establishes a semantic relationship with the main clause (see *ibid.*).

Despite their distinct behavior, the literature frequently describes adverbial constructions together with subordinating structures due to the fact that they usually share formal properties like the existence of subordinating elements, specific verb forms, or different word order patterns in the subordinated clause (THOMPSON et al., 2007, p. 238). Having these properties in mind, I summarize the following criteria of adverbial clauses from this discussion in order to identify them in Dâw:

- a) is omissible, since these are adjuncts;
- b) can be replaced by a single word (in the case of time, manner and location adverbial clauses);
- c) presents an adverbial subordinator establishing the semantic relationship with the main clause;
- d) modifies the verb of the main clause or the entire main clause.

Martins (2004, p. 595) considers adverbial constructions to be a process of subordination in Dâw according to the criterion of grammatical dependency. The author mentions the existence of subordinating conjunctions in clause-final position for all types of subordinating strategies in Dâw. With regard to adverbial clauses, Martins (2004, pp. 598-603) describes purpose, reason, conditional, concessive, and time adverbial clauses and makes no reference to locative clauses. To fill this gap in the description, I now explore how the criteria mentioned above apply to locative adverbial clauses in Dâw.

Locative adverbial constructions in Dâw, as in (483) and (484), behave the same way that Martins (*ibid.*) describes for adverbial constructions of different semantic types, i.e. they consist of a main clause and a subordinated adverbial clause showing identical word ordering (SV) and functioning as an adverb of the main clause. In elicited data, subordinated clauses are usually right-adjoined, as in (483) and (484).

(483) *ãr yâa dôo' [ãm nĩ-êe' bug]*  
 1SG return AUX:source 2SG live-PST there  
 'I came back from (the place) where you lived.'

(484) *tir rãm [rũur nĩ rid]*  
 3SG go game EXI LOC  
 'He goes (to the place) where there is game'

However, there are some cases in which the locative adverbial clause precedes the main clause, such as in (485) and (486). In these cases, they seem to have discursive function, providing anaphoric reference to locative information mentioned earlier in discourse.

(485) *[tiid            dâw            bax            xoot    rid]*  
 over.there    dâw.people    emerge            place    LOC

*nũux            nĩ        mãay*  
 curupira        EXI    a.lot

‘There where the Dâw people emerged were many curupiras (forest spirits).’

(486) *[dâw            nĩ        xoot    wâ’    b#g]    tir        ka’                    xâd*  
 dâw.people    live    place    on        there    3SG    lie.in.hammock        DUR  
 ‘He was lying (at the the place) where the Dâw people lived.’

Diessel (2001), in his work on ordering and distribution of main and adverbial clauses, provides cross-linguistic evidence that VO languages, such as Dâw, show more flexibility in syntactic ordering. This can be confirmed for Dâw; however, there is a strong tendency for adverbial clauses to occur in clause-final position, similar to locative adjuncts in the form of postpositional phrases. Nonetheless, Diessel’s finding (ibid., p. 434) that adverbial clauses with clause-final subordinators have the tendency to precede the main clause does not hold for Dâw locative adverbial clauses because they have a strong tendency to occur after the main clause.<sup>42</sup>

Furthermore, adverbial clauses in Daw are adjuncts since they can be omitted; dropping the adverbial clauses from examples (483) and (484) still leads to a grammatical utterance. Locative adverbial clauses in Dâw can also be replaced by spatial adverbs as in (487), where the spatial adverb *tiid*, ‘over there’ can be substituted for the adverbial clause of (484) (*ruur nĩ rid* ‘where there is game’).

(487) *tir        rãm        tiid*  
 3SG    go        thither  
 ‘He goes thitherward.’

One overt criterion crucial for considering locative adverbial clauses as a process of subordination is the occurrence of the subordinating conjunctions *rid* ‘LOC’ and *b#g* ‘there’ in

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<sup>42</sup> Diessel’s (2001) findings seem to apply for adverbial clauses with conditional and concessive semantics in Dâw, since these tend to precede the main clause instead of following it.

clause final position. Similarly, to other adverbial subordinators in Dâw, both have homonymous forms with spatial semantics providing evidence for diachronic development. The subordinator *rid*, for example, derives from the generic locative marker functioning as a postposition taking nominal arguments. However, in its function as subordinator in locative adverbial clauses it is preceded by a clause. Furthermore, *rid* also acts as the interrogative particle in the locative questions described at the beginning of this chapter. In contrast, the subordinator *bɯg* has the spatial demonstrative adverb *bɯg* ‘there’ as a counterpart (see section 3.3). Both are interchangeable as subordinators, which may derive from the fact that they are also interchangeable in their function as postpositions. This development is cross-linguistically common. Kortmann (1997, p. 108) points out that adverbs, adpositions, interrogatives, and relative markers are most prone to become adverbial subordinators.

Evidence for their usage as subordinators in adverbial clauses comes from restrictions in syntactic behavior. Without the main clause from example (488) the adverbial clause turns out to be ungrammatical (489), which shows syntactic dependency on the main clause. In comparison, coordinated clauses in Dâw formed by juxtaposition can be freely extracted, indicating syntactic independence.

(488) *a-duuy*      *id*      *dôob*                      *waap*   *bɯg*  
 ANAPH-after    1PL    go.downwards                      TOT    there

[*ãr*    *nãa*    'mɯɯy                      *yôr*                      ***rid***]  
 1SG    tell    2SG.OBL                      today                      LOC

‘After that we all went down there (to the place) that I told you about today.’

(489) \* *ãr*    *nãa*    'mɯɯy                      *yôr*    ***rid***  
 1SG    tell    2SG.OBL                      today    LOC

In contrast, adverbial clauses employing the subordinator *bɯg* behave differently. Extracting the main clause from (490) leads to a grammatical clause (491) providing a different semantic reading since *bɯg* in these cases is understood in its function as a spatial demonstrative adverb. Yet, as a subordinator *bɯg* needs to occur in clause-final position while, when moved to clause initial position, the construction is perceived as coordinated clauses, like in example (492).

(490) *ãr*      *rãm*      [*ãm*      *nĩ-êe'*                      ***bɯg***]  
 1SG    ir      2SG    live-PST                      there

‘I go to where you lived.’

(491) *ãm nĩ-êe' bug*  
 2SG live-PST there  
 'You lived there.'

(492) *ãr yãa ddo' bug ãm nĩ-êe'*  
 1SG return AUX:source there 2SG live-PST  
 'I came back and you lived there.'

### 8.3.2 The semantics of locative adverbial clauses in Dâw

With respect to their semantics, there are two types of locative adverbial clauses: existential and non-existential locative adverbial clauses. Adverbial existential clauses consist of the copula *nĩ* 'EXI' and an NP representing, the copula subject and the Figure, respectively. In terms of their spatial semantics, these adverbial constructions describe static spatial and non-static spatial events with respect to the main clause. In example (481) (here repeated in (493)) the adverbial clause describes the location of the Figure, that is, the subject of the main clause, in a static spatial event. This reading derives from the locative copular verb *nĩ* 'be located' linking Figure (*tir* '3SG') and Ground (adverbial clause). Locative adverbial constructions preceded by a main clause displaying the locative copular verb are not frequent in Dâw. Dâw speakers make use of BLCs instead, like in (494), leading to a similar reading. By comparing the semantics of Grounds expressed by an existential locative adverbial clause (493) and by a postpositional phrase (494), one can see differences with respect to the search domain. In other words, by expressing that the person is *at the abiu tree* such as in (494), the speaker presupposes that the interlocutor knows the exact location of the tree or that the tree is visible and within the same search domain for speaker and interlocutor. Yet, examples (493) and (495) - (497) with existential locative adverbial clauses, in contrast, refer to a broader area around a specific landmark such as the *abiu tree* (493). Furthermore, in these examples the speaker does not presuppose that the interlocutor knows the exact location of the Ground to which he refers. This becomes evident in conversations with elder Dâw speakers about places in the forest that they knew about but that were unknown to me.

(493) *tir nĩ [rõom tâag nĩ rid]*  
 3SG be.at abiú tree EXI LOC  
 'He is (at the place) where the abiu tree is.'

(494) *tir nĩ rõom tâag rid*  
 3SG be.at abiú tree LOC  
 'He is at the abiu tree.'

More frequently found are existential locative adverbial clauses with motion verbs in their main clauses. As examples (495) - (497) show, these express motion directed toward the Ground represented by the adverbial clause.

(495) *rid rām [raap nū p̄ud b̄g]*  
 3PL go fish EXI INTS there  
 ‘They go (to the place) where there are many fish.’

(496) *niid nēed [weed nū b̄g]*  
 hitherward come eat EXI there  
 ‘Come here, where there is food.’

(497) *id w̄ud nēed ta-b̄g*  
 1PL arrive come DEM:dist-there

[‘aa’ *ç̄w t̄ag nū rid*]  
 ANAPH peach.palm tree EXI LOC  
 ‘We arrived there, where there is the peach palm tree.’

These constructions are also interesting for questions of Path anchoring, i.e. the question of if the motion event starts or ends at one specific point or if it only happens directed to one of these points. This is often distinguished in the notions of *to* and *toward*. As seen in chapter 3, the locative postposition *rid* is used when a Figure reaches a Ground (here: the door) such as in (498). Motion events expressed like this are understood as being telic. However, in (499) there is no entailment of arrival and consequently the motion event is conceived as being directed to the door without necessarily being telic. Since D̄aw does not show any distinctive grammatical or lexical resource expressing the notion of *towards*, I consider existential adverbial clauses as one syntactic strategy to express this notion.

(498) *S̄w rām top yōr rid*  
 NP go house mouth LOC  
 ‘Brasilino goes to the door.’  
 Lit.: ‘Brasilino goes to the mouth of the house.’

(499) *S̄w rām [top yōr nū rid]*  
 NP go house mouth EXI LOC  
 ‘Brasilino goes towards the door.’  
 Lit.: ‘Brasilino goes towards where there is the mouth of the house.’



One final remark needs to be made with respect to relative clauses. Throughout this session, I presented some examples, such as (497), that could be considered relative clauses based on a nominal element in the main clause that the subordinating clause refers to. However, until this point, I have no evidence for distinct behavior of adverbial clauses and relative clauses in Dâw. This must be left for further research.

### **8.3.3 Locative adverbial clauses and discourse**

In Dâw narratives, there is heavy emphasis on spatial reference through locative adverbial clauses and locative adjuncts (postpositional phrases or adverbial phrases). This creates the impression that the interlocutor is constantly reminded of the place where a certain event occurs. Where locative adjuncts (adverbs or postpositional phrases) function to relate an event to a specific place, locative adverbial clauses additionally create reference to information that is already given in discourse. This ability to structure paragraphs and create cohesion is considered cross-linguistically to be one of the major functions of adverbial clauses (cf. GUILLAUME, 2011; THOMPSON et al., 2007).

Having a first look at Dâw narratives and discourse, one has the impression of constant repetitions through local and temporal adverbial clauses. In a conversation with an elder Dâw woman about a narrative telling the migration of the Dâw people with an impressive set of reference to more than thirty places, she explained the repetition with the fact that the listener can get lost during the story. According to her, by repeating this information people will know the real content of the story. This rhetorical device can therefore be considered a resource of verbal art dominated mostly by elder speakers and consequently not common among younger Dâw speakers.

In this section, I will only focus on the discursive functions of locative adverbial clauses as an instrument of verbal art in Dâw narratives, i.e. I will show their role within a text and with respect to other clauses.

To begin with, Thompson et al. (2007, p. 270) describe the functions of adverbial clauses in discourse as related to their position, i.e. when pre-posed they have text-organizing function whereas when postposed they are more closely related to the main clause. This corresponds to what happens in Dâw, since, when preceding a main clause, the adverbial clause indeed functions as a bridge to establish a relationship to information given in the preceding context. In contrast, when postposed they establish a close semantic relationship to the main clause. In both cases, adverbial are clauses repeated in the form of extensive

parallelisms across lines, a rhetoric feature observed in many languages from the Upper Rio Negro region (cf. EPPS et al., 2018; RAMOS and EPPS, 2018). I will now turn to the description of the discursive functions of locative adverbial clauses in both positions.

As shown earlier in this chapter, adverbial clauses preceding a main clause are less frequent than in final position. However, when preceding they are a repetition of the embedded clause of the previous sentence, a discourse pattern known as *Tail-Head-Linkage* (DEVRIES, 2005) such as in (504). Another function is to add extra spatial information about an event mentioned in preceding discourse. The latter is exemplified in (505). In this case, we find a BLC describing the situation of a person lying in a hammock. The subsequent sentence begins with an adverbial clause providing additional information to the event expressed in the previous sentence. To establish a relationship between the place mentioned in the adverbial clause and the action that happened at this place, the narrator repeats this event in the main clause. This creates cohesion across sentence boundaries and guarantees that the interlocutor knows the exact place of an event.

(504) *a-duuy id wɨɨd nēd ta-bɨg*  
 ANAPH-after 1PL arrive come DEM:dist-there

[*'aa' ɕɨɨw tãag nĩi âg bɨg*]  
 ANAPH peach.palm tree EXI DEM:EMPH there

'After this we arrived there where there is that peach palm tree.'

[*ɕɨɨw tãag nĩi âg bɨg*]  
 peach.palm tree EXI DEM:EMPH there

*id nĩi mēenh kot mēenh kot taa pej ɕeeb*  
 1PL live 1SG.POSS uncle 1SG.POSS uncle late close move

'Where there is the peach palm tree we lived together with our uncle who moved.'

(505) *bɨg tir ka' xãd yeg ked*  
 there 3SG lie.in.hammock DUR hammock in

'There he was lying in the hammock.'

[*dãw nĩi xoot wã' bɨg*] *tir ka' xãd*  
 dãw.people live place on there 3SG lie.in.hammock DUR

'Where the Dãw people used to live, he was lying in the hammock.'

In other examples sentence-initial adverbial clauses are copies of postposed adverbial clauses in the preceding complex clauses. As mentioned above, this strategy is called Tail-Head-Linkage (henceforth: THL) and has been described mainly for Papuan languages (cf. LONGACRE, 1968; DE VRIES, 2005 among others) but recently also for Amazonian Languages (see GUILLAUME (2011) for Cavineña; EPPS (2018) for Hup; STENZEL for Koitira (2017)). According to Guillaume (2011, p. 111), THL is a sentence or clause chain connecting structure in which the last clause of a paragraph ('tail-clause') is partially or completely repeated in the first clause of the following sentence ('head-clause'). This structure is more likely to occur in genres such as narratives or conversations and guarantees participant and event coherence including location, temporality, aspectuality, modality, and perspective (ibid, p. 112). As one of the central formal characteristics of THL, the author mentions the necessity of the repetition of the predicate of the 'tail-clause'. This can be seen in (504) where the entire adverbial clause, i.e. the 'tail-clause', turns out to be the 'head-clause' of the following sentence. By repeating the locative adverbial clause, the narrator connects two events that happened at the same place. In (504), the place of the peach palm is connected with the event of arriving at this place, whereas in the subsequent clause the narrator describes what happened at that exact place after the arrival. There are examples, such as (506) where a locative postpositional phrase is replaced by a spatial demonstrative adverb like *b#g* 'there' in sentence initial position, causing a similar effect. However, using THL in (504) creates a discursive unit by connecting two events at one place. Moreover, by repeating the exact locative adverbial clause the narrator seems to foreground the most important event of the semantic event line, that in this case is the place.

(506) *ãr nasceu b#g wãan nãax ray b#g*  
 1SG be.born there curicuriari.river water that.one there

*gaal b#g*  
 galo.creek there

'I was born at the Curicuriari river, at the Galo creek.'

*b#g nasceu id tii dêew diid*  
 there be.born 1PL AFFIRM.PRTCL Deolinda with

*nãa' dêew diid*  
 DEM:prox Deolinda with

'There (Galo creek) Deolinda and me were born, together with her, together with Deolinda.'

Another pattern of adverbial clauses in discourse is their repetition being directly postposed to the adverbial clause as in (507) or in parallel movements crossing sentences, (508), or stanza boundaries. Similar to THL, repetitions and parallelism in Dâw discourse are rhetorical devices that help to create a plot and keep emphasis on the main events. In some cases, such as in (507), the repetition of the adverbial clause is accompanied by a perceptible pause, which serves the purpose of giving time to think about the continuation of the story. Furthermore, repetitions like in (507) display the function of ‘correcting’ the previously mentioned adverbial clause by adding information to it. The subject of the adverbial clause here, *id* ‘we’, is specified by the narrator specifies by adding the pluralized noun *waa dâr* ‘ancestors’ to affirm that the event happened restrictively to the older generation of Dâw speakers.

(507) *bug id top dâr-wud wud [id wĩnh' rid nũkêd]*  
 there 1PL house PLZ-REST well 1PL work LOC formerly  
 ‘There were only our house where we worked in the old days.’

*[id wĩnh' waa dâr rid nũkêd]*  
 1PL work old.person PLZ LOC formerly  
 ‘Where we elders worked in the old days.’

(508) *[tiid dâw bax xoot rid] nũux nĩ mãy*  
 thitherward dâw.people emerge.place LOC forest.spirit EXI a.lot  
 ‘There where the Dâw people emerged were many curupiras (forest spirits).’

*[dâw bax xoot rid]*  
 dâw.people emerge place LOC

*nũux dâw-wũy' 'wuum dâr 'pɬn*  
 forest.spirit dâw.people-DOM drown AGTV IMPFV  
 ‘(At the place) where the Dâw people emerged, the curupira (forest spirit) drowned them.’

I have shown that repetitions of adverbial clauses in Dâw discourse is pervasive, with the function of recapitulating the main events. It is interesting to think of adverbial clauses as expressing main events, since syntactically they are adjuncts but they are pragmatically expressing main events. However, this work has shown that Dâw speakers emphasize the spatial anchoring of events, which turns them into main events. The fact that these spatial anchors are repeated through THL and other mechanisms like parallelisms provides evidence for considering these to be main events.

## 8.4 Summary

This chapter provided an overview of the different clause types that can express the relations between Figure and Ground in Dâw. We first looked at locative interrogatives whose purpose is to ask for a Ground (in the case of a WH-question) or to confirm a location of a Figure referent or a motion event that a Figure can be engaged with (e.g. ‘Are you coming?’). Subsequently, I examined locative predication or Basic Locative Constructions in Dâw that are answers to locative WH-questions. Finally, I analyzed locative adverbial clauses representing a syntactically complex structure for describing spatial relations. All the analyzed structures are summarized in o presenting the constituent orders.

Table 33- Overview on syntactic structures expressing spatial relations

<b>Locative Interrogatives</b>	
<i>polar</i>	$(\text{Adj}_{\text{Ground}}) + V + S_{\text{Figure}}$
<i>WH-question</i>	$\text{rid} + V + S_{\text{Figure}}$ $\text{rid} + S_{\text{Figure}}$ $\text{rid} + O + S_{\text{Figure}} + V$
<b>Basic Locative Construction</b>	
<i>Locative verbal clause</i>	$S_{\text{Figure}} + V_{\text{loc}} + \text{Adj}_{\text{Ground}}$
<i>Focused locative verbal clause</i>	$\text{Adj}_{\text{Ground}} + V_{\text{loc}} + S_{\text{Figure}}$
<i>Locative non-verbal clause</i>	$S_{\text{Figure}} + \text{Adj}_{\text{Ground}}$
<i>Locative phrases</i>	$\text{Adj}_{\text{Ground}}$
<b>Locative adverbial clause</b>	
<i>Unmarked constituent order</i>	$[S_{\text{Figure}} V(\text{O})] + [SV(\text{O}) \text{rid}/\text{bug}]_{\text{Ground}}$
<i>Marked constituent order</i>	$[SV(\text{O}) \text{rid}/\text{bug}]_{\text{Ground}} + [S_{\text{Figure}} V(\text{O})]$

I began with the examination of locative questions by analyzing both polar and WH-questions. First we saw that both provide different constituent order (VS) for polar questions and (VS)/(OSV) for WH-questions compared to declarative clauses (SVO). Locative WH-question are morphologically marked by the clause-initial interrogative particle *rid* ‘where’ that derives from the locative marker and frequently tagged through the affirmative *tii*, the negative copula verb *mãay* and the dubitative particle *aa’ êe’* in order to bias the expected answers.

With respect to Basic Locative Constructions, I have shown that there are two types of locative predication in Dâw a verbal one and a non-verbal one that are expressed in four distinct constructions as shown in o. We have seen that both strategies are connected with clear semantic differences in terms of permanency and the degree of how stereotypical a

spatial situation is. This is, the more permanent, time-stable and prototypical a spatial relation between Figure and Ground is (e.g. ‘The mountain is in the forest.’) the less this is expressed through a verbal predicate. Instead, Dâw speakers prefer locative non-verbal clauses in order to express this. This is an interesting opposition to the semantically rich complex predicates described in chapter 7 that provide precise descriptions of the Figure’s orientation, support and bodily orientation among others. Spatial scenes described through complex predicates can consequently be understood as less permanent and less prototypical.

The verbal/non-verbal distinction is also interesting in Stassen’s (1997) typology for intransitive predication. In this terminology, the author suggests a classification for languages based on a comparison of whether a language provides the same strategy for nominal predication and locational predication or not. Within this typology, Dâw can be analyzed as a *mixed encoding* language, since it provides more than one strategy of locational predication: a copula construction, locative verbs and verbless predication. Nominal predication coincides only with verbless locative predication as I have shown in this chapter.

For locative adverbial clauses in Dâw we have seen that the dependent clause functions as the Ground that represents a locative adjunct of the main clause again. They are interesting with respect to ordering principles of the main clause and dependent clause and the effect that this causes in discourse. That is, when the dependent clause is pre-posed, they have a text-organizing function and are responsible for discourse cohesion (see GIVÓN, 2001, p. 347; THOMPSON et.al, 2007, p. 270; GUILLAUME, 2011, p. 110); however, when postposed, they are more closely related to the main clause. This syntactic flexibility is manifested in the discursive strategy of Tail-Head Linkage creating inter-sentential bridges, event coherence and, with respect to space, relating two events to the same place (Ground). In other words, locative adverbial clauses function here as spatial anchors comprising the backbone of a narrative.

Finally, what all these syntactic structures have in common is their sensitivity to pragmatics causing a certain flexibility of constituent order. Locative adjuncts in particular can frequently be found dislocated to clause-initial position providing evidence for the pragmatic weight of locative expressions.

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## **9 Landscape terms and place names in Dâw**

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## 9 Landscape terms and place names in Dâw

In his paper on language and landscape among the Western Apache, Basso (1988) compares the difficulties that an ethnographer confronts when getting to know an unfamiliar language with the difficulties of understanding the landscape of an ethnic group. One important reason for doing so is that both language and landscape acquire value and significance by virtue of the ideational systems with which they are apprehended and construed among a native community (BASSO, 1988, p. 100). In other words, talking about landscape reflects a relationship between geographic reality and human cognition that is linguistically expressed, for example, in landscape terms, whose conceptualization do not follow universal principles (see BOHNEMEYER et al., 2004). Place names (or toponyms) are another important category that comes into play when referencing space, and in a narrower sense, the environment, since these refer to places that have a marked role in the lives of people from a given language community and embody a certain knowledge structure represented in the community's environment (see LEVINSON and BURENHULT, 2008).

What has interested scholars in the last decades is the question of the relationship between the geophysical world and spatial language and how this relationship can vary cross-linguistically and cross-culturally (BROWN, 2008, p. 152). This involves thoughts on what kind of categories people choose for landscape terms and place names. In other words, what do people see when they look around them, and how do they encode this linguistically? This, in turn, brings us closer to understanding how community members divide their environment into concepts that are seen through their linguistic expressions (see BASSO, 1988; HUNN, 1996; BURENHULT and LEVINSON, 2008). Hunn and Meilleur (2012, p. 15) in their work take this classificatory property of, especially, landscape terms into account and introduce the idea that these terms form a specific semantic domain, like kinship or color terms, since each term refers to a perceptually and functionally distinct feature of landscape. Considering landscape terms and place names as a coherent lexical noun class referring to places requires the formulation of morphosyntactic criteria that define this class in a language.

Another central question that addresses landscape terms and place names is whether a language treats them as objects or as places. In case of distinct encoding like, for example, distinct adpositional marking based on the class of the Ground-denoting noun, a language can be understood as being sensitive to what Landau and Jackendoff (1993) call the distinction of *what-* and *where-*nouns. This distinction goes back to Lyon's (1977) categorical division of 'first-order entities' and 'places/locations' that are contained in the physical world. Languages

that are sensitive to this distinction present a nominal categorization system similar to the mass/count distinction (RYBKA, 2015, p. 6).

This chapter aims to find answers to these questions for the Dâw case in order to better understand how the Dâw people map linguistic resources onto the environment. Therefore, I first examine the inventory of landscape terms with respect to their functional and formal properties (section 9.1.1) and subsequently analyze mono-morphemic and complex landscape terms with respect to their semantic properties (see sections 9.1.2 and 9.1.3). The subsequent section summarizes some thoughts on how the people categorize landscape according to the inventory of landscape terms. I then turn to the discussion on the *what/where*-distinction in Dâw. In sections 9.1.5.1-9.1.5.4, I provide evidence that Dâw encodes nouns denoting objects differently from place nouns when acting as Ground-denoting adjuncts. In section 9.2, I turn to place names in Dâw and show how speakers choose specific places and enable a particular identification of, for instance: rivers, communities, or sacred places. I begin with an analysis of their semantic and morphosyntactic properties in order to ultimately discuss what is named in Dâw.

## 9.1 Landscape terms

The sets of landscape terms and place names in Dâw draw on different types of data. Some derive from wordlists adapted for the region by Epps (fieldnotes), others from Bohnemeyer et al. (2004) *Landscape terms and place names elicitation guide*. Furthermore, I collected data in situ while traveling with the Dâw people through their territory by canoe and by foot. In this section, I first examine the formal and functional properties of landscape terms in order to verify if they behave differently from common nouns in Dâw. I then analyze mono-morphemic landscape terms, with an emphasis on the two most salient landscape features: the river and the forest. Subsequently, I focus on complex landscape terms reflecting the semantic notions of parts, size, and, regions of landscape. I show that the categorization of landscape in Dâw is sensitive to factors like perceptual salience, subsistence modes, and cultural importance.

### 9.1.1 Formal and functional properties

A first look at landscape terms in Dâw (see o below) shows a set of mono- morphemic nouns (e.g. *paas* ‘mountain’) and one of nominal compounds (e.g. *nâax nōr* ‘river mouth’). Where mono-morphemic landscape terms describe generic landforms (e.g. river, mountain, forest),

complex landscape terms refer to size taxonomy and parts/regions of landscape, which I discuss in the subsequent sections. Here, I focus on the question of whether landscape terms can be considered a distinct lexical category according to morphological or syntactic peculiarities.

Table 34- Landscape terms in Dâw

<b>mono-morphemic landscape terms</b>	
<i>xoot</i>	place (generic)
<i>xâaw</i>	old house site (not inhabited anymore)
<i>nâax</i>	stream/river (generic)
<i>tun</i>	island
<i>xeew</i>	beach
<i>mõor</i>	lake
<i>wâk</i>	caatinga
<i>'waar</i>	capoeira
<i>paa</i>	dry land ( <i>terra firme</i> )
<i>paas</i>	hill
<i>çax</i>	land
<i>xaay</i>	forest
<i>tuu</i>	ground
<i>t̃̃̃w</i>	path
<i>kaaw</i>	manioc garden
<b>complex landscape terms</b>	
<i>nâax pōg</i>	river (big, main course)
<i>nâax pēeg</i>	river (smaller, usually tributary)
<i>nâax pis</i>	creek
<i>nâax xeew</i>	creek with white water
<i>nâax nōr</i>	river mouth
<i>nâax 'yoo</i>	headwaters
<i>nâax mii' saaç</i>	river bifurcation
<i>nâax pej</i>	river bank
<i>nâax dōo'</i>	river port
<i>nâax tâw</i>	rapid
<i>xusee</i>	waterfall
<i>nâax way</i>	igapó
<i>paas pēeg</i>	mountain
<i>paas dōo'</i>	peak
<i>paas buuy</i>	foot of the mountain
<i>paas m̃̃ay</i>	cave
<i>câx m̃̃ay</i>	hole in the ground (natural or manmade)
<i>t̃̃̃w saaç</i>	path bifurcation
<i>t̃̃̃w soop dōo'</i>	varadouro
<i>nir xoot</i>	community/settlement
<i>top xâaw</i>	former community

Nominal morphology in Dâw is scarce and in many cases optional, a fact that is problematic for this analysis. Plural marking, for example, is not obligatory in Dâw (see STORTO, forthcoming). However, Martins (2004, p. 400-409) describes two morphemes indicating plural, which are *dâr* and the collectivizer *sun*. Where the former is less productive, occurring more in lexicalized forms like *waa dâr* ‘the elders’ (old + PLZ), nowadays, *sun* occurs frequently with [+human] nouns and expresses the semantics of a thing, person, or a species belonging to a certain group, like in (509). Here, it follows the name of one of the Dâw children (*Marlekson*), indicating that he is a part of the group of the children that went fishing. In sentences like (510), which provide plural semantics for landscape terms (e.g. *nir xoot sun* ‘the communities’ and *nâax sun* ‘the rivers’), the collectivizer *sun* also applies. One interpretation is to understand rivers, for example, as a part of the whole drainage system in the topography that surrounds the Dâw people. It is interesting that landscape terms make use of the collectivizer to indicate plurality, since my corpus shows this morpheme frequently with human entities rather than with inanimate entities. There are also many cases in which plural marking is absent and is indicated through the context or remains ambiguous, such as in (511).

(509) *id laay' dâw tee sun diid ee sun diid*  
 1PL to.fish dâw.people child COL with Marlekson COL with  
 ‘We are fishing with the Dâw kids and with Marlekson’s group.’

(510) *nir xoot sun nĩ nâax sun mĩ*  
 [be.located place] COL be.located river COL in.liquid  
 village COL be.located river COL in.liquid  
 ‘The villages are located at the rivers.’

(511) *nir xoot sun nĩ nâax pej*  
 [be.located place] COL be.located [river close.to]  
 village COL be.located riverbank  
 ‘The villages are located at the riverbanks.’

With respect to quantification, landscape terms are quantified according to the pattern for count nouns. Storto (forthcoming) describes the quantifiers *reew* and *mĩr*(‘ed) as equivalents to ‘many’ and ‘few’ in English and states that these are combined with notional count nouns to express amounts. The same interaction can be observed for landscape terms in non-existential clauses (512) and existential clauses (513).

(512) *waa*            *dâr*    *nĩ*                    *reew nir*                    *xoot wâ'*  
 ancestor        PLZ    be.located        many [be.located        place] on  
 ancestor        PLZ    be.located        many village                    on  
 'The ancestors lived in many villages.'

(513) *reew tun*                    *nĩ*    *wâan*                    *nâax mĩ'*  
 many island                    EXI    curicuriari.river        river in.liquid  
 'Many islands are in the Curicuriari river.'

An exception must be made for the landscape term for 'forest' (*xaay*). As visible in (514), quantification of this noun is referred to with *pũud*<sup>43</sup> 'a lot' instead of *reew* as with other landscape terms. Consequently, the usage of the quantifier *reew* with respect to 'forest' leads to an ungrammatical utterance (515). Instead, in (516) the consultant provided an alternative example using the term *bee* 'tree' with the count noun quantifier *reew* as a metaphor for the term for forest. One might expect that *pũud* is the counterpart of *reew* used to quantify mass nouns. However, as Storto (forthcoming) shows, quantification of mass nouns is expressed through the adjectives *pêg* (big) and *pis* (small) in Dâw. In this context, *pũud* seems to quantify the event that in example (514) is the idea of 'there are a lot of forests'.

(514) *xaay nĩ pũud yêd nir*                    *xoot pej*  
 forest EXI a.lot INTS [be.located        place] close.to  
 forest EXI a.lot INTS village                    close.to  
 'There is a lot of forest around the community.'

(515) \**xaay nĩ*                    *reew*                    *nir*                    *xoot pej*  
 forest be.located        many                    [be.located        place] close.to  
 forest be.located        many                    village                    close.to

(516) *bee nĩ*                    *reew nir*                    *xoot pej*  
 tree be.located        many [be.located        place] close.to  
 tree be.located        many village                    close.to  
 'There are many trees around the village.'

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<sup>43</sup> The morpheme *pũud* frequently occurred in my corpus in post-verbal position and cannot occur on its own. With respect to its function, *pũud* appears with adverbs with intensificational semantics like 'a lot' in English, making reference to the event. On the other hand, it seems to be cognate with the distributive morpheme *pĩd* in Hup, which Epps (2008, p. 318) considers a quantifier with the basic function of signaling multiple realizations of some focused entity or attribute. According to the author (2008, p. 318), when postposed to a verb, it has an aspectual function and indicates iterativity of an event. It seems plausible to interpret a repeated event in a bounded time frame as doing this event *a lot*. Hence, *pũud* is a good candidate to be considered to express distributive aspect due to its semantic and syntactic properties. However, there is the need to differentiate this morpheme from the iterative aspect expressed by *beey* in Dâw, which must be left for future work. For that reason, I maintain the lexical gloss 'a.lot' for *pũud* in this work.

Universal quantification for landscape terms was attested to also follow the pattern for common nouns through use of the morpheme ‘*waap*’ postposed to the quantified noun, as in (517).

- (517) *nir*            *xoot*    ‘*waap*            *tir*    *xaad*            *tir*    *wôr*    *ãay*  
 [be.located    place] UNIV.QUANT 3SG    look.for            3SG    [?    woman]  
 village                    UNIV.QUANT 3SG    look.for            3SG    sister  
 ‘He looked for his sister in all of the communities.’

Quantification with numerals is considered not to be sensitive to the count and mass distinction in Dâw (see STORTO, forthcoming). The same happens with landscape terms in Dâw, as in (518) and (519). The numeral is found pre-posed to the noun (here landscape terms) to which it refers without the need of additional plural morphology.

- (518) *Wijj*            ‘*wĩnh* ~~*tuum*~~            *kaaw*            *wâ’*  
 Roberto            work    NMRL:2            manioc.garden            on  
 ‘Roberto is working in two manioc gardens.’

- (519) *São Jorge*            *nĩ*            ~~*tuum*~~            *nâax*    *pôog*    *pej*  
 São.Jorge.village    be.located    NMRL:2            river    big    close.to  
 ‘The community of São Jorge is close to two (big) rivers.’

Another important phenomenon for the comparison of common nouns and the class of landscape terms is modification. I tested the ability of all landscape terms listed in o above to be modified by the demonstrative determiners *naa’* (DEM:prox) and *taa’* (DEM:dist) (see section 3.3). As common nouns, all landscape terms could be modified by these demonstrative determiners, as shown in (520) and (521), when they were either adjuncts or subjects (522).

- (520) *Belin*    ‘*wĩnh-êe’*            ***naa’***            *nâax*    *mi’*  
 Celina work-PST            DEM:prox            river    in.liquid  
 ‘Celina worked in this river.’

- (521) *id*            ~~*wũd-êr*~~            *dũ’*            ***taa’***            *xusee*  
 IPL    arrive-NEG            also    DEM:dist            waterfall  
 ‘We also will not arrive at that waterfall.’

- (522) ***taa’***            *paas*            *pêeg*  
 DEM:dist            mountain            big  
 ‘That mountain is big.’

Like common nouns, landscape terms can occur as subjects, objects, and adjuncts. However, they frequently appear as locative adjuncts and rarely as subjects or objects, since they are semantically more prone to act like locative adjuncts. With respect to case marking of core arguments in Dâw, landscape terms as subjects or objects act like common nouns; i.e. they remain unmarked as subjects, as in (522), and unmarked as direct objects in transitive clauses (523). According to Costa (2014, p. 210), Dâw shows differential object marking on direct objects in transitive clauses which is conditioned by semantic aspects like definiteness and animacy. Since landscape terms in Dâw are considered inanimate entities, differential object marking did not appear in my data (see example (523)).

- (523) *tir paar xaay pêeg rēd*  
 3SG know forest big INSTR  
 ‘He knows the forest a lot.’

Another cross-linguistic feature of landscape terms is that they can denote both non-geographical entities and geographical entities or *places*, depending on semantic and syntactic properties, which turns them into an unusual ontological category (see LYONS, 1977; SMITH and MARK, 2001; BURENHULT and LEVINSON, 2008). In examples (523) and (523) *the forest* is understood as a non-geographical entity in its function as grammatical subject and grammatical object, rather than a place. In comparison, in (16) it occurs in a locative adjunct representing the Source-indicating Ground that automatically becomes a place due to the Source-indicating auxiliary *dôo’* and the locative marker *rid*, or to a set of spatial postpositions when combined with other landscape terms.

- (524) *‘yãm x#’ nēed dôo’ xaay rid*  
 jaguar come AUX:source forest LOC  
 ‘The jaguar is coming from the forest.’

On the other hand, some non-geographical entities can function as places, like, for example in *‘The stone is in the basket’*. This raises the question of if landscape terms and common nouns referring to so called *first-order entities* functioning as Grounds in locative adjuncts are encoded in the same way. In section 9.1.5.3, I will show that in Dâw they are not. Instead, Dâw provides a three-way distinction between nouns denoting objects, objects and places, and places that are distinguished with respect to morphological marking as Grounds.

Finally, the analysis of morphosyntactic and distributional characteristics of landscape terms provided evidence for similar behavior for both common nouns and landscape terms. According to the underlying pattern of quantification, landscape terms behave like count

nouns with the exception of the term for ‘forest’, *xaay*. They can also act as core-arguments but are much more common in peripheral arguments, such as in locative adjuncts. In this position, they present a different syntactic behavior in comparison to common nouns denoting objects with respect to the spatial postpositions that select them as their arguments. This suggests a distinction between nouns based on their function as places, which is discussed in section 9.1.5.3.

### 9.1.2 Mono-morphemic landscape terms

The set of mono-morphemic landscape terms in Dâw presents landscape terms deriving from elements of nature (see o) and the ones that are unanalyzable with respect to their lexical source domain (see o). One interesting property of these terms is that they only combine with a restricted set of spatial postpositions in locative adjuncts. Moreover, there is a small set that occurs unmarked in the same environments. Despite these differences, all mono-morphemic landscape terms can co-occur with the locative marker *rid* when they function as Goal or Source-denoting Ground nominals.

The lexical source domain of the first group of landscape terms is elements from nature, such as stone, sand, water, and earth that are counterparts of some landscape terms. Observing the semantic relations between the natural landscape features and landscape terms establishes a clear relationship between a substance and a landform consisting of this substance (e.g. ‘stone’ *paas* - ‘mountain’ *paas*). In other words, these landscape terms refer to the inherent physical features of the landform.

Table 35- Mono-morphemic landscape terms based on elements of nature

	<b>natural landscape feature</b>	<b>landscape term</b>	<b>postposition (location, Goal and Source)</b>
<i>nâax</i>	water	river	<i>mî</i> ‘in.liquid’, <i>rid</i> ‘LOC’
<i>çax</i>	earth	land, area	<i>wâ</i> ‘on’, <i>rid</i> ‘LOC’
<i>paas</i>	stone	hill	<i>rêd</i> ‘at’, <i>rid</i> ‘LOC’
<i>xeew</i>	sand	beach (of the river)	<i>wâ</i> ‘on’, <i>rid</i> ‘LOC’

As seen in o, when these landscape terms act as Grounds in a locative adjunct, they are usually combined with a specific spatial configurational postposition. This seems to be conditioned by the default spatial relation in which a Figure can be engaged with one of these Grounds, that are, for example, to be *in* water (525) or to be *on* the beach (526). However, if

the spatial relation with respect to one of the landscape terms is not of a contiguous nature they can also be selected by the spatial postposition *pej* ‘close to’ (527)

- (525) *nâax pêeg mĩ'*                    *'mũg rid dâw*                    *bood top*  
 water big in.liquid here LOC dâw.people oven house  
 ‘At the big river, close to here, is the oven house of the Dâw.’  
 Lit.: ‘In the big river, close to here, is the oven house of the Dâw.’

- (526) *abug id nõx yêt-êe'*                    *ta-bug*                    *xeew wâ'*  
 DISC.CONJ 1PL [fall lie-PST] DEM:prox-there beach on  
 DISC.CONJ 1PL disembark-PST DEM:prox-there beach on  
 ‘Then we disembarked at the beach over there.’  
 Lit.: ‘Then we disembarked on the beach over there.’

- (527) *id wũud*                    *xeew pej*  
 1PL arrive beach close.to  
 ‘We are arriving close to the beach.’

The second group of mono-morphemic landscape terms (see o) is unanalyzable with respect to its lexical source domain. These terms refer to both natural landforms (*xoot* ‘place’, *tuu* ‘ground’, *xaay* ‘forest’, *tun* ‘island’, *mõor* ‘lake’, *wâk* ‘caatinga’, *waar* ‘capoeira’, *paa* ‘dry land’) and man-made landforms (*tũw* ‘path’ and *kaaw* ‘manioc garden’). Similar to the landscape terms from o above, these are likely to co-occur with a specific spatial postposition. In some cases, they remain unmarked when they comprise Grounds in spatial descriptions.

Table 36- Unanalyzable mono-morphemic landscape terms

Landscape term	postposition (location, Goal and Source)
<i>xoot</i> ‘place (generic)’	∅, <i>rid</i> ‘LOC’
<i>tuu</i> ‘ground’	∅, <i>rid</i> ‘LOC’
<i>xaay</i> ‘forest’	∅, <i>têen</i> ‘in.the.middle.of’, <i>rid</i> ‘LOC’
<i>pox</i> ‘sky’	∅, <i>rid</i> ‘LOC’
<i>tun</i> ‘island’	<i>rêd</i> ‘at’, <i>rid</i> ‘LOC’
<i>mõor</i> ‘lake’	<i>mĩ</i> ‘in.liquid’, <i>rid</i> ‘LOC’
<i>wâk</i> ‘caatinga’	<i>xaax</i> ‘between’, <i>rid</i> ‘LOC’
<i>waar</i> ‘capoeira’	<i>wâ</i> ‘on’, <i>rid</i> ‘LOC’
<i>paa</i> ‘dry land’	<i>bug</i> ‘there’, <i>rid</i> ‘LOC’
<i>tũw</i> ‘path/track’	<i>ked</i> ‘in’, <i>rid</i> ‘LOC’
<i>kaaw</i> ‘manioc garden’	<i>wâ</i> ‘on’, <i>rid</i> ‘LOC’

This is the case for the terms *xoot* ‘place’, *tuu* ‘ground’, *xaay* ‘forest’, and *pox* ‘sky’. Throughout this work, I have shown that a spatial relation between a Figure nominal and a Ground nominal is usually expressed with a postpositional phrase (see chapter 3). However, the data have shown that these landscape terms compose locative adjuncts in the form of unmarked noun phrases rather than postpositional phrases, as in examples (528) - (531).

(528) *bʉg waa kasām xaay*  
 there ancestor die forest  
 ‘There the ancestors died in the forest.’

(529) *dāw tee kâat tuu*  
 person child step ground  
 ‘The child is stepping on the ground.’

(530) *ār nĩ naa’ xoot*  
 1SG be.located DEM:prox place  
 ‘I lived at that place.’

(531) *abʉg jōow ‘ox xād saak mār pox*  
 DISC.CONJ João run DUR climb.up RPT sky  
 ‘Then, they say, João ran and climbed up in the sky.’

One possible explanation is that especially the terms for ‘forest’ and ‘ground’ refer to landforms that are central for the livelihood of the Dâw people, as discussed in the introduction to this chapter. Being engaged with these places leads then, somehow, to an intrinsic spatial relation between a Figure referent with respect to these places. In other words, these places are frequently referred to in discourse and can be routinized, becoming pragmatically unmarked. Additionally, to my understanding, Dâw provides distinct types of nouns denoting objects, objects and places, or only places. This distinction manifests itself linguistically through the absence or presence of postpositional marking and the locative marker, respectively. I will return to this distinction in detail in 8.2.4.

The discussion has shown that mono-morphemic landscape terms in Dâw denote the most prominent and culturally important landforms of the ecological system they inhabit. A comparison of these terms with Dâw’s sister languages (see o below) provides evidence that the use of mono-morphemic forms to denote these landforms is a common strategy within the Naduhup family. Nadëb shows some complex forms, which can be expected according to its distinct typological profile in comparison to Yuhup, Hup, and Dâw (see EPPS, forthcoming). There are four landscape terms that are cognates in all four languages, denoting

landforms that draw on the Naduhup people’s typical environment, which are: *land*, *ground*, *forest*, and *path*. Moreover, all four languages show the substance-landform pairs that I have shown in Dâw (e.g. water-river). Dâw, Yuhup, and Hup do this straightforwardly, whereas Nadëb shows exceptions for the pairs *water-river* and *stone-mountain*. What all four languages have in common is that they make use of both mono-morphemic and complex forms for denoting landforms. Interestingly, the choice between them coincides with the type of landforms in all four languages.

Table 37- Mono-morphemic landscape terms their expressions in the Naduhup languages<sup>44</sup>

Elements of nature	Yuhup	Hup	Dâw	Nadëb
water	dëh	dëh	nâax	naëng
earth	saah	s’áh	çax	k’ããts
stone	páč	páč	paas	pä
sand	wég	weg-yòh	xeew	hood
<b>Landscape Term</b>				
river	ih mi, dëh mi	dëh	nâax	tamahub
land	saah	s’áh	çax	k’ããts
hill/mountain	páč	páč	paas	waëë
beach (river)	wég-yoh	weg-yoh pög	xeew	hood
place (generic)	?	?	xoot	ji babong doo
ground	tu	tú	tuu	tuuh
forest	háy	hây, s’úg	xaay	hëëj
sky	sík	pöh	pox	pong
island	pön	pöd	tun	ta hoo gakä
lake	moh	möh	mōor	karaj’aa
caatinga	wäk	mùn	wäk	kas’aag
capoeira	booríg	yř’	‘waar	gëëw paah
dry land ( <i>terra firme</i> )	?	s’úg	paa	hëëj
path	tíw	tíw	tuuw	tyw
manioc garden	boót	b’òt	kaaw	gëëw

### 9.1.3 Complex landscape terms: parts, size and regions of landscape

Complex landscape terms in Dâw denote landforms that can refer to i) a whole-part relation of a generic landform (e.g. river – river mouth), ii) size taxonomy of a landform (e.g. creek vs. river), iii) regions of landforms (e.g. rapids), or denote further landforms like path types (e.g. *varadouro* ‘connecting path between rivers’).

<sup>44</sup> The data from this table are taken from the following references: for Hup (RAMIREZ, 2006); Yuhup (SILVA and SILVA, 2012) and for Nadëb (EPPS and OBERT, fieldnotes).

Like mono-morphemic landscape terms, they belong to the class of nouns, as demonstrated in § 8.2.1. Syntactically, complex landscape terms involve the juxtaposition of two or three components reflecting the process of noun compounding described by Martins (2004, p. 141-167) for Dâw. o shows that noun-noun compounds and noun-verb compounds are the major strategies for forming complex landscape terms. Additionally, some landscape terms are postpositional phrases and even compounds containing nouns and postpositional phrases. The first element of most complex forms is always composed of one of the mono-morphemic landscape terms presented in the previous section. The second element establishes the semantic relationship between the generic landform and the specific landform.

Table 38- Complex landscape terms

Construction type	Landscape term	Spatial postposition	Observations
noun + noun (natural feature)	<i>nâax xeew</i> river + sand 'white water creek'	<i>wâ</i> 'on', <i>rid</i> 'LOC'	- small creeks in the <i>caatinga</i> forest
noun + noun (body part term) <i>part-whole</i>	<i>nâax nôr</i> river + mouth 'river mouth'	<i>mî</i> 'in.liquid', <i>rid</i> 'LOC'	
noun + noun	<i>paas buuy</i> mountain + non.indigenous.person 'mountain foot'	<i>rêd</i> 'at', <i>rid</i> 'LOC'	- no other semantics encountered for <i>buuy</i> that could be related to 'mountain foot'
	<i>top xâaw</i> house + not.inhabited.place 'old house site' (Port.: <i>sítio antigo</i> )	<i>wâ</i> 'on', <i>rid</i> 'LOC'	- refers to an old house site, that can be totally overgrown with vegetation
	<i>paas mãy</i> stone + hole 'cave'	<i>ked</i> 'in', <i>rid</i> 'LOC'	
	<i>çâx mãy</i> earth + hole 'earth hole'	<i>ked</i> 'in', <i>rid</i> 'LOC'	
	<i>yâw t#w</i> armadillo + path 'path of the armadillo'	<i>ked</i> 'in', <i>rid</i> 'LOC'	- N1 interchangeable by names of species of animals that leave traces on the ground
	<i>t#w saaç</i> path + fork 'path bifurcation'	<i>ked</i> 'in', <i>rid</i> 'LOC'	

noun + attributive verb (size)	<i>nâax pôg</i> water + be.very.big 'main river course' ex. Rio Negro	<i>mĩ</i> 'in.liquid', <i>rid</i> 'LOC'	- corresponds to place name for the Rio Negro
	<i>nâax pêeg</i> water + be.big 'tributary' ex. Curicurari River (tributary to Negro River)	<i>mĩ</i> 'in.liquid', <i>rid</i> 'LOC'	- usually applies to tributaries of main river courses
	<i>nâax pis</i> water + be.small 'creek' (Port.: <i>igarapê</i> )	<i>mĩ</i> 'in.liquid', <i>rid</i> 'LOC'	- small creeks in the forest
	<i>paas pêeg</i> stone + be.big 'mountain'	<i>rẽd</i> 'at', <i>rid</i> 'LOC'	
	<i>nâax way</i> water + be.long 'flooded land' (Port. <i>igapô</i> )		
	<i>nâax tâw</i> water + be.angry 'rapids' Lit.: 'angry water'	<i>mĩ</i> 'in.liquid', <i>rid</i> 'LOC'	
noun + verb + AUX	<del><i>taww</i></del> <i>soop dôo'</i> path + ascend.from.river + AUX:source 'varadouro' Lit.: 'path ascending from the river'	<i>ked</i> 'in', <i>rid</i> 'LOC'	
noun + postposition	<i>nâax pej</i> river + close.to 'riverbank'	∅, <i>rid</i> 'LOC'	
	<i>nâax dôo'</i> river + in.front.of:not.facing 'river port' Lit.: 'in front of the river'	∅, <i>rid</i> 'LOC'	
	<i>paas dôo'</i> river + in.front.of:not.facing 'mountain top' Lit.: 'in front of the mountain'	∅, <i>rid</i> 'LOC'	- lexicalization trajectory unclear
	<i>'nâp 'yêe tâag xaax</i> piaçava.palm + tree + between 'piaçava growing area' Lit.: 'Between piaçava palm trees'	∅, <i>rid</i> 'LOC'	- possible with any kind of tree species that grows naturally in a specific area of the forest. Not

	<i>câak tâag xaax</i> buriti.palm + tree + between 'buriti palm growing area' Lit.: 'Between buriti palm trees'	∅, <i>rid</i> 'LOC'	common with domesticated species like banana, for example
noun + postpositional phrase	<i>tuu nâax mĩ</i> ground + river + in.liquid 'river bottom'	∅, <i>rid</i> 'LOC'	
postpositional phrase + noun	<i>nâax mĩ' saaç</i> river + in.liquid + fork 'river bifurcation'	∅, <i>rid</i> 'LOC'	
noun + ?	<i>nâax 'yoo</i> water + ? 'headwaters'	<i>mĩ</i> 'in.liquid', <i>rid</i> 'LOC'	
verb + noun	<i>nir</i> <sup>45</sup> <i>xoot</i> be.located + place 'community'  <i>kasâm nir xoot</i> die + be.located + place 'cemetery'  <i>suk xoot</i> hunt + place 'hunting ground'  <i>laay' xoot</i> fish + place 'hunting ground'	∅, <i>wâ</i> 'on', <i>rid</i> 'LOC'  ∅, <i>wâ</i> 'on', <i>rid</i> 'LOC'  ∅, <i>wâ</i> 'on', <i>rid</i> 'LOC'  ∅, <i>wâ</i> 'on', <i>rid</i> 'LOC'	
verb + verb	<i>xusee</i> <del><i>xuu</i></del> + <i>see</i> descend + drain 'waterfall'	<i>mĩ</i> 'in.liquid', <i>rid</i> 'LOC'	

The first group in o shows a set of landscape terms that are noun-noun compounds of the following semantic classes:

<sup>45</sup> I consider the verb *nir* to be a variant of the locative copula verb *nĩ* 'be located' in Dâw.

N <sub>1</sub>	N <sub>2</sub>
modifier	head
- mono-morphemic landscape term	- Natural landscape feature - body part term - mono-morphemic landscape term
- animal species	- Natural landscape feature - mono-morphemic landscape term
- ethnonym	- mono-morphemic landscape term

These landscape terms have a descriptive nature conditioned by their structure. The data show a N<sub>1</sub> N<sub>2</sub> combination in which N<sub>2</sub> is the head noun and N<sub>1</sub> is the modifier or possessor. In the case of whole – part relations like for the term ‘river mouth’ *nâax nôr*, N<sub>2</sub> expresses the part of the whole expressed through N<sub>1</sub>. In the same way, possessed nouns like *yâw t#w* ‘armadillo’s path’, *t#w saaç* ‘path’s bifurcation’, and *nâax xeew* ‘white water creek’ (Lit. ‘sand water’) are also head-final. The majority of these compounds present transparent semantics, with exception of the term for ‘mountain foot’, *paas buuy*. The noun *buuy*<sup>46</sup> in Dâw nowadays denotes a non-indigenous person. However, there is a cognate form in Dâw’s sister language Hup, the spatial postposition *buycô?* ‘above’ (EPPS, 2008, p. 465), that may have been preserved in this construction but lost elsewhere in Dâw.

Complex landscape terms referring to concave landforms such as caves or holes are formed through the noun denoting the substance they refer to (e.g. *paas* ‘stone’, *câx* ‘earth’) plus the noun *mãay* ‘hole’. These landforms can be understood as container spaces since they are always selected by the spatial postposition *ked* ‘in’ such as in (532). In the case of holes made by animals, N<sub>1</sub> is the species that hole belongs to (533).

- (532) *xaay dee naa’ paas mãay ked*  
forest owner DEM:prox stone hole in  
‘The forest owner lives in this cave.’

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<sup>46</sup> One possible relationship between ‘mountain foot’ and the term *buuy* in Dâw, could be that the surroundings of a mountain were considered by the Dâw people to be dangerous areas that hosted forest spirits, jaguars, and other ethnic groups that the Dâw feared. According to some elders, mountain feet are places where they found instruments for manioc processing and clay pots that are proofs for the presence of the other groups. In other words, a mountain foot could be understood as a place of the ‘others’ instead as a part of a landform.

- (533) *sãas mãy ked tir ãa sun*  
 armadillo hole in 3SG sleep COL  
 ‘They slept in the hole of the armadillo.’

The second group of landscape terms is made up of noun-verb compounds that can also be understood as clauses. As seen in o, the most common strategy in Dâw is to create complex landscape terms with the following structure :

N	V
head	modifier
Mono-morphemic landscape term	- attributive verb (size, format) - active verb (locative)

The leftmost part of the compound, a noun, is always a mono-morphemic landscape term discussed in the previous section, establishing thus a relation to a generic landform. The verb postposed to it has a modifying function and establishes the semantic relation of this complex term with respect to the landform expressed by the noun in compound-initial position. Semantically, these landscape terms refer to size differences of landforms or specific regions of landforms. The mechanism of using attributive verbs with size semantics (*pôog* ‘very big’, *pêeg* ‘big’, *pis* ‘small’) for denoting different types of rivers reveals how Dâw people conceive of and differentiate between different types of rivers, namely through its width and volume. Languages of the region like Dâw’s sister language Nadëb (see PISSOLATI and OBERT, in prep.) apply body part terms to denote different types of rivers, i.e. they refer to the main river course as a ‘body’ and its tributaries are usually referred to as ‘arms’. These systems can be understood as fractal; the ‘river arm’ becomes the ‘river body’ if one is localized at the tributary of a tributary and so on. However, in Dâw different tributaries of, for example, the Curicuriari river, can be considered as *nâax pêeg* ‘big river’ or *nâax pis* ‘creek’ depending on the river’s width. A similar pattern can be observed for the term *nâax way* ‘flooded land’ (Port.: *igapô*) that denotes flooded riverbanks in the rainy seasons. The verb *way* ‘be long’ can be used in contexts of describing the physical feature of being long or stretched in animate (534) or inanimate entities (535). Analogous to size differences of river types, the term *nâax way* makes also references the width of the river that is stretched, crossing its lateral boundaries.

- (534) *reer way*  
 snake be.long  
 ‘The snake is long.’

- (535) *bee mĩ way*  
 tree twig be.long  
 ‘The twig is long.’

One interesting case of this group is the term *t#w soop d#o* ‘varadouro’ (Lit. ‘path ascending from the river’). This term refers to a specific kind of path significant for practices of everyday mobility for the D#w people, since it refers to a network of tracks connecting one river with another. This semantics is seen in its components, which are the noun *t#w* ‘path’, followed by the verb *soop* ‘ascend from the river’ and the Source-indicating auxiliary *d#o*’ discussed in section 6.4. Example (536) provides evidence that the ordering of these components reflects the ordering in a Basic Locative Clause with Source semantics. The conflation of the notions of Path (ascending) and Ground (river) in the verb *soop*, allows the locative adjunct (*n#ax rid*) to be dropped to form a noun denoting this path type.

- (536) *t#w soop d#o n#ax rid*  
 path ascend.from.river AUX:source river LOC  
 ‘The path ascends from the river.’

Another group of complex landscape terms is the locative postpositional phrases. They consist of a spatial postposition with a mono-morphemic landscape term as their arguments. Different from all other landscape terms examined until this point, the mono-morphemic landscape term involved in this noun is not the landform to which these complex landscape terms belong. Rather, they function as a reference point for the landform that the complex landscape term denotes. The term *n#ax pej* ‘river bank’ (river + close.to), for example, describes not a specific part of the river but a landform that is in a specific spatial configuration with respect to the river. In other words, they refer to adjacent regions of specific landforms such as *n#ax pej* ‘riverbank’, *n#ax d#o* ‘river port’, and *paas d#o* ‘mountaintop’; or to specific areas with one prevalent tree species like, for example, *'n#ap 'y#e t#ag xaax* ‘piaçava growing area’ or *c#ak t#ag xaax* ‘buriti palm growing area’. Where the former type consists of a noun that establishes the landform that region refers to (here: water and mountain) and a spatial postposition, the latter utilize inalienable possessed nouns referring to the plant term (i.e. *'n#ap 'y#e t#ag* ‘piaçava + tree’) and the spatial postposition *xaax* ‘between’. The fact that these landscape terms already include a spatial postposition causes absence of a further postposition when they make up locative adjuncts. However, they can combine with the locative marker *rid* when they appear as Goal (537) or Source-oriented locative adjuncts (538).

- (537) *tir soop dôo' nâax dôo' rid*  
 3SG ascend.from.river AUX:source [river in.front.of:not.facing] LOC  
 3SG ascend.from.river AUX:source river.port LOC  
 'She is returning from the river port.'
- (538) *id dôob nâax pej rid*  
 1PL descend.to.river [river close.to] LOC  
 1PL descend.to.river riverbank LOC  
 'We go down to the riverbank.'

Dâw also presents two complex landscape terms that consist of a noun and a locative postpositional phrase. The underlying structure of the term *nâax mii' saaç* 'river bifurcation' reflects possessed nouns, with *saaç* 'fork' functioning as the head noun and the postpositional phrase *nâax mii'* 'river + in liquid' as its modifier. In contrast, in the term *tuu nâax mĩ'* 'river bottom' the head noun precedes the locative postpositional phrase. This structure resembles the non-verbal locative clauses that I analyze in chapter 8 as one of the strategies of locative predication.

The last pattern of landscape terms refers to places or areas at which a specific activity is carried out, like *suuk xoot* 'hunting ground', *laay' xoot* 'fishing place', and *nir xoot* 'community' (Lit.: 'place to be/live'). Different from the other word forming processes in landscape terms observed so far, this structure involves a verb-noun compound:

<b>V</b>	<b>N</b>
modifer	head
- active verb	- generic term for 'place' <i>xoot</i>

The compound-initial verb denotes the activity that can be carried out at this place, whereas the following noun is the generic term for 'place' in Dâw (*xoot*). There are also some examples in my corpus where *xoot* is found compounded with other nouns, e.g. ethnonyms like *buuy xoot* 'place of non-indigenous people' or refers to places that are typical habitats for specific animals, like *taax xoot* 'place of the tapir'.

#### 9.1.4 Some thoughts on landscape categorization in Dâw

The discussion on both mono-morphemic and complex landscape terms in Dâw has shown some underlying determinants of Dâw's landscape terminology which are: (i) perceptual salience, (ii) subsistence mode, and (iii) cultural importance (cf. BOHNEMEYER et al., 2004).

In the Dâw case these are all related, and they important for understanding how landscape is divided into categories.

One general finding on landscape categories in Dâw is that these can be divided into two bigger groups: river-related and forest-related. River-related categories involve terms for size differences of rivers and parts or regions of the river (island, riverbank, river port, river bottom, rapids, etc.). In contrast, forest-related categories involve the generic term for forest as well as specific parts inside the forest determined by species (manioc garden, dry land, caatinga, etc.), types of paths, and terms for inhabited spaces (communities, abandoned house sites, and cemeteries) that are located in and along the forest. Other landscape categories that do not fall into these two groups are concave (holes and caves) and convex landforms (hills and mountains) and of the category 'sky'.

With respect to perceptual salience, all the terms, by nature, denote perceivable landforms with respect to size and are thus visually prominent. However, a more interesting fact is that river-related terms are clearly differentiated by their width and volume. Forest-related terms also present insights on landscape categorization with respect to different types of soils, plant species, and tree heights that make up specific parts of the forest.

Subsistence modes do clearly motivate the categorization of landscape for the Dâw people and are undoubtedly tied to the distinct parts of the forest. Every different part of the forest is connected to hunting, gathering, agricultural practices, the extraction of raw material. Again, this is intertwined with cultural practices. As mentioned earlier, the forest is the center of the Dâw people's livelihood, which goes far beyond subsistence practices. Narratives and myths of the Dâw people make constant reference to the forest and landscape categories discussed here and present a rich repertoire of place names that refer to rivers and communities. Moreover, spatial mobility is also tied to the forest and to the vast network of path connecting rivers, communities, house sites, and sacred and historical places with the Dâw community, which in turn determines landscape categories and thus its terminology. In other words, physical features of the environment like indicator species or activities play an important role for the categorization of landscape in Dâw corresponding to Ingold's (2000, pp. 192-193) observation "no feature of the landscape is, of itself, a boundary. It can only become a boundary, or the indicator of a boundary, in relation to the activities of the people (or animals) for whom it is recognized or experienced as such."

### 9.1.5 Landscape terms in Dâw and the *what/where* distinction

This subsection discusses whether landscape terms are linguistically treated as first-order entities or as places. A central approach to this question is to understand the morphosyntactic behavior of landscape terms when they function as Grounds in opposition to nouns denoting objects in this position. This division is interesting in particular for substance-landscape term pairs (stone-mountain, water-river, sand-beach, and soil-land), since they can be both objects and places. Consequently, a key question is if they show different grammatical encoding in their function as objects and places.

These thoughts address the idea of *what*- and *where*-nouns introduced at the beginning of this chapter. The question that arises is whether Dâw encodes Ground nominals differently when they are composed of a *what*-noun (person, object, etc.) versus a *where*-noun (landscape term, place name), implying a noun categorization system as has been observed for languages like Marquesian (CABLITZ, 2008), Lokono (RYBKA, 2015) and Makalero (HUBER, 2014).

Rybka (2015, p. 6) describes the *what/where* distinction as the “likelihood of a noun functioning as the Figure or the Ground in the spatial expression.” This implies that *where*-nouns are more likely to act as Grounds, since they are places by definition. These nouns are consequently less marked than nouns from the *what*-category in the Ground function. According to the author (*ibid.*), this distinction is motivated by semantic factors and established by ontological properties of the referents like, for example, perceptual boundedness (see also CABLITZ, 2008, p. 202).

The grammatical locus of the *what/where* distinction is found in the expression of spatial relations (RYBKA, 2015, p. 259). As I demonstrate throughout this work, spatial relations in Dâw are commonly expressed in Ground-denoting locative adjuncts in form of postpositional phrases<sup>47</sup>. The Ground denoting noun acts as an argument of one of the spatial postpositions or of the locative marker *rid* (see section 3.2). Together they form Ground denoting adjuncts that can encode the notions of location (static spatial events) or Goal and Source (motion events). In languages with a *what/where* noun categorization system, nouns receive distinct directionality markers that contrast *what*- and *where*-nouns. For that reason, I examine the behavior of landscape-denoting nouns and object-denoting nouns as Grounds in spatial relations in which they indicate location, Goal, and Source.

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<sup>47</sup> Locative adjuncts can also be composed of locative adverbs or adverbial clauses; however, here I focus on postpositional phrases since they take nouns as their arguments and my goal is to understand the linguistic categorization of nouns.

The results provide evidence for a three-way noun categorization system in Dâw that divides nouns into *what*-nouns, *what/where*-nouns, and *where*-nouns. The cut-off point for this division is based on the degree of morphological marking of the Ground nominals. o shows that *what*-nouns can be arguments of all kinds of spatial postpositions depending on the configuration between Figure and Ground, but they do not combine with the locative marker *rid* and do not occur unmarked. *Where*-nouns, in opposition, are selected only by a restricted set of spatial postpositions that refer to a default spatial arrangement between Figure and Ground. In other words, if a Figure entity is, for example, immersed ‘in water/river’, ‘on the surface of water/river’, or ‘next to water/river’, Dâw uses the same postposition, *mĩ* ‘in liquid’, for all the different spatial settings. Furthermore, they can all combine with the locative marker *rid*, and some *where*-nouns can occur unmarked. Hence, the opposition between *what*- and *where*-nouns in Dâw is mainly visible through the possibility of being or not selected by the locative marker *rid*.

Table 39- Ground encoding possibilities of *what*-nouns, *what/where*-nouns and *where*-nouns

	spatial postposition - unrestricted	spatial postposition - restricted	<i>rid</i>	∅
<i>what</i> -nouns				
<b>Location</b>	+	-	-	-
<b>Goal</b>	+	-	-	-
<b>Source</b>	+	-	-	-
<i>what/where</i> -nouns				
<b>Location</b>	+	+	+	-
<b>Goal</b>	+	+	+	-
<b>Source</b>	+	+	+	-
<i>where</i> -nouns				
<b>Location</b>	-	+	+	+
<b>Goal</b>	-	+	+	+
<b>Source</b>	-	+	+	+

The following three sections will briefly present and discuss each noun class, providing evidence for the three-way distinction of nouns based on their encoding as Grounds in clauses expressing static and non-static spatial relations.

### 9.1.5.1 *What*-nouns

What I describe as *what*-nouns for Dâw correspond to what Lyons (1977) calls *first-order entities*. These are three-dimensional and self-moving entities, i.e. humans and animals. However, first-order entities can also be not self-moving but can be manipulated, which is the case for

objects (e.g. chair, car, pencil etc.). Entities of this kind do not denote places by definition; however, they can function as such when they function as a Ground nominal in Basic Locative Constructions like in the example ‘*The book lies on the chair*’. The question to be investigated in this subsection is how these nouns behave when they function as Grounds in static and non-static spatial events.

I mainly draw on data from elicitation tasks like the *Topological Relation Picture Series* (BOWERMAN and PEDERSON, 1992), *Picture series for positional verbs* (AMEKA and WILKINS, 1999) and the *Photo Elicitation Task* (OBERT, this work), since these predominantly involve objects as Grounds. Additionally, I observed natural speech data involving the description of spatial scenes.

Static spatial scenes expressed in one of the three types of Basic Locative Constructions (verbal locative clauses, non-verbal locative clauses, and locative phrases) frequently establish the spatial arrangement between Figure and Ground through postpositional phrases. In chapter 3, I showed that Dâw presents a rich inventory of spatial postpositions that select nouns with respect to the inherent physical properties of the Ground (e.g. *mĩ* ‘in liquid’) or with respect to the spatial configuration between Figure and Ground (e.g. *wâ* ‘on’ vs. *bũut* ‘under’). A prototypical static spatial scene in which the Ground is represented by a *what*-noun is demonstrated in examples (539) - (540).

(539) Location - what-noun

<i>tir</i>	<i>ka'</i>		<i>mãr</i>	<b><i>yeg</i></b>	<b><i>ked</i></b>
3SG	lie.in.hammock		RPT	hammock	in

‘They say, he was lying in the hammock.’

(540) Location - what-noun

<i>xop</i>	<i>dâk</i>	<b><i>puleg</i></b>	<b><i>rêd</i></b>
cup	hang	nail	at

‘The cup is hanging on the nail.’

(541) Location - what-noun

<i>'yãm x#'</i>	<i>çâk</i>	<i>nõx</i>	<i>wôob</i>	<b><i>'aa'</i></b>	<b><i>'wâ</i></b>
jaguar	jump	fall	be.on	ANAPH	on

‘The jaguar jumped down on him.’

In the same way, non-static spatial scenes provide information on the Figure-Ground configuration through postpositional phrases. Since Dâw does not provide distinct postpositions differentiating Source from Goal-indicating Grounds, these notions are implied through simple or complex predicates with directional motion verbs (542) and through the

presence and absence of the Source-indicating auxiliary *dôo'* (see section 6.4) in post-verbal position (543).

(542) Goal - what-nouns  
*buuj saak Uç wâ'*  
 lizard climb Pedro on  
 'The lizard climbs on Pedro.'

(543) Source - what-nouns  
*dâw tee nõx xtt# dôo' bee rêd*  
 person child fall go.down AUX:source tree at  
 'The child falls down from the tree.'

As mentioned in the previous subsection, *Dâw* also presents the locative marker *rid*<sup>48</sup>, which replaces spatial postpositions in order to indicate Source, Goal, or location<sup>49</sup> semantics (see section 3.2). However, analysis of my corpus provided evidence that the locative marker does not select *what*-nouns as its arguments. Grammaticality judgements lead to ungrammatical results when the spatial postposition of examples (539) and (542) - (543) above is interchanged with the locative marker *rid* (544) - (546) in static and non-static spatial scenes in which Grounds are composed of *what*-nouns.

(544) Location - what-nouns  
*\*tir ka' mâr yeg rid*  
 3SG lie.in.hammock RPT hammock LOC

(545) Goal - what-nouns  
*\*buuj saak Uç rid*  
 lizard climb Pedro LOC

(546) Source - what-nouns  
*\*dâw tee nõx xtt# dôo' bee rid*  
 person child fall go.down AUX:source tree LOC

The examples of this section provided evidence that *what*-nouns are not selectable arguments of the locative marker *rid*. Instead, the encoding of Grounds consisting of *what*-

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<sup>48</sup> I consider *rid* in its function as a locative marker a postposition according to its ability to be the head postpositional phrases and thus require arguments (see section 3.2 on the locative marker).

<sup>49</sup> In section 3.2, I mention that *rid* in non-motion events is used when the Ground is located in intangible distance from the Figure, i.e. these Grounds are in general landscape terms or place names.

nouns is expressed in postpositional phrases in static and non-static spatial scenes. In other words, turning objects into places in Dâw requires a specific postposition instead of the semantically more generic locative marker that distinguishes only the three notions of directionality (location, Goal, and Source).

### 9.1.5.2 Where-nouns

Lyons' (1977) definition of *where*-nouns contrasts with *what*-nouns with respect to their function of denoting 'places/locations' rather than 'objects'. Cablitz (2008, p. 202) argues that *perceptual boundedness* is the most significant difference between *what*-nouns and *where*-nouns, i.e. the extension of a town is less perceivable than the extension of a chair. On the other hand, there are geographical entities, like islands, that can have clear perceptual boundaries depending on their size. In the same way, criteria like material nature described as inherent to *what*-nouns can also apply to *where*-nouns, since locations can also be of material nature (e.g. mountains, lakes, cliffs). This overlap of characteristics supports Lyons' (1977, p. 693) claim that geographical entities and landscape features can be considered to occupy an intermediate position between objects and places. The question that arises is to what extent a language manifests these differences linguistically.

For Dâw, I argue for a distinct marking when the Ground is a *where*-noun versus a *what*-noun. The cut-off point here is the possibility of expressing the Ground-denoting postpositional phrase headed by the locative marker *rid* in both static and non-static (Source and Goal oriented) spatial scenes.

BLCs expressing static spatial relations between a Figure and a Ground composed of a *where*-noun show three different ways of encoding this spatial relation: i) postpositional phrases (547), ii) bare noun phrases without a relational element (548), and iii) postpositional phrases headed by the locative marker *rid* (549).

Example (547) shows a BLC in which the Ground is the landscape term *kaaw* 'manioc garden', which is the argument of the spatial postposition *wâ* 'on' in Dâw. This structure corresponds to what was observed for BLCs with *what*-nouns. However, one striking difference is the fact that the majority of Dâw landscape terms in their function as Grounds can only be arguments of a very restricted set of spatial postpositions, as shown in o above.

- (547) Location – where-nouns  
*Tōonh*            ‘*wīnh tir*        *kaaw*                    *wâ’*    *yōr*  
 Angelina        work    3SG    manioc.garden        on        today  
 ‘Angelina is working in her manioc garden today.’

As discussed in section 9.1.5.2, static spatial relations in which the Ground is represented by landscape terms like ‘forest’, ‘sky’, and ‘ground’ are expressed through bare noun phrases without any relational element, as exemplified in (548). As a possible explanation, I consider the interplay between spatial postpositions describing configurational notions and this group of landscape terms that are conceptualized as unbounded. In other words, for establishing a spatial relation between Figure and Ground in Dâw, the Figure needs to be related to some part of the Ground, usually its spatial limits. However, landscape terms like ‘forest’, ‘sky’, and ‘ground’ are not conceptualized as bounded spaces which, in turn, complicates the choice of a spatial postposition. I return to this discussion in section 9.2.5.4.

- (548) Location – where-noun (no marking)  
*bug*    *waa*                    *kasâm*    *xaay*  
 there ancestor        die        forest  
 ‘There, the ancestors died in the forest.’

The third strategy for Ground encoding in static spatial scenes involves the use of the locative marker *rid*, which can take either landscape terms and place names as its arguments. The locative marker is interchangeable with spatial postpositions like in (549) and (550) and can select landscape terms that usually occur unmarked in locative adjuncts (551).

- (549) Location – where-noun  
*Maria nīi*                    *nū’ māy*                    *nīr*                    *xoot*    *rid*  
 Maria be.located        other                    [be.located        place]    LOC  
 Maria be.located        other                    community                    LOC  
 ‘Maria is in another community.’

- (550) Location – where-noun  
*Maria nīi*                    *nū’ māy*                    *nīr*                    *xoot*    *wâ’*  
 Maria be.located        other                    [be.located        place]    on  
 Maria be.located        other                    community                    on  
 ‘Maria is in another community.’

The use of *rid*, in comparison to spatial postpositional phrases or unmarked nouns, leads to slight semantic differences with respect to distance. Where in (551) the speaker refers to a

place in the forest that is located a long distance from the place of utterance, in (552) the speaker refers to the forest surrounding the community.

(551) Location – where-noun

*ãr* ‘wĩnh-êe’ **xaay** **rid**

1SG work-PST forest LOC

‘I worked (far away) in the middle of the forest.’

(552) Location – where-noun

*ãr* *rãm* **xaay**

1SG go forest

‘I am going into the forest.’

Non-static spatial scenes with *where*-nouns as Grounds establish spatial relations through the use of the locative marker *rid* for expressing both Goal (553) and Source-oriented Grounds (554). This contrasts with what was observed for *what*-nouns, which cannot be arguments of the locative marker.

(553) Goal – where-noun

*dãw* *tee* *ox’* *rãm* *nãax* *dôo* **rid**

*dãw.people* *child* *run* *go* *water* *port* LOC

‘The kids are running to the port.’

(554) Source – where-noun

*dãw* *tee* *nẽed* **dôo’** *nãax* *pôog* **rid**

*dãw.people* *child* *come* *AUX:source* *water* *big* LOC

‘The kids are coming from the river.’

I consider the possibility of being arguments of the locative marker *rid* to be the main criterion that distinguishes *what*-nouns from *where*-nouns in Dãw. Recalling the definition of *where*-nouns from the beginning of this section, I describe *where*-nouns in Dãw from a morphosyntactic point of view as nouns that can be arguments of the locative marker *rid*. From a semantic perspective, *where*-nouns describe geographic entities, landforms, and, as we will see in the subsequent section, place names.

### 9.1.5.3 What/where-nouns

The description of the distinct morphosyntactic behavior of nouns in Ground-denoting locative adjuncts provided evidence for the presence of a *what/where* distinction in Dãw.



- (559) What-noun  
*xaam yêen xeew b̥uut*  
 crab hide sand under  
 ‘The crab is hidden under the sand.’
- (560) Where-noun  
*dâw tee r̥ũ' xeew wâ'*  
 person child play beach on  
 ‘The children are playing on the beach.’
- (561) What-noun  
*tâwâat p̥ēm paas wâ'*  
 bird sit stone on  
 ‘The bird is sitting on the stone.’
- (562) What-noun  
*mem dâk paas r̥êd*  
 butterfly lean stone in.adhesion  
 ‘The butterfly is leaning on the stone.’
- (563) Where-noun  
*paas m̥ây n̥ĩ paas r̥êd*  
 [stone hole] be.located mountain in.adhesion  
 ‘The cave is in the mountain.’

One exception must be made with respect to the ‘water-river’ pair, since these are arguments of the postposition *m̥ĩ* ‘in liquid’ in both *what*- and *where* function, as exemplified in (564) and (565). One could argue that *Dâw* does not display distinct terms for ‘water’ and ‘river’ according to this behavior. However, these terms show different interactions with the locative marker *rid* that is restricted to the *where*-noun usage (river). This confirms, thus, the existence of two distinct terms as exemplified in (566) and (567).

- (564) *r̥âap yook n̥âax m̥ĩ'*  
 fish swim water in.liquid  
 ‘The fish is swimming in the water.’
- (565) *tun xaa n̥âax m̥ĩ'*  
 island sit river in.liquid  
 ‘The island is in the river.’  
 Lit.: ‘The island is sitting in the river.’

(566) *tir nôx xttt nâax mĩ'*  
 3SG fall descend water in.liquid  
 'He falls into the water.'

(567) *tir nôx xttt nâax rid*  
 3SG fall descend river LOC  
 'He falls into the river.'

As discussed in the previous sections, *what*-nouns differ from *where*-nouns with respect to their interaction with the locative marker when they function as Grounds in non-static spatial scenes. The same pattern applies for the *what/where*-nouns discussed in this section. Hence, when acting as *what*-nouns that denote substances, they are not able to be selected as arguments of the locative marker *rid* (571) whereas in their function as *where*-nouns they are, as in (568) and (569).

(568) Where-noun  
*tir rãm xeew rid*  
 3SG go beach LOC  
 'He is going to the beach.'

(569) Where-noun  
*tir nêed dôo' xeew rid*  
 3SG come AUX:source beach LOC  
 'He is returning from the beach.'

(570) What-noun  
*bok nôox xttt xeew xaax*  
 pot fall descend sand between  
 'The pot falls in the sand.'

(571) What-noun  
 \**bok nôox xttt xeew rid*  
 pot fall descend sand LOC

This discussion has provided evidence for the hypothesis that the substance-landform pairs in Dâw can have both object and place function, which is morphosyntactically visible. For these cases, the *what/where* distinction is crucial since it enables the recognition of these terms as places or objects.

### 9.1.5.4 Discussion

The examples from the last three subsections provided evidence that Dâw presents different Ground encoding strategies for different classes of nouns. This distribution is represented in obelow. It shows a continuum with *what*-nouns and *where*-nouns at its extreme points. *What/where*-nouns are intentionally placed outside the continuum since I do not consider them to be part of it, i.e. they are not considered a third class of nouns since they function either as *what*-nouns or *where*-nouns. Below the arrow, I also list the morphosyntactic properties of both noun categories when composing Grounds in locative adjuncts in Dâw. We can see that this distinction manifests linguistically in combinatorial possibilities of nouns and spatial postpositions, the possibility of co-occurring with the locative marker *rid*, and the possibility of appearing unmarked. The prediction that, in the case that the language provides a *what/where* distinction, *where*-nouns are lesser marked than *what*-nouns is confirmed for the Dâw case. In other words, the more place reference a noun establishes in its semantics the less it needs to be marked in Dâw, and vice versa. Consequently, the *where*-nouns *xaay* ‘forest’, *pox* ‘sky’, and *tuu* ‘ground’ can be considered as places by definition because of their ability to occur unmarked in locative adjuncts.

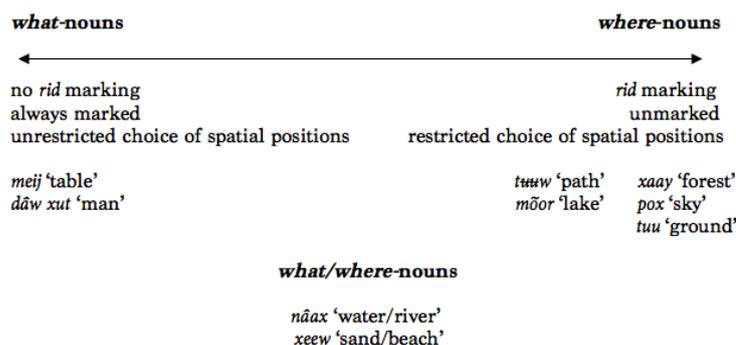


Figure 13- What/Where distinction in Dâw

But what motivates this distinction? One option is to think about the idea of *perceptual boundaries* that is one of the five ontological properties<sup>50</sup> of geographic entities proposed by Smith and Mark (1999) (see CABLITZ, 2008, p. 202). According to the authors (ibid.), the outlines of an “ideal” geographic entity are usually less perceptible as a whole than the boundaries of non-geographic entities like, for example, a car. One reason for this is that they

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<sup>50</sup> Smith and Mark (1999) in their work establish five key ontological properties that allow a distinction between geographic and subgeographic entities. These ontological properties are perceptual boundedness, size, location, type of boundary, and texture of boundary.

are often too big or too distant (e.g. mountain, forest, or ocean) to be perceived in their totality (see RYBKA, 2015, p. 312). If we think of ‘forest’, ‘ground’, ‘sky’, and the generic term ‘place’ with respect to its boundaries, these landforms do not have clear-cut limits, especially in the topographical context of Amazonia. By relating a Figure entity to such a Ground, the choice of a spatial postposition in Dâw is complicated due to the lack of readily perceptible boundaries. In contrast, in the case of non-geographic entities with clear perceptual boundaries, the system of spatial postpositions usually reflects a spatial arrangement of a Figure entity with respect to a specific part of the Ground like horizontal support (e.g. ‘The ball is on the chair’), attachment (e.g. ‘The stick is leaning on the chair’), non-contiguity (e.g. ‘The ball is under the chair’), and even projective relations (e.g. ‘The boy is in front of the chair’). The examples in parentheses show that the Figure is always related to a *part* of the Ground referent, here a non-geographic entity, with clear-cut boundaries. Hence, less clear-cut boundaries in the case of landscape terms could be a possible factor that conditions the use of the more generic locative marker.

Understanding especially the forest as a landform with no clear-cut boundaries holds interesting clues with respect to the question of if Dâw treats treed environments as containers, i.e. an entity that can be “entered” or “exited” (see BURENHULT et al., 2017). Burenhult et al. (ibid.), in their comparative work on forest terminology, show that some languages do treat the forest as an enclosed space by providing, for example, specific motion verbs showing the semantics of ‘enter a forest’ and ‘exit a forest’. This is not the case for Dâw, since speakers apply the basic motion verbs *rãm* ‘go’ and *něed* ‘come’ for entering and exiting the forest. This contrasts to the verbs *xâjâ* ‘enter’ and *rõd* ‘exit’ that are used for accessing and leaving enclosed spaces like houses or canoes. Furthermore, the term *xaay* also expresses the idea of ‘outside’ (572) according to the dense forest that is omnipresent in the Dâw ecosphere.

(572) *João dõo’ rõd dâw ãay xaay rid*  
 João CAUS exit person FEM forest LOC  
 ‘João made the woman go outside (of the house).’

Applying the idea of perceptual boundaries to the other landscape terms such as *tun* ‘island’, *mõor* ‘lake’, *wâk* ‘caatinga’, *waar* ‘capoeira’, *paa* ‘dry land’, *tãw* ‘path’, and *kaaw* ‘manioc garden’ shows increased perceptual boundedness. Lakes, islands, paths, and plantations (here especially manioc gardens) show spatial limits with respect to their adjacent landform. An island is therefore limited by water and paths by the forest, for example. One could argue that landscape terms referring to specific parts of the forest like *wâk* ‘caatinga’, *waar* ‘capoeira’, and *paa* ‘dry land’ do not have perceivable boundaries such as the forest. However, the

boundaries of these landforms are conditioned by specific types of vegetation, soil and tree heights creating thus boundaries that are perceivable for the Dâw people.

Finally, the discussion provided evidence for the existence of the *what/where*-distinction in Dâw. This type of nominal categorization has its grammatical locus in the expression of spatial relations and is ontologically motivated. I consider perceptual boundedness responsible for the Dâw split, suggesting that Dâw landscape terms are less bounded than *what*-nouns in Dâw. Bringing together ontological properties of *what*- and *where*-nouns and the morphosyntactic behavior of both indicates a correlation between boundedness and markedness: the less perceptually bounded a referent is, the less it is marked, and vice versa. Additionally, the *what/where* distinction marks nouns as prototypical Grounds or prototypical Figures in Dâw. The distinction provides evidence that landscape terms are ontologically different from first-order entities in Dâw.

## 9.2 Place names

In this subsection, I examine place names in Dâw by discussing their semantic and morphosyntactic properties in order to understand how Dâw formally constructs place names and how place names are semantically built for denoting a specific place.

The inventory of place names was collected during several journeys by canoe and hikes in the forest within the Dâw territory. Additionally, Dâw narratives discussing the past in the Middle Rio Negro region and the migration to the Curicuriari River are a fruitful source for place names. The examination of their formal and functional properties is based on Bohnemeyer's (2001) 'Toponym questionnaire' and Burenhult and Levinson's (2004) 'Landscape terms and place names elicitation guide'.

After having described their formal and functional properties, I address the compositional nature of place names and their semantics and finally discuss the question of 'What gets named in Dâw?' in order to see how place names in Dâw provide a resource for referring to inhabited spaces by naming them.

### 9.2.1 Formal and functional properties

Comparing place names and landscape terms from a morphosyntactic point of view, one would expect to find different behavior since place names are considered proper nouns whereas

landscape terms are common nouns. Bohnemeyer (2001, p. 56) suggests the following characteristics for a prototypical place name in order to differentiate them from common nouns:

- a) A place name is a proper name and not a common noun, i.e. it cannot occur with indefinite determination, quantifiers or numerals.
- b) The denotation of the place names involves a distinct and stable location.
- c) Place names can denote referential Grounds in answers to *Where*-questions.

Place names in Dâw show these characteristics, which contrast them with common nouns. Quantification on place names, for example, is not possible for semantic reasons in Dâw, such as in (573). One exception must be made with respect to some more generic place names denoting communities of different ethnic groups such as *woor nir xoot* ‘community of the Tukanoans’. Though these communities are also named, if a Dâw speaker wants to refer to several communities the more generic place name can be found quantified, such as in example (574).

(573) \**mūt waap*      *neb*  
 NMRL:3            inebo.creek

(574) *tiid*            *nĩ*      *reew*    *woor*                            *nir*            *xoot*  
 to.that.place    EXI    many   tukanoan.people    [be.located    place]  
 to.that.place    EXI    many   tukanoan.people    village  
 ‘Over there are many Tukanoan villages’

Determination is not obligatory for nouns in Dâw. Indefinite determination, expressed by the numeral ‘*mē*’ ‘one’ with place names in Dâw is not possible, as in (575). Nevertheless, definite determination on place names in Dâw is recurrent and found encoded through the demonstrative determiners *naa*’ ‘this’ (576), and *taa* ‘that’ (577). The combination of demonstrative determiners and place names corresponds to what scholars (see HIMMELMANN, 1996; ENFIELD, 2003) call *recognitional deixis*. As Enfield (2003, p. 111) puts it, this form of deixis establishes reference based on shared knowledge by interlocutors and can be encoded by specific morphological forms, such as demonstratives. Hence, by using demonstrative determiners referring to distance with place names, Dâw speakers presuppose the interlocutor’s knowledge of the distance to this place.

- (575) \**mẽ*            *liw'*            *paas*  
 NMRL:I            kariwa.creek    mountain
- (576) *têen*    *ãr*        *raan*    *nɨg-ũy'*        *naa'*            *bukar pêeg*  
 now    1SG    tell    2PL-DOM        DEM:prox        bukar.pêeg.creek  
 'Now, I will tell you about this Bukar Pêeg creek.'
- (577) *ãr*        *paar*    *taa*            *suaçu*  
 1SG        know    DEM:dist        suaçu.creek  
 'I know that Suaçu creek.'

Place names can act as Figures in their function as subjects, such as in (578). However, in this function they are less common because their prototypical function is to denote places rather than objects.

- (578) *tumbil*                            *xôod*            *rid*  
 tumbira.village            upriver            LOC  
 'The Tumbira village is (located) upriver.'

This built-in locative function makes place names more likely to act as Grounds in locative adjuncts. For that reason, I expect place names to follow the *where*-noun pattern with respect to morphological marking in locative adjuncts. That is, to be arguments of the locative marker *rid*, a restricted set of spatial postpositions, or to occur unmarked. Examples (579) and (580) show that place names in locative adjuncts in static spatial scenes can occur unmarked or with a specific spatial postposition, as landscape terms do.

- (579) *Location - place name (no marking)*  
*mẽenh*    *mẽ'*        *nũ*        *taa'*        *bug*        *lab*        *nõr*  
 1SG.POSS    mother    be.located    DEM:dist    over.there    Arabo.creek    mouth  
 'My mother lived there far at the mouth of the Arabo creek.'

- (580) *Location - place name (postpositional phrase)*  
*liw'*            *mũ'*            *id*        *top*  
 Kariwa.creek    in.liquid        1PL        house  
 'At the Kariwa creek was our house.'

Ground denoting adjuncts with place names in non-static spatial scenes (Goal- and Source oriented) can be marked by the locative marker, as in (581) and (584), or can occur unmarked, as in (582) and (583). Different from landscape terms, the possibility of occurring unmarked

is not restricted to specific place names, i.e. all place names can occur unmarked in their function as Ground denoting locative adjuncts both in static and non-static spatial scenes.

(581) Goal – place name (locative marker)

*id wʰʰd bʰʰb xôod rid tumbil rid*  
 1PL arrive tomorrow upriver LOC Tumbira.village LOC  
 ‘Tomorrow we will arrive upriver at the Tumbira community.’

(582) Goal – place name (no marking)

*têen id wʰʰd liw' nôr*  
 now 1PL arrive Kariwa creek mouth  
 ‘Now, we arrived at the mouth of the Kariwa creek.’

(583) Source – place name (no marking)

*id çem nêed dôo' Waruá*  
 1PL yesterday come AUX:source Waruá.village  
 ‘Yesterday we came from the Waruá village.’

(584) Source – place name (locative marker)

*Rosi yâa dôo' baal rid*  
 Rosi return AUX:source Manaus LOC  
 ‘Rosi returned from Manaus.’

This flexibility of marking is common for place names in Dâw, since in speakers’ grammaticality judgements the three types of marking turned out to be interchangeable when tested, as can be seen in (585) - (587). Nevertheless, there is a strong tendency for place names in Ground denoting adjuncts to occur unmarked, which is motivated by their function to inherently denote places.

(585) no marking

*têen id wʰʰd liw' nôr*  
 now 1PL arrive Kariwa.creek mouth  
 ‘Now, we arrived at the mouth of the Kariwa creek.’

(586) postpositional phrase

*têen id wããd liw' nõr mĩi'*  
 now 1PL arrive Kariwa.creek mouth in.liquid  
 'Now, we arrived at the mouth of the Kariwa creek.'

(587) locative marker

*têen id wããd liw' nõr rid*  
 now 1PL arrive Kariwa.creek mouth LOC  
 'Now, we arrived at the mouth of the Kariwa creek.'

In this subsection, I have demonstrated that place names are proper nouns differing from common nouns according to Bohnemeyer's (2001) criteria. They differ from landscape terms because of their inability to be quantified, pluralized, or to occur with indefinite determiners. Furthermore, place names denote *distinct* stable locations, whereas landscape terms can denote multiple locations. However, both place names and landscape terms frequently denote referential Grounds in answers to *Where*-questions. This grammatical locus and respective marking strategies suggests that place names are best analyzed as *where*-nouns.

### 9.2.2 Compositional and semantic notes on place names

Some place names are presented in o divided by the landform the named place belongs to. Like landscape terms, the inventory of place names in Dâw provides both mono-morphemic and complex forms, and again, some of them have transparent semantics whereas others are semantically unanalyzable.

Table 40- Place names in Dâw

Landform	Place name and structure	Location, explanation for name
river	<i>nâax pôog</i> water + be.very.big  compound: landscape term + attributive verb	Rio Negro
river	<i>wâan nâax</i> ? + river  compound: ? + landscape term	Curicuriari River
river	<i>daad</i> Verb: to paint  noun	Marié River
creek	<i>nâax taax</i>	Capivara creek

	water + tapir noun: animal species	
creek	<i>lol'</i> ? noun: unknown etymology	Yasi creek
creek	<i>bukaar pêeg</i> species? + be.big compound: plant species + attributive verb	Creek of the big tree
creek	<i>neb</i> Inebo noun: Nheengatú loan	Inebo creek
rapids	<i>kôog xusee</i> titi.monkey + rapids compound: animal species + landscape term	Rapids of the titi monkey
rapids	<i>tuwin xusee</i> Tuwin + rapids compound: place name + landscape term	Tuwin rapids
beach	<i>musum kwara</i> musum.fish + hole compound: both loans from Nheengatú	Hole of the musum fish = beach of the city of São Gabriel da Cachoeira
beach	<i>yalaa xeew</i> Jará.creek + beach compound: place name + landscape term	Beach of the Jará creek
mountain	<i>'liw paas</i> Karwia.creek + mountain compound: place name + landscape term	Kariwa mountains (Bela Adormecida)
mountain	<i>tumbil paas</i> Tumbira.village + mountain compound: place name + landscape term	Mountains of the Tumbira community
historical place in the forest	<i>been suk wôob</i> Bené + manioc.flour + be.on clause	(place) where Bene hid manioc meal
historical place in the forest	<i>dâw nūr pax xaa</i> [person head] clay sit clause	(place) where there are graves in the mud

historical place in the forest	<i>top xôoy dâr</i> house + burn + AGTV clause	(place) where the houses burned (old house site of one clan)
mythological place in the forest	<i>xaay tēen</i> forest + today?  compound: noun + temporal adverb	center of the forest
path	<i>sit belem t̃w̃w</i> Belem site + path  compound: place name + landscape term	Path leading to Sitio Belem
community	<i>neb</i> Inebo  noun: Nheengatú loan	Community of the Inebo river
comuninity	<i>waruá</i> mirror  noun -Nheengatú loan	Waruá community
town	<i>taaw</i> town  noun- Nheengatú lown <i>tawa</i> 'town'	São Gabriel da Cachoeira
town	<i>baal'</i> barra  noun - Portuguese loan; former name of Manaus was <i>barra</i> 'bay'	Manaus

Mono-morphemic place names frequently denote rivers, creeks and communities. Some of them do not provide transparent semantics, such as *lol'* 'Yasi creek', whereas others bear etymologic relations, such as the *daad* 'Marie river' that probably go back to the verb *daad* 'paint the body' making reference to the serpentine design of this river. Interestingly, Dâw presents a representative set of place names denoting rivers, creeks, and communities that are loans from contact languages such as Nheengatú, Portuguese, or Arawakan languages. The choice between a place name in Dâw and a loan word offers interesting insights into the interaction and engagement of the Dâw the people with these places, which I discuss in the subsequent section.

Place names with a complex structure in Dâw are frequently nominal compounds of the following structure: place name + landscape term. These place names overtly express the relationship between place names and landscape terms, showing that the two domains can be semantically associated. As Cablitz (2008, p. 223) puts it, landscape terms occurring in place

names (e.g. *liw' tun* 'Kariwa creek island') and the place name itself reference the same geographical entity. This compound structure applies for place names denoting mountains, rapids, paths, islands, and beaches, whereas place names referring to communities, rivers, and creeks do not involve a landscape terms.

In some cases, Dâw also combines nouns and verbs to form place names like *bukaar pêeg* 'Bukaar pêeg creek'. In this example, the place name refers to a specific tree functioning as a landmark to denote the creek passing next to it.

Finally, place names denoting mythological or historical localities in the forest are expressed in clauses summarizing an event that happened at this place. Place names in examples (588) and (589) resemble relative clauses with a null head nominal; however, a detailed syntactic description of such structures will not be attended to at this moment.

(588) *dâw nūr pax xaa*  
 [person head] clay sit  
 grave clay sit  
 '(Place where) the clay grave is.'

(589) *ben suk wôob*  
 Bené manioc.flour be.on  
 '(Place where) Bené hid manioc flour.'

This discussion has shown that place names are formed through similar word formation processes as landscape terms. I show that mono-morphemic place names usually denote waterbodies and communities. Complex place names, in contrast, denote places located at landforms different from waterbodies that are, nevertheless, related to rivers and creeks, which is seen in the components of these terms. This relation is central for understanding what gets named in Dâw which will be discussed in the subsequent section.

### 9.2.3 What gets named in Dâw?

As Basso (1988, p. 103) puts it, the function of place names is to serve as referential vehicles denoting objects in the world. Besides their functioning as mere referents, place names are considered the most highly charged linguistic symbols due to the inseparable connection between specific localities and associations of space, time, history, persons, or social activities (cf. *ibid.*). For the Dâw case, this engagement with certain places and consequently the associations tied to them is revealed in place naming patterns. Two facts are central to this,

namely: i) that place naming is predominantly based on rivers and creeks, and ii) that the distribution of place names and loan words is not random. In this subsection, I discuss these strategies in light of the question of ‘What gets named in Dâw?’.

To begin with, the list of place names in Dâw shows structurally complex place names formed through juxtaposition of a place name and a landscape term. The landscape term establishes reference to the landform of the place. What is intriguing is the semantics of the place name element within such a compound. o from the last section shows that place name elements of compounds predominantly refer to waterbodies. These can, when occurring as mono-morphemic place names, also denote a community or house site (*sítio*) usually located at the mouth of a river/creek<sup>51</sup>. Complex place names, however, denote places whose landforms are related to a certain waterbody. For example, consider the mono-morphemic place name *liw'* ‘Kariwa creek’ that, first of all, denotes a creek that is a tributary of the Curicuriari river. At the same time, it denotes an ancient house site where some of the elders were born and have died located close to this creek. When occurring in complex place names like *liw' tttttw* ‘Path leading to the Kariwa creek’, *liw' tun* ‘Kariwa island’ (island in the Curicuriari river close to the mouth of the Kariwa creek)<sup>52</sup> or *liw' paas* ‘Kariwa mountain’, the place name serves as a reference point for these places. In other words, waterbodies function as central landmarks in order to denote a place, since communities, mountains, and islands, among others, are named after creeks and rivers passing in the vicinity. This provides evidence that waterbodies are crucial for the identification of places in the Dâw territory and a central source for navigating between rivers.

The same pattern applies when the place name is borrowed from Nheengatú or Portuguese. However, there are interesting correlations between this choice and the occupation of the Dâw territory. Narratives and conversations with elders of the Dâw community that inhabited the interfluvial zones around the Curicuriari river provided evidence that places involving a loan from Nheengatú are not considered to be ‘original’ places of the Dâw people. Usually, these places are connected to piaçava extraction where they got involved into the extractivist debt-peonage system around the 1940s (MEIRA, 1996, p. 176). Consequently, names for these places were adapted from the Nheengatú place name used by

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<sup>51</sup> Dâw speakers also use these place names when referring to a place of piaçava or vine extraction in the past 60 years. Usually, the places where extractivist workers delivered the raw material (regional Portuguese *colocação*), were located or at Tukanoan communities or house sites usually along the Curicuriari river. The corresponding place name in Dâw derives from the closest tributary to these communities/sites.

<sup>52</sup> An interesting observation on place names denoting islands in Dâw is that these are also named after a tributary close to the location of the island in a bigger river. Hence, the place name *liw' tun* ‘Kariwa island’ does not refer to an island *in* the Karwia creek (usually smaller creeks in that region do not have islands) but to an island in the Curicuriari river close to the Kariwa tributary.

non-indigenous patrons and extractivist workers from different ethnic groups. Often forced to work at these places, the Dâw people mention that they do not see them as places where they lived but as places where they worked and spent a limited amount of time. Thus, Dâw place names consisting of loan words denote places that the Dâw were less engaged with, whereas more original places commonly receive names that are either unanalyzable with respect to the semantic source domain (ex. *ʔol* ‘Yasi creek’) or consist in animal or plant species (ex. *nâax taax* ‘capybara creek’).

This pattern suggests the conclusion that the domain of hydrological landscape is central for place naming in Dâw. I consider this high degree of lexicalization of names for waterbodies in place names an evidence that these function as referential points. Thinking about the question of ‘What gets named in Dâw?’, this discussion shows that the dense hydrological network of the Dâw territory builds the base for place naming, since certain localities will always be located, and consequently closely related to water courses. In other words, what gets named in Dâw are places around and along rivers that are central for livelihood and subsistence practices.

Furthermore, the split between Dâw place names and loans from contact languages for waterbodies suggests a ‘place typology’ with respect to the Dâw people’s engagement with these places. Basso’s quote from the beginning of this chapter describing the connection between specific localities and associations of space, time, history, persons, or social activities, nourishes this typology. In other words, places the Dâw people were originally and traditionally engaged with are named differently from places associated with non-indigenous occupation, labor, and violence. Mapping these terms into space provides information about spatial mobility and livelihood at certain places and, at the same time, it reveals speakers’ attitudes towards these places.

### 9.3 Summary

In this chapter I have described how the Dâw people linguistically map their environment through landscape terms and place names. The first part of this chapter addressed the question of landscape terms and their formal and functional properties. I have shown that landscape terms in Dâw can be mono-morphemic or complex. Complex landscape terms are semantically descriptive, which is seen through part-whole relationships or through combinations of nouns and attributive verbs among other patterns. Based on different linguistic marking in Ground denoting adjuncts, I argued for the presence of a noun classification system expressing the *what/where*-distinction. In other words, Dâw turns out to be a language that is sensitive in

terms of distinguishing object nouns from place nouns in locative adjuncts, visible in their distinct morphological marking.

The second part of this chapter focused on place naming patterns in Dâw. Similar to landscape terms, these can be mono-morphemic or complex. I have shown that the majority of complex place names, with exception of the ones formed through clauses, involve names of waterbodies in modifying function. This suggests that place naming in Dâw is based on the location of certain places with respect to waterbodies. This also provides evidence for a relationship between both place names and landscape terms, since landscape terms frequently occur in place names in order to describe the geographic entity where a defined place is located.

The split between Dâw place names and place names that are loan words from contact languages seems to be motivated by a division between indigenous and non-indigenous places respectively.

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## **10 Final remarks**

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## 10 Final remarks

The primary goal of this work was to provide a fine-grained description of language-specific resources and their underlying semantic patterns for the encoding of spatial notions in Dâw. Therefore, I provided an analysis of the main spatial domains proposed by Levinson (2004): Topological Relations, Motion, Deixis, Frames of Reference and their distribution in grammatical form classes. In order to better understand the interaction of these form classes in the clause, I also examined principal syntactic constructions (chapter 8). Here, I focused on locative interrogatives, Basic Locative Construction types, and locative adverbial clauses as representatives for complex structures in Dâw. Moreover, I examined the semantics of landscape terms and place names in Dâw and discussed their behavior when acting as Grounds. These observations add a further dimension to the description of the encoding of spatial notions in languages, since these can reveal how topographical notions and large-scale spatial scenes can be linguistically encoded.

One of the central resources was found in locative verbs for two main reasons. First, Dâw shows a rich set of posture and positional verbs describing static location. The interesting aspect of these is that their choice depends on semantic factors including Figure and Ground properties. For the encoding of semantic properties of the Figure, I demonstrated that properties like shape, canonical base, animacy, and bodily orientation are relevant for the choice of the locative verbs. Regarding Ground properties, Dâw locative verbs reflect differences in vertical and horizontal support indicating, thus, topological relations. This structure turned out to trigger an interaction with postpositions, since verbs like *wôob* ‘be on’ always required the postposition *wâ* ‘on’. Furthermore, some positional verbs show Ground conflation such as *ka* ‘lie in hammock’ or *wâap* ‘be in water’.

Likewise, Dâw presents a set of motion verbs divided into directional and inherent motion verbs. The former can conflate Motion and Path or even Motion + Path + Ground (ex. *dôob* ‘go towards river’) in a single verb root that, according to Talmy (2000), is typologically uncommon. Inherent motion verbs in Dâw provide Manner and Motion conflation. Both distribution of Manner in displacement-motion-verb-constructions and Path in inherent-motion-verb-constructions are carried out in complex predicates. One further interesting finding with respect to motion events is that Dâw displays two differing ways of encoding them. On one hand, intransitive constructions can conflate information about Motion, Path and Ground in the verb root, such as in the sentence *Mateus dôob* ‘Mateus goes downwards to the river’. On the other hand, there are pleonastic constructions with multiple

verb roots and additional Path encoding through locative adjuncts headed by very specific spatial postpositions, the locative marker, or spatial adverbs.

Information packing in complex predicates is a central feature of spatial language in Dâw. These constructions serve multiple functions, such as detailed descriptions of localization and bodily disposition, mainly in the case of the combination of posture and positional verbs. Likewise, complex predicates indicate the direction and/or Manner of motion as well as the codification of aspectual information. Complex predicates facilitate, therefore, grammaticalization by reanalyzing verb roots from the last slot of the complex predicate.

Nominal resources are the counterpart of the linguistic encoding of spatial information in Dâw. To begin with, Dâw provides a rich system of spatial postpositions that, in some cases, select their arguments with respect to inherent physical properties of the Ground. Additionally, I the generic locative marker *rid* syntactically functions as a postposition and semantically expresses the directional notions of Goal and Source and refers to generic location. Its semantics in a specific spatial scene is implied by the locative verb with which it co-occurs in the clause.

With respect to spatial deixis in Dâw, I have demonstrated a speaker-anchored two-way proximal-distal system expressed in demonstrative determiners and modifiers. However, demonstrative spatial adverbs correspond to a four-way distinction that is both speaker and addressee based. In discourse and conversations, these deictic resources are very frequent and establish constant anaphoric reference to preceding spatial information.

Nominal resources are central for understanding the encoding of Frame of Reference (FOR) information in Dâw that is expressed by the usage of distinct postpositions or spatial adverbs. A general criterion for the selection of a FOR in Dâw is, whether speakers refer to a large scale or small scale spatial scene. Whereas small scale (and tangible) spatial scenes are preferentially encoded through the deictic and the intrinsic FOR, the location of Figure referents in a large scale spatial scene such as a landscape is usually expressed through the absolute FOR. The choice between intrinsic and deictic FOR is motivated by the presence or absence of the Figure's canonical fronts. It is noteworthy that Dâw speakers do not seem to make use of the relative FOR, which is constantly substituted by the deictic FOR.

In chapter 8, I analyzed the interplay of verbal and nominal resources in distinct syntactic constructions that encode spatial notions. We saw that it is difficult to state a default Basic Locative Construction in Dâw, since their syntactic structure depends on the characteristics of the spatial scene that is described. Large scale spatial scenes are

preferentially encoded in verbless clause constructions while small scale spatial scenes are frequently encoded through locative verbal clauses. This distinction shows a general problem for the definition of a BLC in languages, since according to Levinon's (2004) definition, it only encompass the expression of tabletop spatial scenes. However, natural spatial discourse in Dâw provides a variety of spatial settings that are encoded in distinct syntactic constructions. For that reason, I propose a three-fold typology of possible BLCs in Dâw that correspond to distinct spatial scenes based on syntactic variation in discourse.

Also in chapter 8, I introduced locative adverbial clauses and their behavior in Dâw discourse. Especially in narratives, these turned out to be responsible for Tail-Head-Linkage (THL), reflecting a central characteristic of Dâw verbal art, i.e. pervasive repetition of spatial information. An intriguing fact is that THL in Dâw is restricted to locative adverbial clauses recapitulating the main events. It is interesting to think of adverbial clauses as expressing main events, since syntactically they are adjuncts but they pragmatically express main events: spatial information.

A further fundamental question of this investigation was the role of landscape terms and place names in spatial discourse and whether both differ in terms of their ontological features compared to tabletop objects. Therefore, I investigated their linguistic encoding when functioning as Grounds in static and non-static spatial scenes in comparison to Ground encoding of tabletop objects. Landscape terms and place names turned out to be possible arguments for the locative marker *rid* or can even occur unmarked when functioning as Grounds, while tabletop objects are not selectable arguments of *rid* and do not occur unmarked. This differential Ground encoding provides evidence for a noun classification system dividing nouns into *what*-nouns and *where*-nouns manifested in location, Source, and Goal directionality. According to Rybka (2015: p. 334), the membership in one of the classes underlie language internal structures and differ cross-linguistically. For Dâw, I have demonstrated that perceptual boundedness and size are the driving force to encode nouns as *where*-nouns, since geographic entities are usually less perceptible in their total than the boundaries of non-geographic entities. An extreme point on the continuum between clearly bounded – unbounded are the landscape terms *xaay* 'forest', *pox* 'sky', and *tuu* 'ground', whose limits can hardly be perceived in the Amazonian topographical context. In consequence, these terms usually occur unmarked in their function as Grounds. The existence of a *what/where*-distinction in Dâw has also shown that *where*-nouns represent prototypical Grounds for the fact of inherently denoting places rather than objects. When *where*-nouns act as Figures, the Figure-Ground relation is expressed through locative non-verbal clauses juxtaposing Figure and Ground NPs – another distinctive criterion with respect to the syntactic behavior of *what*-

nouns and *where*-nouns. In natural speech situations during navigation in the Dâw territory these clauses are recurrent, reflecting culture-specific preferences that, due to their frequency, may have influenced this split and, consequently, the grammatical structures (see EVANS, 2003; ENFIELD, 2002).

Another central observation with respect to the semantics of place names is that many of are based on the names for rivers, i.e. a community or a mountain, for example, is usually named after a river/creek that passes through the vicinity. This naming strategy provides evidence for structuring landscape with respect to the dense network of rivers and creeks in the area the Dâw people inhabit. In that sense, place naming strategies show a strong reference to watercourses providing evidence for particular economic, social, political, cosmological and ancestral importance of waterways. Pissolati and Obert (in prep.) note for the Dâw and Nadëb people that spatial mobility is consequently based on the hydrographic network, including major rivers and creeks in the interfluvial zones. This observation gains relevance due to the fact that the Naduhupan groups were traditionally referred to with the term ‘forest people’ in contrast to neighboring ‘river people’.

The semantic encoding of the topographical water-feature also surfaces in other parts of speech such as verbs and postpositions. Locative verbs in Dâw provide Ground conflation represented by water in several cases, such as in *wâap* ‘be in water’ or *pee* ‘move upriver’. The same could be observed for the spatial postposition *mĩ* that restricts its arguments to nouns with the semantics related to waterbodies. This specific role of waterbodies in the lexicon provides evidence for their cultural and environmental relevance for Dâw speakers.

With these main results in mind, it seems necessary to provide an answer to the overarching question *How does a Dâw speaker talk about space?* The distinction between large scale and small scale spatial scenes is crucial for the syntactic means that are employed to talk about space in Dâw. Large scale and small scale scenes can be situated at opposing sides of a cline and decomposed into a number of semantic parameters as shown below:

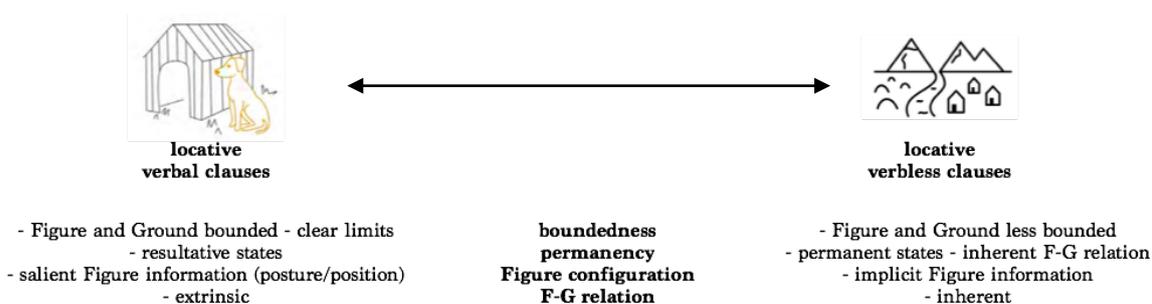


Figure 14- Characteristics of large scale and small scale spatial scenes

That is, the utterance provided will differ with respect to tangible tabletop spatial scenes and intangible large scale spatial scenes. These two types of spatial scenes underlie distinctive conceptual characteristics such as boundedness of Figure and Ground referents; degree of permanency of a Figure at a certain Ground; the Figure configuration; and, finally, the type of Figure-Ground relation. This split motivates the use of different syntactic constructions. These contrast locative verbal clauses establishing detailed Figure and Ground information in locative verbs, Ground-denoting adjuncts and locative verbless clauses that merely express Figure-Ground inherency without overtly expressing further information (shape, F-G configuration etc.).

These observations contribute to the understanding of the linguistic encoding of spatial information in an endangered Amazonian language. In Dâw, semantic differences related to the conceptualization of space motivate the choice of distinct lexical, morphological, and syntactical encoding strategies that language descriptions usually do not address in detail. Furthermore, this work has shown the importance of the analysis of speech data collected *in space* that provided examples of large scale spatial settings and how Dâw speakers talk about them. Moreover, it adds a further dimension on spatial reference since in this way one can verify the selection of spatial anchors that are commonly shared among a speech community (see river-based orientation system). Spatial language in its spontaneous use also provides fascinating insights into the community's engagement with the inhabited space, corresponding to Ingold's (2000, p. 192-193) claim about landscape that itself has no boundaries but that boundaries appear in relation to the interaction of people with a specific part of landscapes. For the Dâw case, we have seen that these boundaries indeed correspond to specific activities carried out at certain places and, in turn, are linguistically established as well.

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## **Elicitation Stimuli**

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## Annex A

### Sample Text

Obert, K.; Marques, M.; Sousa, P.; Castro, M.; Castro, N. Waa Dâr Tũũw. **Revista Linguística**. v. 15, n. 1, p. 50 - 87, 2019.

#### WAA DÂR Tũũw

‘O caminho dos antigos’

‘The path of the ancestors’

- (1) *tiid bax mār tiid wĩiç rid*  
*tiid bax mār tiid wĩiç rid*  
 to.that.place emerge RPT to.that.place wĩiç.creek LOC  
 ‘Para lá eles surgiram, para lá no igarapé Wĩiç.’  
 ‘They emerged there at the Wĩiç river.’
- (2) *wĩiç rid dâw bax mār tiid*  
*wĩiç rid dâw bax mār tiid*  
 wĩiç.creek LOC dâw.people emerge RPT to.that.place  
 ‘No igarapé Wĩiç os Dâw surgiram.’  
 ‘At the Wĩiç river they emerged.’
- (3) *'yãm x̃t' weed mār dâw-ũũy'*  
*'yãm x̃t' weed mār dâw-ũũy'*  
 jaguar eat RPT dâw.people-DOM  
 ‘A onça comia os Dâw.’  
 ‘Jaguars were eating the Dâw.’
- (4) *reew!*  
*reew*  
 a.lot  
 ‘Muito!’  
 ‘A lot!’
- (5) *nadâb sun mē wên mĩ*  
*nadâb sun mē wên mĩ*  
 Nadëb.people COL other weni.creek In.liquid  
 ‘Os Nadëb estavam no outro igarapé Weni.’  
 ‘The Nadëb people were at another river, at the Weni river.’
- (6) *diid bax koor dâwâ'*  
*diid bax koor dâw-â' primêel*  
 there:ITG emerge do.before dâw.people-FOC first  
 ‘Primeiramente, os Dâw surgiram lá longe.’  
 ‘At first the dâw people emerged there very far away.’

- (7) *primēel dâw bax koor tiid wēen rid*  
*primēel dâw bax koor tiid wēen rid*  
 first dâw.people emerge do.before to.that.place weni.creek LOC  
 ‘Primeiramente os Dâw surgiram para lá no rio Weni.’  
 ‘At first the dâw people emerged at the Weni river.’
- (8) *wĩç rid*  
*wĩç rid*  
 wĩç.creek LOC  
 ‘No (igarapé) Wĩç.’  
 ‘At the Wĩç (river).’
- (9) *diid 'yãm x# weed mār reew*  
*diid 'yãm x# weed mār reew*  
 there:ITG jaguar eat RPT a.lot  
 ‘Lá longe, dizem que a onça comia muito (os Dâw).’  
 ‘There far away it is said that the jaguar ate (the Dâw people) a lot.’
- (10) *reew t#m 'ee sun*  
*reew t#m 'ee sun*  
 a.lot eye narrow COL  
 ‘Os Yanomami (olho estreito) eram muitos.’  
 ‘There were many Yanomami (narrow eyes).’
- (11) *t#m 'ee sun reew nĩkêd.*  
*t#m 'ee sun reew nĩkêd*  
 Yanomami.people COL a.lot formerly  
 ‘Os Yanomami (olho estreito) eram muitos antigamente.’  
 ‘The yanomami people (narrow eye) were a lot formerly.’
- (12) *tâaw mãy mār agâ'*  
*tâaw mãy mār agâ'*  
 be.mad be.intensive RPT EMPH.DEM  
 ‘Dizem que esse aí é bravo mesmo.’  
 ‘They say that that one is really mad.’
- (13) *nadâb sun weed dũ' dâw-tũy'*  
*nadâb sun weed dũ' dâw-tũy'*  
 Nadëb.people COL eat also Dâw.people-DOM  
 ‘Os Nadëb também comiam os Dâw.’  
 ‘The Nadëb people ate the Dâw people as well.’
- (14) *reew weed rid tii*  
*reew weed rid tii*  
 a.lot eat 3PL AFFIRM.PRTCL  
 ‘Eles comiam muito (os Dâw) mesmo.’  
 ‘They really ate (the Dâw) a lot.’

- (15) *reew diid rid weed mār*  
*reew diid rid weed mār*  
a.lot there:ITG 3PL eat RPT  
‘Lá longe eles (os Nadëb) comiam muito.’  
‘There far away, they (the Nadëb people) ate a lot.’
- (16) *rân dâr*  
*rân dâr*  
ancestor PLZ  
‘Os antepassados.’  
‘The ancestors.’
- (17) *reew māay mār weed diid tii yēm ta'*  
*reew māay mār weed diid tii yēm ta'*  
a.lot be.intensive RPT eat there:ITG AFFIRM.PRTCL world entire  
‘Eles comiam muito lá mesmo, em todo lugar.’  
‘There they really ate a lot, everywhere.’
- (18) *abɥg rid çeeb pee tiid mār*  
*a-bɥg rid çeeb pee tiid mār*  
ANAF-there 3PL change.place go.upriver to.that.place RPT  
‘Alí, dizem que eles se mudaram para lá rio acima.’  
‘There, it is said, they moved upriver.’
- (19) *ray mĩ daad mĩ*  
*ray mĩ daad mĩ*  
watchmacallit in.liquid Marié.river in.liquid  
‘Dentro daquele, dentro do rio Marié.’  
‘In that, in that Marié river.’
- (20) *daad mĩ rid çeeb pee mār*  
*daad mĩ rid çeeb pee mār*  
Marié.river in.liquid 3PL change.place go.upriver RPT  
‘Dizem que foi no rio Marié que eles se mudaram subindo.’  
‘It is said, that they moved upriver in the Marié river.’
- (21) *dâw sâg wɥɥd abɥg rid daad pee*  
*dâw sâg wɥɥd abɥg rid daad pee*  
dâw.people rest arrive DISC.CONJ 3PL Marié.river go.upriver  
‘Os Dâw que restaram chegaram e aí subiram o rio Marié.’  
‘The remaining Dâw arrived and then they went up the Marié river.’
- (22) *abɥg rid wây' nũux xoo*  
*abɥg rid wây' nũux xoo*  
DISC.CONJ 3PL see curupira canoe  
‘Aí eles viram canoa de curupira.’  
‘Then they saw the canoe of the curupira.’

- (23) *abʉg rid kasām rũ'*  
*abʉg rid kasām rũ'*  
 DISC.CONJ 3PL die UNIV.QUANT  
 'Aí eles morreram todos.'  
 'Then everybody died.'
- (24) *kasām rũ'*  
*kasām rũ'*  
 die UNIV.QUANT  
 'Morreram todos.'  
 'Everybody died.'
- (25) *xoo wanhũ' ka' nũux tii dâw ãã buy sʉr uy dũ'*  
*xoo wanhũ' ka' nũux tii dâw ãã*  
 canoe seem lie.in.hammock curupira AFFIRM.PRTCL person FEM  
*buy sʉr uy dũ'*  
 be.first.time menstruate because also  
 'O curupira parecia canoa (deitada no rio) porque mulher estava menstruada pela primeira vez.'  
 'The curupira appeared like a canoe (lying in the river) because a woman was menstruating for the first time.'
- (26) *dâw çeeb pee nēed*  
*dâw çeeb pee nēed*  
 dâw.people change.place go.upriver come  
 'Os Dâw vieram se mudando subindo o rio.'  
 'The Dâw came, moving upriver.'
- (27) *abʉg rid wʉʉd niid, waa dâr*  
*abʉg rid wʉʉd niid waa dâr*  
 DISC.CONJ 3PL arrive to.this.place old.person PLZ  
 'Aí, eles chegarem aqui (comundiade Waruâ), os antepassados.'  
 'Then they arrived here (Waruá community), the ancestors.'
- (28) *wʉʉd rũ'*  
*wʉʉd rũ'*  
 arrive UNIV.QUANT  
 'Chegaram todos.'  
 'Everybody arrived.'
- (29) *wʉʉd rũ' axooç sunu'*  
*wʉʉd rũ' axooç sun-u'*  
 arrive UNIV.QUANT 3PL.ANAPH COL-FOC  
 'Todos eles chegaram.'  
 'All of them arrived.'

- (30) *reew m̃ay m̃r ñkêd dâwâ'*  
*reew m̃ay m̃r ñkêd dâw-â'*  
 a.lot be.intensive RPT formerly Dâw.people-FOC  
 'Antigamente os Dâw eram muitos.'  
 'Formerly the Dâw people were a lot.'
- (31) *dâw tamêr w̃w̃d*  
*dâw tam-êr w̃w̃d*  
 Dâw.people fear-NEG very  
 'Os Dâw eram bem corajosos.'  
 'The Dâw people were very brave.'
- (32) *dâw wuk m̃r*  
*dâw wuk m̃r*  
 Dâw.people small.group RPT  
 'Dizem que era um grupo pequeno de Dâw (que era corajoso).'  
 'It said, that it was a small group of Dâw (that were brave).'
- (33) *âr waa âay x̃x̃n wâa ran p̃n'*  
*âr waa âay x̃x̃n wâa ran p̃n'*  
 1SG old.person FEM chat listen tell.story IPFV  
 'Eu sempre escutava as velhas contarem histórias.'  
 'I always listened the old women telling stories.'
- (34) *ñkêd*  
*ñkêd*  
 formerly  
 'Antigamente.'  
 'Formerly.'
- (35) *reew m̃r dâw ñkêd*  
*reew m̃r dâw ñkêd*  
 be.alot RPT Dâw.people formerly  
 'Antigamente os Dâw eram muitos.'  
 'In the old times, there were many Dâw people.'
- (36) *nã' ked m̃r dâw çeeb pee nã' ked*  
*nã' ked m̃r dâw çeeb pee nã' ked*  
 DEM.prox in RPT dâw.people change.place go.upriver DEM.prox in  
 'Os Dâw se mudaram subindo dentro desse (rio), dentro desse (rio).'  
 'The Dâw came up this (river), up this (river).'

- (37) *abʉg dâw rãm mõ'*  
*a-bʉg dâw rãm mõ'*  
 ANAPH-there Dâw.people go far.away  
 'Alí, os Dâw foram para muito longe.'  
 'There, the Dâw people went far away.'
- (38) *tũmbil nĩ dũ' mār dâw top xâw*  
*tũmbil nĩ dũ' mār dâw top xâw*  
 Tumbira EXI also RPT Dâw.people house old.site  
 'No Tumbira eles também tem antigos lugares de casas.'  
 'In Tumbira there are also old house places/grounds.'
- (39) *tên woor nĩ bʉg*  
*tên woor nĩ bʉg*  
 today Tukano.people EXI there  
 'Lá tem Tukano agora.'  
 'Today there are Tukano people there.'
- (40) *reew mãy mār bʉg ridi'*  
*reew mãy mār bʉg ridi'*  
 a.lot be.intensive RPT there 3PL-FOC  
 'Eles são muitos mesmo lá.'  
 'There a really many of them.'
- (41) *bee 'waap*  
*bee 'waap*  
 tree such.as  
 '(São muitos) igual árvores.'  
 '(They are many) like trees.'
- (42) *dâw mēr sār wʉʉd dâw-ũũy' nĩkêd*  
*dâw mēr sār wʉʉd dâw-ũũy' nĩkêd*  
 Dâw.people NEG.EXI think FRUST Dâw.people-DOM formerly  
 'Pensaram que os Dâw não eram muitos antigamente.'  
 'They thought that the Dâw people were not a lot in the old times.'
- (43) *waa dârũũy'*  
*waa dâr-ũũy'*  
 old.person PLZ-DOM  
 'Os antepassados pensavam isso.'  
 'The ancestors pensaram isso.'

- (44) *abʉg 'yãm xʉ' ridʉʉy kâs dâr*  
*a-bʉg 'yãm xʉ' rid-ʉʉy' kâs dâr*  
 ANAPH-there jaguar 3PL-DOM bite PCTL  
 ‘Alí a onça mordeu eles.’  
 ‘There the jaguar ate them.’
- (45) *kâs mãay 'yãm xʉ' dâwʉʉy' n̄kêd*  
*kâs mãay 'yãm xʉ' dâw-ʉʉy' n̄k-ked*  
 bite be.intensive jaguar povo.dâw-MDO antigo-dentro  
 ‘A onça mordia os Dâw muito antigamente.’  
 ‘The jaguar bit the Dâw people a lot in old times.’
- (46) *kas waap n̄i dâwêjê n̄iked waa dârêj*  
*kas waap n̄i dâw-êj-ê' n̄iked waa dâr-êj*  
 thing TOT have dâw-BEN-FOC formerly old.person PLZ-POSS  
 ‘Os Dâw de antigamente tinham tudo para eles.’  
 ‘In the old times the Dâw had everything for themselves.’
- (47) *reew mãay kas pay rêd kasãm dâw*  
*reew mãay kas pay rêd kasãm dâw*  
 a.lot be.intensive thing REL INTS die Dâw.people  
 ‘Os dâw que morreram por causa de muitas coisas.’  
 ‘The Dâw people who died because of many things.’
- (48) *reew pay kasãm dâwâ'*  
*reew pay kasãm dâw-â'*  
 a.lot REL die Dâw.people -FOC  
 ‘Muitos dâw que morreram.’  
 ‘Many Dâw that died.’
- (49) *abʉg dâw çeeb pee nã' ked mâr wâan nâax mĩ'*  
*abʉg dâw çeeb pee nã' ked*  
 DISC.CONJ Dâw.people change.place go.upriver DEM.prox in  
  
*mâr wâan nâax mĩ'*  
 RPT Curicuriari.river in.liquid  
 ‘Aí, dizem que os Dâw vinham se mudando (subindo) dentro desse, dentro do rio Curicuriari.’  
 ‘Then, it is said, that the Dâw people came up the Curicuriari river.’
- (50) *abʉg dâw bâyâa tũbiil rid*  
*abʉg dâw bâyâa tũbiil rid*  
 DISC.CONJ dâw.people return Tumbira LOC  
 ‘Aí os Dâw chegaram até na comunidade Tumbira.’  
 ‘Then, the Dâw people arrived at the community of Tumbira.’

- (51) *rõt*  
*rõt*  
 far.away  
 ‘Longe!’  
 ‘Far away!’
- (52) *abɥg rid top xâw' dâr-ɥɥd*  
*a-bɥg rid top xâw' dâr-ɥɥd*  
 ANAPH-alí 3PL house old.site PLZ-REST  
 ‘Alí ficam somente os seus antigos lugares de casa.’  
 ‘There are only old house places/grounds over there.’
- (53) *abɥg dâw tuuk yêt xâd mâr bood*  
*a-bɥg dâw tuuk yêt xâd mâr bood*  
 ANAPH-alí Dâw.people turn lie DUR RPT oven  
 ‘Alí, dizem que os Dâw deixaram o forno virado no chão.’  
 ‘There, they say the Dâw people left the oven upside down.’
- (54) *bood dâw tuuk yêt xâd mâr*  
*bood dâw tuuk yêt xâd mâr*  
 oven Dâw.people turn lie DUR RPT  
 ‘Dizem que os Dâw deixaram (o forno) virado.’  
 ‘It is said that the Dâw people left (the oven) upside down.’
- (55) *tuuk yêt xâd mâr tɥm 'ee rid-ɥɥy' waan uy mâr*  
*tuuk yêt xâd mâr tɥm 'ee rid-ɥɥy' waan uy mâr*  
 turn lie DUR RPT eye narrow 3PL-DOM follow because RPT  
 ‘Eles deixaram o forno virado porque dizem que os Yanomami (olho estreito) foram atrás deles.’  
 ‘They left the oven upside down because it is said, that the Yanomami people were following them.’
- (56) *nadâb sun*  
*nadâb sun*  
 Nadëb.people COLET  
 ‘Os Nadëb.’  
 ‘The Nadëb people.’
- (57) *weed mǎayêe' mâr rid*  
*weed mǎay-êe' mâr rid*  
 eat be.intensive-PST RPT 3PL  
 ‘Eles (os Nadëb) comiam muito.’  
 ‘They (Nadëb people) ate a lot.’

- (58) *ĩn mâa rēd ymm dâw tii*  
*ĩn mâa rēd ymm dâw tii*  
 cará wild.cará INTS survive Dâw.people AFFIRM.PRTCL  
 ‘Os Dâw sobreviveram com cará e cará do mato.’  
 ‘The Dâw people survived with yam and wild yam.’
- (59) *'nũ 'yô' pñn' ray nēg rēd mār*  
*'nũ 'yô' pñn' ray nēg rēd mār*  
 ? wet.food IPFV INTJ fat INTS RPT  
 ‘Dizem que (eles) molhavam (o cará) com gordura de caça.’  
 ‘They say that they soaked (the yam) with game grease.’
- (60) *mēr suuk nĩ ridēj mēr kaaw nĩ*  
*mēr suuk nĩ rid-ēj mēr kaaw nĩ*  
 NEG.EXI manioc.flour not.even 3PL-BEN NEG.EXI manioc.garden not.even  
 ‘Eles (os Dâw) não tinham nem farinha nem roça para eles.’  
 ‘They (the Dâw people) did not have neither mandioc flour nor a plantation for them.’
- (61) *mēr rũ'*  
*mēr rũ'*  
 NEG.EXI UNIV.QUANT  
 ‘Não tinha nada.’  
 ‘There was nothing.’
- (62) *kas waap mēr ridējē*  
*kas waap mēr rid-ēj-ē*  
 thing TOT NEG.EXI 3PL-BEN-FOC  
 ‘Eles não tinham nada para eles.’  
 ‘They had nothing.’
- (63) *rid kâr xôo rid kâr xôo*  
*rid kâr xôo rid kâr xôo*  
 3PL suffer circulate 3PL suffer circulate  
 ‘Eles andavam sofrendo, andavam sofrendo.’
- (64) *kâr xôo waa dâr*  
*kâr xôo waa dâr*  
 suffer circulate old.person PLZ  
 ‘Os antepassados andavam sofrendo (com fome).’  
 ‘They ancestors walked around suffering.’
- (65) *mēr kas waap*  
*mēr kas waap*  
 NEG.EXI thing TOT  
 ‘Não tinha nada.’  
 ‘There was nothing.’

- (66) *abʉg rid kooy mār mâ rēd*  
*abʉg rid kooy mār mâ rēd*  
 DISC.CONJ 3PL munch RPT wild.cará INTS  
 ‘Aí eles comiam (a comida) com cará.’  
 ‘They ate their food with cará.’
- (67) *wāay aa xub māay mār dāw-â*  
*wāay ‘aa’ xub māay mār dāw-â*  
 talk ANAPH be.hungry be.intensive RPT Dâw.people-FOC  
 ‘É verdade, os Dâw passavam muita fome.’  
 ‘It’s true, the Dâw were suffering hunger.’
- (68) *abʉg rid çâk mār woor yak*  
*abʉg rid çâk mār woor yak*  
 DISC.CONJ 3PL steal RPT Tukano.people manioc  
 ‘Aí, eles roubavam a mandioca dos Tukano.’  
 ‘So they stole the manioc of the Tukano people.’
- (69) *çâk rû’ yêd*  
*çâk rû’ yêd*  
 steal UNIV.QUANT INTS  
 ‘Roubaram tudo.’  
 ‘They stole everything.’
- (70) *abʉg woor rid-ũũy’ yût rû’ yêd mār*  
*abʉg woor rid-ũũy’ yût rû’ yêd mār*  
 DISC.CONJ Tukano.people 3PL-DOM kill UNIV.QUANT INTS RPT  
 ‘Aí dizem que os Tukano mataram todos (os Dâw).’  
 ‘Then, it is said, that the Tukano people killed them (the Dâw people) all.’
- (71) *abʉg rid xup moog ka’ xâd*  
*abʉg rid xup moog ka’ xâd*  
 DISC.CONJ 3PL REFL be.together.in.hammock lie.in.hammock DUR  
 ‘Aí eles morriam todos juntos na rede.’  
 ‘Then died together in a hammock.’
- (72) *reew māay agâ’ aa reew-ẽy*  
*reew māay agâ’ ‘aa’ reew-ẽy*  
 a.lot be.intensive EMPH.DEM ANAPH muito-?  
 ‘Estes (que morreram) eram muitos, aqueles eram muitos mesmo.’  
 ‘The ones (who died) were many, they were many.’
- (73) *reew māay apay*  
*reew māay a-pay*  
 a.lot be.intensive ANAPH-coisa  
 ‘Essas coisas aconteciam muito.’  
 ‘These things used to happen all the time.’

- (74) *râa' sun dâwũũy' yũtër*  
*râa'* *sun* *dâw-ũũy'* *yũt-ër*  
 hupd'äh.people COL Dâw.people-DOM kill-NEG  
 'Os Hupd'äh não matavam os Dâw.'  
 'The Hupd'äh didn't kill the Dâw.'
- (76) *dâw maam dũ'*  
*dâw* *maam* *dũ'*  
 Dâw.people relative also  
 'São parentes dos Dâw também.'  
 'They are relatives of the Dâw as well.'
- (77) *dâw reew kasãm pũn'*  
*dâw* *reew* *kasãm* *pũn'*  
 Dâw.people a.lot die IPFV  
 'Muitas pessoas morriam.'  
 'Many people were dying.'
- (78) *rõt mãay rãm pũn' mâr rid ãam tâag yar rid nĩr xoot rid mâr*  
*rõt* *mãay* *rãm* *pũn'* *mâr* *rid* *ãam* *tâag*  
 far be.intensive go IPFV RPT 3PL girlfriend be.used.to  
  
*yar* *rid* *nũ'* *mãy* *nĩr* *xoot* *rid* *mâr*  
 go.look.for 3PL other reside place 3PL RPT  
 'Eles costumavam ir muito longe para outras aldeias em busca de namoradas.'  
 'They used to go far away to other communities looking for women.'
- (79) *abũg 'yãm xũ' ridũũy' kãs pũn mâr*  
*a-bũg* *'yãm xũ'* *rid-ũũy'* *kãs* *pũn* *mâr*  
 ANAPH-there jaguar 3PL-DOM bite IPFV RPT  
 'Nesse lugar, a onça mordida eles.'  
 'At that place the jaguar bite them.'
- (80) *rõt nũ dâwâ dâw tẽr nũẽr rõt*  
*rõt* *nũ* *dâw-â* *dâw* *tẽr* *nũ-ẽr* *rõt*  
 far reside Dâw.people-FOC Dâw.people close EXI-NEG far  
 'Os Dâw moravam muito longe, perto eles não moravam.'  
 'The Dâw people lived far away, they did never live close.'
- (81) *rõt mãay agã'*  
*rõt* *mãay* *agã'*  
 far be.intensive EMPH.DEM  
 'Isso era longe mesmo.'  
 'This was really far away.'

- (82) *'yãm xɨ' teeĩũy' yũt yêd koor mār*  
*'yãm xɨ' tee-ĩũy' yũt yêd koor mār*  
 jaguar son-DOM kill INTS do.first RPT  
 '(Os Dâw) Mataram primeiro o filhote da onça.'  
 'At first, (the Dâw) killed the offspring of the jaguar.'
- (83) *abɨg rid dōo xaa ray ked mār*  
*abɨg rid dōo xaa ray ked mār*  
 DISC.CONJ 3PL CAUS stand.Nhum watchmacallit in RPT  
 'Aí, dizem que eles colocaram (o filhote da onça) em pé no caminho.'  
 'They say that they left (the offspring of the jaguar) standing (on a stick) on the path.'
- (84) *'aa' rid xaa yaa'*  
*'aa' rid xaa yaa'*  
 ANAPH 3PL cook roast  
 'Eles o (filhote da onça) cozinham.'  
 'They cooked it (the offspring of the jaguar).'
- (85) *bok mãy agâ*  
*bok mãy agâ*  
 pan not.be EMPH.DEM  
 'Aquilo não era panela.'  
 'That one wasn't a pot.'
- (86) *bu' baak*  
*bu' baak*  
 termite mound  
 'Casa de cupim.'  
 'Termite mound.'
- (87) *bu' baak rid xaa mār*  
*bu' baak rid xaa mār*  
 termite mound 3PL cook RPT  
 'Em casa de cupim eles cozinham.'  
 'They cooked in a termite's mound.'
- (88) *abɨg aa xaaw mār*  
*abɨg 'aa' xaaw mār*  
 DISC.CONJ ANAPH cook RPT  
 'Aí esse (casa de cupim) ferveu.'  
 'Then this (termite's mound) boiled.'
- (89) *xaawẽr nōr*  
*xaaw-ẽr nōr*  
 cook-NEG mouth  
 'Na verdade não estava fervendo.'  
 'In fact it wasn't boiling.'

- (90) *abɨg tir weed rũ' yêd tir yɨɨmêd*  
*abɨg tir weed rũ' yêd tir yɨɨm-êd*  
 DISC.CONJ 3SG eat UNIV.QUANT INTS 3SG raw-?  
 ‘Aí ele comeu tudo cru mesmo.’  
 ‘Then he ate everything raw.’
- (91) *dâw yar 'yãm xɨ' teeɨɨy' yũt yêd tii*  
*dâw yar 'yãm xɨ' tee-ɨɨy' yũt yêd tii*  
 Dâw.people go.look.for jaguar son-DOM kill INTS AFFIRM.PRTCL  
 ‘O homem dâw matou o filho da onça.’  
 ‘The Dâw (man) killed the offspring of the jaguar.’
- (92) *tir waan sê' aa*  
*tir waan sê' 'aa'*  
 3SG follow.animal.trace because.of ANAPH  
 ‘Por isso ele correu atrás desse (filhote da onça).’  
 ‘That is why he chased it (the offspring of the jaguar).’
- (93) *abɨg tir ãa dâw top waar bɨɨt mār*  
*abɨg tir ãa dâw top waar bɨɨt mār*  
 DISC.CONJ 3SG sleep Dâw.people house old under RPT  
 ‘Aí dizem que ele (o homem que matou o filhote da onça) dormiu na casa antiga dos Dâw.’  
 ‘Then, it is said, that he (the man who killed the offspring of the jaguar) slept in the ancient house of the Dâw people.’
- (94) *dâw top waar bɨɨt dâw ãa mār*  
*dâw top waar bɨɨt dâw ãa mār*  
 Dâw.people house old under Dâw.people sleep RPT  
 ‘Na casa velha dos Dâw, o homem dâw durmiu.’  
 ‘The man slept in the ancient house of the Dâw people.’
- (95) *top waar bɨɨt rid ãa mār*  
*top waar bɨɨt rid ãa mār*  
 house old under 3PL sleep RPT  
 ‘Eles dormiam na casa antiga.’  
 ‘They slept in the ancient house.’
- (96) *dâw*  
*dâw*  
 Dâw.people  
 ‘O povo dâw.’  
 ‘The Dâw people.’

- (97) *abʉg rid ãa pox mār*  
*abʉg rid ãa pox mār*  
 DISC.CONJ 3PL sleep up RPT  
 ‘Aí eles dormiam no alto.’  
 ‘They slept high up.’
- (98) *rũm tâag rēd*  
*rũm tâag rēd*  
 avocado trunk at  
 ‘No pé de abacate.’  
 ‘In the avocado tree.’
- (99) *rõt mãay tôr wʉʉd dâr rãm aa ãp mār*  
*rõt mãay tôr wʉʉd dâr rãm ‘aa’ ãp mār*  
 far be.intensive sound.of.spirit arrive PCTL go ANAPH ? RPT  
 ‘De muito longe vem falando o espirito.’  
 ‘From far away the spirit came talking.’
- (100) *‘yãm xʉ’ mē’ tʉʉm taa ox yâa ‘yãm xʉ’ sun tii tir ãam diid*  
*‘yãm xʉ’ mē’ tʉʉm taa ox yâa*  
 jaguar NMRL:1 NMRL:2 in.front.of run return  
  
*‘yãm xʉ’ sun tii tir ãam diid*  
 jaguar COL AFFIRM.PRTCL 3SG wife with  
 ‘A onça veio correndo de lado a lado junto com sua esposa.’  
 ‘The jaguar came running together with it’s wife.’
- (101) *ox yeey yâa pôg*  
*ox yeey yâa pôg*  
 run shake.body return be.big  
 ‘Eles vinham correndo (com corpo) balançando. (O corpo deles era) bem grande.’  
 ‘They came running (with their bodies) shaking. (Their bodies) were huge.’
- (102) *çêem rey tâ’*  
*çêem rey tâ’*  
 night take.time during  
 ‘A noite toda.’  
 ‘The whole night.’
- (103) *apaay agâ’ nʉkêd dâw çeeb xôo pʉn’*  
*a-paay agâ’ nʉkêd dâw çeeb xôo pʉn’*  
 ANAPH-like.that EMPH.DEM formerly Dâw change.place circular IPFV  
 ‘Era assim antigamente, os Dâw se mudaram de um lugar para outro.’  
 ‘In the old times it was like that, that Dâw were moving from place to another.’

## Appendix B

### Glossary of regional terms

<i>Açai</i>	palm species, used to produce a nourishing drink; <i>Euterpe precatoria</i>
<i>Assporar</i>	act of cursing a person by blowing, usually carried out by shamans
<i>Aturá</i>	big basket made of vine, carried on the forehead
<i>Beiju</i>	flat bread that is made out bitter manioc
<i>Benzimento</i>	spell for healing and protective purposes
<i>Caatinga</i>	part of the Amazonian forest with sandy soil and small trees
<i>Cachaça</i>	alcoholic drink made out of sugar cane
<i>Cachoeira</i>	rapids
<i>Capoeira</i>	overgrown plantation
<i>Caraná</i>	palm species, used to cover traditional houses; <i>Mauritiella armata</i>
<i>Caranzal</i>	part of the forest with predominance of <i>caraná palm trees</i> ; sandy soil and vegetation of low height
<i>Cipó</i>	vine, used for weaving baskets
<i>Comunidade</i>	village
<i>Colocação</i>	place where extractivist workers
<i>Curupira</i>	malignant forest spirit, in Brazilian folk etymology associated with a red haired woman
<i>Dabucuri</i>	region-wide reciprocal presentation ritual; most often involves wild fruit and game (EPPS, 2008: p. 935)
<i>Dono</i>	for the Dâw people: forest owner
<i>Farinha</i>	processed bitter manioc, primary food source
<i>Forno</i>	oven made out of clay for manioc flour roasting
<i>Igapó</i>	swamp forest
<i>Igarapé</i>	shallow creeks in the interior of the forest
<i>Lago</i>	water basin in the forest in dry season

<i>Maloca</i>	community house, main reference to Tukanoan long house
<i>Maniwa</i>	bitter manioc
<i>Paca</i>	<i>Agouti paca</i>
<i>Pajé</i>	shaman
<i>Patrão</i>	Usually non-indigenous patrons for whom the Dâw people used to work in extractivist work
<i>Piaçava</i>	palm tree, <i>Attalea funifera</i> ; its fibrous products were collected by the Dâw people in extractivist period
<i>Porto</i>	riverbank where people take bath and wash their clothes
<i>Roça</i>	manioc garden
<i>Sibêe</i>	drink made out <i>farinha</i> and water
<i>Sítio</i>	site, usually on the margins of a river where people spend time for fishing or hunting
<i>Tapiri</i>	temporary shelter for overnight stays in the forest; traditional house of the Dâw people without walls and a <i>caraná</i> roof
<i>Terra firme</i>	elevated part of the forest with scarce undergrowth and high trees; appropriate place for manioc gardens
<i>Timbó</i>	fish poison
<i>Tinguizar</i>	act of killing fishes with <i>timbó</i>
<i>Varadouro</i>	Track in the forest connecting two rivers or communities with each other

## Appendix C

### Photo Elicitation Task











## Appendix D

### Guided Story *Procurando Caraná*

Obert, K.; Oliveira, J.; Triana, G. **Procurando Caraná – Guided story for motion event elicitation.** São Paulo: Universidade de São Paulo, 2017.







