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## 12 Jodï

1 Introduction
2 Classification, general background, and prior work
3 Phonology
4 Word classes and general morphological structure
5 The noun phrase
6 The verb phrase
7 Simple clauses
8 Complex clauses
9 Conclusions
10 Acknowledgements
11 References

## 1 Introduction

Sustained contact between the Jodï and the larger Venezuelan society began only in the early 1970s. Since then, Jodï culture and their traditional ecological knowledge have received substantial attention in the anthropological literature; their language (yuwa1244), however, has remained understudied. The goals of this chapter are twofold: 1) it brings together previous Jodï scholarship to provide a grammatical sketch of this language, and 2) it highlights areas that require further research.

The chapter is organized as follows. Section 2 provides a brief introduction to the language and its speakers. Section 3 deals with Jodï phonology, discussing both segmental and suprasegmental characteristics as well as phonological processes. Section 4 briefly introduces word classes and the general morphological structure of the language, while Section 5 discusses the properties of nouns and noun phrases, and Section 6 of verbs and verb phrases. Finally, Section 7 and Section 8 focus on simple and complex clauses, respectively. Section 9 concludes.

## 2 Classification, general background, and prior work

In this section, I discuss the classification of the Jodï language before presenting the geographic and sociolinguistic profile of the language as well as a brief summary of prior work.

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### 2.1 Family membership and dialects

Jodï has been consistently considered as unclassified or as an isolate in the general literature. ${ }^{1}$ However, several proposals have linked the language to four other language families: Cariban, Yanomaman, the putative Makú family (a grouping including the Naduhup languages, Kakua-Nukak, and Puinave), and Sáliban. As Rosés Labrada (2019) shows, the first three proposals (Jodï-Cariban, Jodï-Yanomaman, and Jodï-Makú) have been rejected or can be rejected; the Jodï-Sáliban proposal, by contrast, has support from both lexical and morphosyntactic evidence that suggest that Jodï is related to the Sáliban languages: Sáliba, Piaroa, and Mako. ${ }^{2}$

While no systematic study of dialectal variation exists to date, several authors mention the presence of distinct dialects. Quatra (2008b: 17), for instance, mentions that several "micro-dialects" co-exist within the community of San José de Kayamá; he also suggests that a process of dialect leveling is in progress in this community (Quatra 2008a: 13).

### 2.2 Geographic distribution, population, and speaker numbers

As Table 12.1 shows, the Jodï are a small group of approximately one thousand people. They live in several small communities in the Amazonas and Bolivar states of

Tab. 12.1: Jodï population and speaker numbers.

| census | total ethnic <br> population | population over <br> $3-5$ yrs old $^{3}$ | number of <br> speakers | sources |
| :--- | :--- | :--- | :--- | :--- |
| 1982 | 392 | - | - | OCEI (1985) <br> 1992 |
| 643 | 526 | 526 | OCEI (1993) \& Mosonyi (2003: <br> 120) |  |
| 2001 | 767 | 683 | 654 | INE (2003) \& Mattéi-Müller <br> $(2006: 287, ~ 290)$ |
| 2011 | 982 | 878 | 854 | INE (2015) \& INE (2016) |

1 For a review of this literature and an in-depth discussion of different proposals, see Rosés Labrada (2019).
2 Editor's note: Rosés Labrada (2019) provides significant evidence that Jodï is a distant relative of the Sáliban family. However, because this chapter was commissioned prior to the publication of Rosés Labrada (2019), and because the affiliation of Jodï has continued to generate some debate, this language is included in the Isolates volume.
3 The two most recent Venezuelan censuses (i.e., $2001 \& 2011$ ) only report speakers for the population 3 years old and older; this column has been added to serve as the comparandum for the speaker numbers in the next column. Mosonyi (2003) only takes into account the population 5 years old and older.

Venezuela. These communities are located in the Sierra de Maigualida along the Asita, Yakahu, Iguana, Majagua, Mosquito, Banderita, Blanco, Kayamá, and Upper Cuchivero rivers (López Zent 1999: 44). The two communities with the largest population numbers are San José de Kayamá and Caño Iguana, both (former) mission communities (see Section 2.3), with 499 people (age $3+$ ) and 122 people (age $3+$ ) respectively according to the 2011 census (INE 2016).

### 2.3 Sociolinguistic background

Jodï has been reported as being seriously endangered in continent-wide language vitality reports (e.g., Moore (2007: 45); Crevels (2007: 131; 2012: 221)) as well as in country-wide ones (e.g., González Ñáñez (2000: 393)). However, most reports - for instance, Mosonyi (2003), Villalón (2004; 2011) and Mattéi-Müller (2006) - consider the language to be stable for the time being. This latter assessment of the situation stems from the fact that the proportion of Jodï speakers across all generations is high, which indicates that intergenerational transmission has not been interrupted (Quatra 2011: 137-138). This is further confirmed by the 2011 census data presented in Table 12.2.

As Table 12.2 shows, there is a high degree of monilingualism within the Jodï population (age 3 and above). There is, however, evidence from the 2011 census (INE 2016) that Spanish is gaining ground, with 142 people reporting to be JodïSpanish bilinguals ( $\sim 16 \%$ ) and 20 reported as Spanish monolinguals ( $\sim 2 \%$ ); compare this with the 1992 census data where there were no Spanish monolinguals reported and where the percentage of bilinguals was only $9.4 \%$ (Mosonyi 2003: 140).

In addition to being in contact with Spanish, the Jodï are also in regular contact today with the Eñepa' - a Cariban group also known in the literature as Panare in the communities of San José de Kayamá and Caño Iguana. Coppens (1983: 298), however, explains that the Eñepa'-Jodï contact in Caño Iguana is relatively recent and that previously the Jodï groups in that area had contact with a Yawarana-Piaroa

Tab. 12.2: Jodï speakers according to the 2011 Venezuelan census (INE 2016).

|  | number of speakers (age 3+) |
| :--- | :---: |
| Jodï monolinguals | 712 |
| Jodï-Spanish bilinguals | 142 |
| Spanish monolinguals | 20 |
| Another language monolinguals | 1 |
| Spanish-another language bilinguals | 1 |
| Does not declare | 2 |
| total | 878 |

community settled along the Majagua River. It is unclear, however, whether this contact between Jodï and Eñepa' has resulted in any degree of bilingualism; the 2011 census data suggests that it has not, since no case of Jodï + another (nonSpanish) language bilingualism is reported (INE 2016).

The Jodï rely primarily on slash-and-burn agriculture, hunting, gathering, and, to a lesser extent, fishing (Coppens 1983, 255-268; Zent \& Zent 2008, 504-523). As with other Amazonian groups, Jodï traditional religion included healers and shamans (Coppens 1983: 296-297; Zent \& Zent 2008); however, Jodï traditional practices were impacted by the presence of evangelical New Tribes missionaries in Caño Iguana - starting around 1970 - and the nuns of the order María Inmaculada de la Madre Laura (Lauritas) in San José de Kayamá where a mission was founded in 1983 (Coppens 1983: 254; Zent \& Zent 2008: 505-506). An early ethnographic analysis of Jodï life and culture is found in Coppens (1983); this work was later enriched and expanded by Stanford Zent and Eglée (López) Zent (2008).

### 2.4 Prior work on Jodï

There has been a substantial amount of anthropological work with the Jodï, which started shortly after initial sustained contact was established in the early 1960s and 1970s (see López Zent (1999: 30-35) for an overview); this work has included general ethnographic work (Coppens 1983; Storrie 1999; Zent \& Zent 2008), documentation and analysis of ethnobotany (López Zent 1999; Zent, Zent \& Iturriaga 2004; Zent \& Zent 2016), and shamanism (Storrie 2006), among other topics. Documentary and descriptive linguistic work, however, is to this day extremely limited.

In terms of available documentation, there are a number of audio recordings archived in the Archive of the Indigenous Languages of Latin American as part of the Venezuelan Languages Collection of Marie Claude Mattei Müller (AILLA Collection PID: 124422) from fieldwork carried out by Mattei Müller and collaborators in 1990, 1993, 1994 and 1997. The earlier data (1990-1993) comes from two speakers and was collected in San José de Kayamá; the 1997 data, however, represent the Caño Iguana dialect. These materials are primarily untranscribed and unannotated vocabulary lists, although there is a rough transcription that accompanies the 1990 recordings (Mattei Müller, Ho \& Ho 1990). In addition, Quatra (2011) mentions a collection of 79 hours of audiovisual materials that is locally archived in San José de Kayamá but inaccessible to most outsiders. It is also likely that additional materials exist in private collections created by the various researchers that have worked with the Jodï over time.

The descriptive work itself is limited to four main sources: Guarisma Pinto's (1974) lexical data and phonological analysis as part of her undergraduate thesis, later published in Antropológica (Guarisma Pinto \& Coppens 1978); Diana Vilera Díaz's (1985) undergraduate thesis, from which her 1987 article on Jodï nouns (Vile-

Tab. 12.3: Comparison of person pronouns across sources.

| person | Q |  | GP \& C | V | IPA transcription |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1sG | ${ }^{\text {hje }}$ | <jye> | ya | $h^{\nu} e$ | [ $h^{\mathrm{j}} \varepsilon \sim \mathrm{j} \varepsilon$ ] |
| 2sG | ${ }^{\mathrm{h}} \mathrm{k} \varepsilon$ | <jkë> | ka | ka | [ $\mathrm{k}^{\mathrm{j}}$ ¢] |
| 3SG.M | $\mathrm{bi}^{\mathrm{h}} \mathrm{k}^{(\mathrm{i})} \mathrm{e} /{ }^{\mathrm{h}} \mathrm{k}^{(\mathrm{i})} \mathrm{e}$ | <bijk(y)e/jk(y)e> | $k^{h}$ ie | $k^{\nu} e$ | ${ }^{\text {[ }} \mathrm{J}^{\mathrm{j}} \varepsilon$ ] |
| 3SG.F | $\mathrm{biju} / \mathrm{k}^{\mathrm{j}} \mathrm{u}$ | <biyu/kyu> |  | ju | [d3u] |
| 1PL | ${ }^{\text {hjedi }}$ | <jyedï> | tut ${ }_{\text {f }}$ | $h^{\nu} e d i$ | ['hetit ~ je'ti] |
| 2PL |  | <jkëdï> | de | kadi | ['ke:tip $\sim$ ke'tit] |
| 3 PL | bidj/didł | <bidï/didï> |  | bidí/didł | [bi'ti] |
|  |  |  |  |  | [di'ti] |

Sources: Q = Quatra (2008a), GP \& C = Guarisma Pinto and Coppens (1978), V = Vilera Díaz (1985)
ra Díaz 1987) stems; ${ }^{4}$ and finally the bilingual Jodï-Spanish dictionary and verb workbook created by Quatra and his collaborators (Quatra 2008a; 2008b). In what follows, I draw from these sources to offer a brief grammar sketch of the Jodï language. ${ }^{5}$

Three caveats are needed here before proceding. The first is that this grammar sketch is based exclusively on published and unpublished secondary data - that is, data not collected by this author in the field. The second one concerns the available data. As Table 12.3 shows, there are important differences and discrepancies between the available sources; this concerns not only issues of representation and notation but also the analysis itself (for instance, note that not all authors agree on the presence vs. absence of two sets of third-person singular pronouns). For comparative purposes, I have added a column with an IPA phonetic transcription of the pronouns as pronounced by two speakers and based on the audio available in Mattei Müller's AILLA collection. Finally, note that the sketch presented here relies exclusively on words and short sentences - most likely obtained through translation elicitation from Spanish - and that no texts are available. I try to address the first two issues by adopting a philological approach to the description, whereby

[^1]I clearly give the original forms as they appear in their sources and separate that from my own analysis; this degree of explicitness may be cumbersome at times for the reader but should ensure that they can distinguish my analysis from those available in the literature and trace my steps. The last issue is more difficult to mitigate, and the reader should keep in mind that many of the Jodï grammatical features and constructions discussed here require further study and would benefit from the study of naturalistic speech (narratives and conversation) as well as targeted elicitation.

## 3 Phonology

Table 12.4 presents a summary vowel inventory for Jodï based on the three proposals in the literature, namely Guarisma Pinto (1974: 48-52), Vilera Díaz (1985: 16-17), and Quatra (2008a: 22-25). In this table, I use square brackets to represent sounds that are clearly identified as allophones - rather than phonemes - by the original authors.

There are both similarities and differences among the different available analyses. With respect to oral vowels, all three authors agree in their analysis of the language as having three high vowels: /i/, /i//, and /u/. They also agree that there is a single low central vowel, but Vilera Díaz lists a front [æ] and a back [a] allophone for this vowel, while Guarisma Pinto does not specify the phonetic versus phonological status of the two latter vowel sounds and Quatra does not list them at all. The other main difference concerns the analysis of the mid-vowels. Whereas Guarisma Pinto and Vilera Díaz treat the front and back mid vowels as having a high-mid and low-mid allophone each, Quatra seems to prefer an analysis where these are considered distinct phonemes. Finally, all authors agree on including a central mid vowel / $\partial /$, but Vilera Díaz additionally lists an $[\Lambda]$ allophone for this vowel.

As Table 12.4 suggests, Jodï also has nasal vowels. The main discrepancy in the analyses of the Jodï nasal vowels in the literature concerns their status as independent phonemes or as nasalized realizations of the oral vowels. Both Guarisma Pinto (1974: 48-52) and Quatra (2008a: 22-25) propose phonemic nasal vowels for most but not all oral vowel qualities - for example, Quatra does not include a mid central

Tab. 12.4: Jodï vowels.

|  | front | central | back |
| :--- | :--- | :--- | :--- |
| high | $\mathrm{i} \tilde{\mathrm{i}}$ | $\dot{\dagger} \tilde{f}$ | u ũ |
| mid | $\mathrm{e} \tilde{\mathrm{e}}$ | $\partial \tilde{\partial}[\wedge]$ | 0 õ |
|  | $[\varepsilon]$ |  | $[ว]$ |
| low | $[æ]$ | a a | $[a]$ |

Tab. 12.5: Jodï consonants (adapted from Guarisma Pinto 1974: 50 and Guarisma Pinto \& Coppens 1978: 5). ${ }^{6}$

|  |  |  | labial | dental | alveolar | (pre-) <br> palatal | velar | labiovelar | glottal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| plosives | unaspirated | p | b |  |  |  |  | $\mathrm{k}^{\text {w }}$ | ? |
|  | aspirated |  |  |  |  |  | (k ${ }^{\text {b }}$ ) |  |  |
| affricates |  |  |  |  |  | t d |  |  |  |
| fricatives |  |  |  |  |  |  |  |  | h |
| nasals |  | m |  |  | n | (n) |  |  |  |
| liquids |  |  |  |  | $11 .[r]$ |  |  |  |  |
| semivowels |  | w |  |  |  | j |  |  |  |
| semiaspirated |  | $h^{\text {w }}$ |  |  |  | $\mathrm{h}^{\text {i }}$ |  |  |  |

nasal vowel. On the other hand, Vilera Díaz (1985: 16-17) argues that all vowels are realized with accompanying nasalization when they precede or follow a nasal consonant but explains that there are also instances of nasal vowels in environments where there are no nasal consonants such as the words $\tilde{o}$ 'rain' and $k^{w} \tilde{a}$ 'neck'. Taking this into account along with the fact that she does not find clear minimal pairs contrasting oral and nasal vowels, she opts for not making any claim about whether vowel nasalization is phonemic or a result of phonetic processes. However, the available data strongly suggest that there are both (phonemically) nasal vowels as well as (phonetically) nasalized vowels.

The consonant inventories proposed for Jodï in the three main existing descriptions are given here in Table 12.5, Table 12.6, and Table 12.7. As with the vowel inventory, square brackets represent sounds that are clearly identified as allophones in the original descriptions; parentheses, on the other hand, represent sounds whose status in the original source is unclear. Additional comments on all consonant sounds and the representational choices made here for converting the original transcription system to the International Phonetic Alphabet can be found in Appendix B of Rosés Labrada (2019).

There are significant differences between the proposed consonant inventories. The three most salient ones are: 1) the treatment of voicing in the plosive series, 2) the representation of pre-aspiration, and 3) the status of the affricates. In terms of voicing, note that the initial descriptions of the system in Guarisma Pinto (1974) and Vilera Díaz (1985) posit a two-way voicing contrast in the stop series - at least in

6 The original data are given in a modified Americanist Phonetic Alphabet with the following nonIPA values: $\check{c}$ for $t$, $\check{y}$ for $d 5, y$ for $j$, $\tilde{n}$ for $n, \check{l}$ (with a caron on top) for $l$, hy for $h^{j}$, and $h w$ for $h^{w}$.

Tab. 12.6: Jodï consonants (adapted from Vilera 1985: 40).7

|  | bilabial dental |  |  |  | alveo- <br> lar | alveopalatal | palatal | post- <br> palatal | velar | labiovelar | glottal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| plosives | p | b | t | d |  |  |  |  | k [g] | $\mathrm{k}^{\mathrm{w}}$ |  |
| affricates |  |  |  |  |  | g | $\left[t^{\prime}\right]$ d ${ }^{\text {d }}$ |  |  |  |  |
| fricatives |  | ( $\beta$ |  |  |  |  |  | $\mathrm{k}^{\text {i }}$ [g'] |  |  | h |
| labialized fricatives |  |  |  |  |  |  |  |  |  |  | $\mathrm{h}^{\text {w }}$ |
| nasals |  | m |  | n |  |  | [ n ] |  | [n] |  |  |
| liquids |  |  |  |  | $1[1][r]$ |  |  |  |  |  |  |
| semivowels | w |  |  |  |  |  | h ${ }^{\text {j }}$ |  |  |  |  |
| velarized implosive | [ ${ }^{\prime \prime}$ |  |  |  |  |  |  |  |  |  |  |

the bilabial and alveolar places of articulation. Quatra (2008a), on the other hand, collapses this contrast and posits an additional series of pre-aspirated plosives (in addition to pre-aspirated sonorants). It is possible that the differences in analysis here are related to the representational level - phonetic versus phonological adopted by the authors, for, as Rosés Labrada (2019) shows, there is variability in plosive voicing intervocalically. With respect to pre-aspiration, if the analysis proposed by Quatra holds, Jodï stands out among South American languages in being the only language that has pre-aspirated consonants (see Michael et al. 2015). The rarity of a pre-aspirated consonant phonological contrast is also important to highlight here. Cross-linguistically, it is common for voiceless obstruents to be realized with associated pre-aspiration (e.g., in North Germanic languages), but pre-aspiration in these languages is generally analyzed as phonetic rather than phonological (Silverman 2003). Note, however, that Guarisma Pinto (1974) argues that pre-aspiration is a phonological process related to stress while Vilera Díaz (1985: 33) suggests that it is tied to voiceless consonants and the lateral at syllable junctures. Finally, Guarisma Pinto and Vilera Díaz include a voiced and voiceless affricate pair, namely $/ \mathrm{t} /$ and $/ \mathrm{d} / /$, in their consonant inventories. Quatra, on the other hand, explains that the consonantal sounds $\left\langle j k y>/{ }^{h} k^{j} /\right.$ and $\left\langle k y>/ k^{j} /\right.$ are pronounced by the majority of Jodï speakers as alveolar, "as if they were $j t y$ and $d y$ " (Quatra 2008: 23; my translation), which I interpret - in part based on the audio from the Mattei Müller collection - to be $/{ }^{\mathrm{h}} \mathrm{f}^{\mathrm{j}} /$ and $/ \mathrm{d}_{3} /$, respectively. This variation is represented in Table 12.7

[^2]Tab. 12.7: Jodï consonants (adapted from Quatra 2008a: 23). ${ }^{8}$

|  |  | bilabial | alveo-dental | alveo-palatal | palatal | velar |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| plosives | unaspirated | b | d | $d 3 \sim k^{j}$ |  | k |
|  | aspirated |  | ${ }^{\mathrm{h}} \mathrm{t}$ | ${ }^{\mathrm{h}} \mathrm{j}^{\mathrm{j}} \sim{ }^{\mathrm{h}} \mathrm{k}^{\mathrm{j}}$ |  | ${ }^{\text {nk }}$ |
| fricatives |  |  |  |  |  | h |
| nasals | unaspirated | m | n |  | n |  |
|  | aspirated |  | ${ }^{\text {h }}$ n |  | ${ }^{\mathrm{n}}$ ת |  |
| liquids | unaspirated |  | 1 |  |  |  |
|  | aspirated |  | ${ }^{\mathrm{h}}$ |  |  |  |
| semiconsonants | unaspirated | w |  |  | j |  |
|  | aspirated | ${ }^{\text {h }}$ w |  |  | ${ }^{\mathrm{h}} \mathrm{j}$ |  |

with a ~ symbol. Further research is needed to elucidate the status of voicing, aspiration, and affricates in Jodï.

Phonological processes have received little attention in the Jodï literature to date. It is, however, possible to argue that, like many other Amazonian languages, the language has widespread nasalization processes, including nasal harmony. The data in Table 12.8 support this claim. Note that when the classifier has a nasal vowel, the demonstrative root is entirely - for the proximate - or partially nasalized for the distal. These data also suggest that nasalization spreads from right to left and that while some consonants are the target of it (e.g., /b/ in the proximate root), others are not affected by it (e.g., /h/ in both demonstrative roots and the /d/ in the distal root). A more in-depth analysis of this and related nasalization processes (see the discussion of verbal agreement in Section 6.4) is needed. Additionally, the analysis of verbal agreement proposed in Section 6.4 postulates a vowel harmony process. Two other processes mentioned in Vilera Díaz (1985: 34-37) are vowel raising - when followed by /i/ - and stop (de)voicing.

8 Quatra (2008a; 2008b) employs the orthography adopted by the Jodï of San José de Kayamá as a result of a series of workshops led by S. Zent between 2002 and 2005 (Quatra 2011: 142). The orthography uses a <j+ another consonant> to represent pre-aspiration of both stops and sonorants, <j> for a glottal fricative, <ñ> for a palatal nasal, and $\langle y>$ for a palatal semiconsonant as well as for palatalization following $\mathrm{a}<k>$ and $\mathrm{a}<j k>$, resulting in the complex graphs <ky> and <jky>. Note that while there are sequences of $\langle j k w>$ and $<k w>$ in the dictionary, Quatra (2008a: 23) does not include these sounds in his list of Jodï consonants; these sequences correspond to the labiovelar $/ \mathrm{k}^{\mathrm{w}} /$ in Guarisma Pinto (1974) and Vilera Díaz (19985). Vilera Díaz, in particular, shows that there is a minimal pair between $/ \mathrm{k}^{\mathrm{w}} /$ and $/ \mathrm{h}^{\mathrm{w}} /$ - namely $k^{\mathrm{w}} \mathrm{a}^{\prime} j o$ 'monkey (Alouatta species)' vs. $h^{\mathrm{w}} a^{\prime} j o$ 'mouse' (1985: 30). These two words are represented in the Quatra (2008a: 126, 164) dictionary as ${ }^{h} k^{w}$ ajo <jkwayo> and $h^{w}$ ajo <jwayo>; hence, I have added $/{ }^{h} \mathrm{k}^{\mathrm{w}} /$ to the IPA transcriptions of Quatra's materials included in this chapter.

Tab. 12.8: Jodï nasalization in demonstratives (adapted from Quatra 2008a, 34-35).

| classifier |  | proximate demonstrative |  | distal demonstrative |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| spelling | phonetic realization | spelling | phonetic realization | spelling | phonetic realization |
| 0 | [0] | bio | [bi-o] | dio | [di-o] |
| $\underline{0}$ | [õ] | mio | [mĩ-õ] | dio | [dĩ-õ] |
| jojo | [hoho] | bijo | [bi-ho] | dijo | [di-ho] |
| jojo | [hõhõ] | mijo | [mĩ-hõ] | dijo | [dĩ-hõ] |

Tab. 12.9: Jodï stress examples (adapted from Vilera Díaz 1985: 38-39).

|  | noun | gloss | corresponding demonstrative |
| :---: | :---: | :---: | :---: |
| a. | bu'hwãa $^{\text {a }}$ a ${ }^{\text {a }}$ | 'flute' | bi'bo |
| b. | 'nãla | 'basket' | bi'o |
| c. | ${ }^{\prime} \mathrm{b}^{\mathrm{w}}$ عlo | 'tray' | bi'lo |
| d. | 'mẽ ${ }^{\text {h }}$ ãa ${ }^{\text {h' }}$ ta | 'shoe' | $\mathrm{bi}^{\text {' }}$ ta |
| e. | 'mĩhi | 'tapara' | mĩhi |
| f. | nõ'nõ | 'shirt' | mĩ'nõ |
| g. | do'do | 'loincloth' | bi'do |
| h. | mõ'h'to | 'fish' | $b i^{\text {h }} k^{\text {j }}$ e |

Finally, with regard to syllable structure and prosody, it can be said that both these areas require further research. Jodï syllable structure seems to follow an open syllable pattern with V, VV, CV, and CVV syllables all attested. It is unclear, however, if vowel sequences are tauto- or heterosyllabic. ${ }^{10}$ With respect to stress, Vilera Díaz (1985) makes some preliminary observations, suggesting that, while stress placement on nouns is difficult to account for, stress on demonstratives is consistently placed on the final syllable and proposing that it is also used to disambiguate cases where a noun has the same form as the demonstrative. The examples she provides are given here in Table 12.9. In these examples, note that the nouns have different stress patterns - penult for examples ( $a-c$ ) and (e) versus final stress for ( $f-h$ ) while the demonstratives always have the stress on the final syllable; the example in (e) shows a case of "disambiguation" - in Vilera Díaz's terms - between a noun and its corresponding demonstrative.

[^3]Tab. 12.10: Jodï stress minimal pairs (adapted from Quatra 2008a: 26).

| penultimate stress |  |  | final stress |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 'ãmi | <ámi> | 'full, be full' | ãmi-'hã ${ }^{11}$ | <ami-ja> | 'coroba grub,12 |
| 'baba | <bába> | 'father' | ba'ba | <baba> | 'classifier for flat things' |
| ${ }^{\text {n }}$ tali | <jtáli> | 'enter’ | ${ }^{\text {nta'li }}$ | <jtali> | 'moriche palm' |
| 'mihĩ | <miji> | 'small calabash' | mi'hĩ | <mijil | 'demonstrative + classifier for palms' |
| 'mine | <miñe> | 'skeleton' | mi'ne | <miñe> | 'plural form for bö (demonstrative)' |
| 'bude | <búde> | 'whistle (v.)' | bu'de | <bude> | 'light a fire' |
| 'bule | <búle> | 'hole' 'eye' | bu'le | <bule> | 'cut (with multiple strokes)' |
| 'luwe | <lúwë> | 'find' | lu'we | <luwë> | 'guama' 'go away/back' |
| 'nuw | <núwè> | 'go back' | nu'wẽ | <nuwè> | 'house, hut' |

Based on this contrast, she suggests that Jodï stress may be phonemic, although she does not provide any minimal pairs other than the one in (e). Additional minimal pairs are, however, available. Quatra (2008a: 26) explains that stress is not represented in the writing system unless it is needed to disambiguate two words; his examples follow here in Table 12.10. Note that all the examples, except for the first one, are bisyllabic and that, although stress in 'mihĩ <míji> 'small calabash' does serve to distinguish a noun from a matching demonstrative, this is not the only use of stress, as most of the pairs do not involve a contrasting noun-demonstrative pair.

## 4 Word classes and general morphological structure

There are two main open word classes in Jodï: nouns and verbs. These can be distinguished on both formal (i.e., morphological) and distributional (i.e., syntactic) grounds and are treated separately in Section 5 and Section 6, respectively. The third lexical class is that of adjectives. These are described in Vilera Díaz (1985: 6680), who argues that there are multiple attributive strategies in the language. First,

11 The Quatra orthography does not indicate stress for the words in this column but given that they contrast with the words in the first column, all of which have stress in the first syllable, I have marked it here in the final syllable. This is problematic for ãmi-'hã, which has three syllables. For Quatra examples elsewhere in this article, I do not indicate stress in the IPA transcription I added except if the word had a stress mark in the practical orthography.
12 Scientific names for plants in the text are as follows: coroba palm = Attalea macrolepsis, moriche palm = Mauritia flexuosa, guama = Inga edulis, calabash = Crescentia cujete .
she shows that an adjectival root (or at least a root denoting a property concept) can occur as a standalone word when it takes a generic suffix (i.e., a general classifier; see Table 12.13), which she lists as'hae inan.SG, wa inAN.PL, ha an.m, 'hau AN.F, and 'hadì AN.PL. ${ }^{13}$ The examples in (1) illustrate this construction.

```
(1) a. ' dzabo-'hae
    white-SG.INAN
    'white-colored thing'
c. 'bai-hae
    old-SG.INAN
    'old, worn thing'
e. ha'nĩ-ha
    small-AN.M
    'small man or animal'
g. ha'nĩ-'hadi
    small-PL.AN
    'small people or animals'
    (adapted from Vilera Díaz 1985: 67, 69-70, 75)
```

d. 'bai-wa
old-PL.INAN
'(several) old things'
f. ha'nĩ-'hau
small-AN.F
'small woman or female animal'
h. u'li-'hau
big-AN.F
‘big woman’

```
(adapted from Vilera Díaz 1985: 67, 69-70, 75)
```

Vilera Díaz further shows that these roots can occur without any suffixation when accompanied by the noun they modify, which she treats as "substituting" the suffix. Compare the examples in (1) with those in (2).
(2) a. 'ḑabo nũ'we white house 'white house'
b. 'bai do'do
old loincloth
'old loincloth'
c. ha'nĩ mã'ḑe
small knife
'small knife' (adapted from Vilera Díaz 1985: 68)

$$
1 \text { vilera Diaz 1985: b8) }
$$

While she does not provide any examples that illustrate this second construction with an animate noun, these are amply attested in the Quatra (2008a) dictionary in animal names with the adjectival roots meaning 'small' and 'big', illustrated here in (3).

[^4](3)

| a. jani ojko | b. uli ojko |
| :---: | :---: |
| hãni ${ }^{\text {n }} \mathrm{k}$ ( ${ }^{\text {a }}$ | uli $\tilde{o}^{\mathrm{h}} \mathrm{kõ}$ |
| small armadillo | big armadillo |
| 'small armadillo' | 'big armadillo' |
| c. jani jkwiyë | d. uli jkwiyë |
| hãni ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}} \mathrm{j}$ ¢ $\varepsilon$ | uli ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}} \mathbf{i j}$ ¢ |
| small kingfisher | big kingfisher |
| 'small kingfisher' | 'big kingfisher' |

(adapted from Quatra 2008a: 212, 129)

Finally, Vilera Díaz shows that these roots can take a resultative or "pseudopassive" suffix -nã, which she analyzes as applying to verbs to "indicate the resulting state of a thing or person after having been object of a given action" (Vilera Díaz 1985: 130) and as denoting "the state of an object, animate or not, that is not intrinsic but rather the product of a given action, intentional or fortuitous" when combining with an adjectival root (Vilera Díaz 1985: 70). These are exemplified here in (4).
(4)

| a. 'tyabo-nã | b. du'ebe-nã |
| :--- | :--- |
| white-RES | red-RES |
| 'clean thing or person' | 'reddened' |
| (adapted from Vilera Díaz 1985: | 71, |

Note that the fact that these roots, or at least a subset of them, take verbal morphology such as what Vilera Díaz calls the resultative could indicate that perhaps they would be better analyzed as verbs, but this hypothesis requires further investigation.

In addition to these open word classes, there are a number of closed word classes, including pronouns (Section 5.1), demonstratives (Section 5.1), classifiers (Section 5.1), numerals (Section 5.3), quantifiers (Section 5.3), question words (Section 7.4), and place adverbs, for which I give a paradigm here in Table 12.11. ${ }^{14}$ It is important to note that the place adverbs are likely related to the proximate and distal demonstratives discussed in Section 5.1, with which they seem to share a deictic root.

Finally, ideophones have not been described for Jodï, but Quatra (2008a) lists a number of interjections that are likely associated with this category; ${ }^{15}$ these are shown here in (5).

[^5]Tab. 12.11: Jodï place adverbs (adapted from Quatra 2008a: 63, 68, 151, 155).

| proximate |  | distal |  |  |
| :---: | :---: | :---: | :---: | :---: |
| bəki ~ bike | $\begin{array}{ll}\text { <bökï ~ bïkë> } & \text { '(toward) } \\ & \text { here' }\end{array}$ | ${ }^{\text {htaki }} \sim{ }^{\text {htike }}$ | <jtökï ~ jtïkë> | '(toward) there' |
| bəna ~ bənł | <böna ~ bönï> 'here’ |  | <jtöna ~ jtönï> | 'there' |
|  | - | dawena ~ dعwena | <dawena ~ dëwena> | 'there, ${ }^{16}$ |

(5) a. $a^{h} k \partial \ldots!$ <ajkö....!> 'Ouch! (expression of pain)'
b. ${ }^{\text {h } k!!~<j k i ̈!>~ ' C a r e f u l!' ~}$
c. be! <bë!> ‘Careful!’
d. bí, bí...! <bï, bï...!> 'Like this...!'
e. de... <dë...> 'Ready, All done!'
(adapted from Quatra 2008a: 44, 172, 266, 63, 68)

While many neighboring languages have agglutinating profiles, it is difficult to make a statement regarding agglutination for Jodï because the two main descriptions of the language differ greatly in how they treat inflectional categories. On the one hand, Vilera Díaz (1985) gives long sequences of morphemes as one uninterrupted string of speech, often without further segmenting them into words and phrases; this is possibly associated with the fact that she worked with monolingual speakers. Quatra and his collaborators, on the other hand, represent the same sequences as strings of independent words; see the examples in Section 6. What can, however, be affirmed is that there are general head-marking and head-final tendencies in the language, as will become evident in Sections 5 and 6.

## 5 The noun phrase

This section focuses on pronouns, nouns, and the noun phrase. After a brief discussion of pronouns in Section 5.1 and of nouns and their properties (Sections 5.2-5.5), I deal with modification (Section 5.6); possession (Section 5.7); and case marking, postpositions, and relational nouns (Section 5.8).

16 There is no proximate counterpart for this word in the Quatra dictionary; however, there is another word that could be considered related, namely hawena <jawena> which Quatra (2008a: 95) translates as 'in that place' and explains that "it is used when the speaker is remembering something" [my translation].

### 5.1 Pronouns

As Table 12.12 shows, Jodï personal pronouns distinguish person (first, second, and third) and number (SG vs. PL) in addition to masculine and feminine in third-person singular. Notice that the plural series shares a plural animate suffix $-d \dot{i}\langle-d i\rangle$ and that the third plural does not distinguish gender. It is also important to note that the third-person pronouns are identical to the animate demonstratives.

These pronouns are used in possessive constructions (Section 5.7) and as subjects of a verb (Section 7.2). Vilera Díaz (1985, 97-99) gives a paradigm for the object pronouns that shows that the pronouns in Table 12.12 are also used for objects but need to be marked with the -ni suffix, which she calls an "indirect complement affix". This marker is further treated in Section 5.8.

Demonstrative pronouns encode a proximate and a distal with the deictic roots $b i-<b i->$ and $d i-<d i->$, respectively. These distinguish between animate and inanimate referents, making further distinctions within these two broad categories, and also vary for number. Given the fact that the demonstrative pronoun system combines the two deictic roots with classifiers, and the complexity of the classifier data, I discuss the demonstrative pronouns in two parts. Here I focus on the general demonstrative pronouns, and specific demonstrative pronouns are discussed in Section in Section 5.4 and illustrated in Table 12.16.

Table 12.13 provides the demonstrative forms for animate referents and for a generic inanimate referent as well as the corresponding classifiers, namely the animate classifiers and the generic inanimate classifier.

The animate demonstrative forms make a distinction between masculine and feminine in the singular, but this distinction is neutralized in the plural where only one form is used, $b i d i \dot{i}$ <bidï> or $d i d i \dot{i}$ <didï>. Another difference among the animate forms is that, while all three proximate forms share the bi- <bi-> root; the distal ones only use the di-<di-> root in the plural. Finally, note that, when compared to the classifiers, there is only some similarity between the plural forms - namely, they all use the animate suffix $-d \dot{i}<-d i \gg-$ and the singular ones have more diverse forms with only some resemblance in the feminine (i.e., the vowel $/ u /$ in all three forms). With respect to the inanimate forms, note that there are two ways of forming the demonstratives: a simple form - ba <bö> for singular proximate, mine <miñe> for

Tab. 12.12: Jodï person pronouns (adapted from Quatra 2008b).

| person | singular |  | plural |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 | ${ }^{\text {hje }}$ | <jye> | ${ }^{\text {njedi }}$ | <jyedï> |
| 3 | ${ }^{\mathrm{h}} \mathrm{k} \tilde{\varepsilon}$ | <jkë> | ${ }^{\mathrm{h}} \mathrm{k}$ ¢ di | <jkëdï> |
| 3.M | $b^{\text {h }} k^{j} e \sim{ }^{h} k^{j} e$ | <bijkye ~ jkye> | bidi $/$ did $\mathfrak{j}$ | <bidï ~ didï> |
| 3.F | biju $\sim \mathrm{k}^{\mathrm{j}}$ | <biyu ~ kyu> |  |  |

Tab. 12.13: Animate and generic inanimate classifiers and demonstratives (adapted from Quatra 2008a, 32-33).

| $\begin{aligned} & \text { gloss } \\ & \# \end{aligned}$ | exemplars | classifiers |  |  |  | proximate |  |  |  | distal |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | SG |  | PL |  | SG |  | PL |  | SG |  | PL |  |
| 1. | male animals \& humans | hã | 〈ja> |  |  | $\mathrm{bi}^{\text {h }} \mathrm{k}^{\mathrm{j}} \mathrm{e}$ | <bijkye> |  |  | ${ }^{\text {hkj }}$, | <jkye> |  |  |
| 2. | female animals \& humans | hau | <jau> |  |  | biju | <biyu> |  |  | $k^{\text {ju }}$ | <kyu> |  |  |
| 3. | things (in general) | hae | <jae> | hawa <br> ~ wa | <jawa~ wa> | bə ~ bə-hae | <bö~ bö-jae> | mine ~ mine-hawa | <miñe ~ miñe-jawa> | ${ }^{h}$ tə ~ <br> ${ }^{\text {hta-hae }}$ | <jtö ~ jtö-jae> | kiẽ ~ <br> kiẽ-hawa | <kye ~ kye-jawa> |

plural proximate, ${ }^{h} t z<j t o ̈>$ for singular distal and $k^{j} \tilde{e}$ <kye> for plural distal ${ }^{17}$ - and a complex form that makes use of the simple forms and attach the classifiers. The proximate and distal roots bi-<bi-> and di-<di-> also combine with classifiers to form demonstratives (see Section 5.4).

### 5.2 Nouns

The available data suggest that all Jodï nouns can occur as free roots without additional morphology. This is shown here in example (6) with a body part term, in (7) with a noun with an inanimate referent, in (8) with a noun with an animate nonhuman referent, and in (9) with a noun with a human referent.
(6) то тётё dë
mo mem $\varepsilon \mathrm{d} \varepsilon$
hand itch 3sG.PRS.ACT
'(My) hand itches.'
(adapted from Quatra 2008a: 187)
(7) nuwe jtili dë
nuwẽ ${ }^{\text {htili }} \mathrm{d} \varepsilon$
house burn 3SG.PRS.ACT
'The house is burning.'
(adapted from Quatra 2008a: 152)
(8) yëwi jwae dë
jewi ${ }^{\text {h }}$ wae $\mathrm{d} \varepsilon$
dog bark 3SG.PRS.ACT
'The dog is barking.'
(adapted from Quatra 2008a: 160)
(9) $\underline{\underline{i n i}}$ jyedï jkaladena ma
ĩni ${ }^{\mathrm{h}} \mathrm{jedi} \quad{ }^{\mathrm{h}}$ kaladena ma
child 1PL.PRO between 3SG.AFFR.PRS.COP
'The child is between us (two).'
(adapted from Quatra 2008a: 114)

17 At first sight, these forms seem to be suppletive; however, it is possible that the effects of nasalization and palatalization processes in the plural forms obscure their connection to the singular ones. For example, if we posit that the plural proximate is a realization of a form /bĩjẽ/ that is composed of the proximate bə <bö> (with vowel raising of / / <ö> to /i/ <i>; note that this is also what happens in the proximate singular forms) and the inanimate plural marker -ije <-iyë> (see Section 5.3) and that the $[\mathrm{m}]$ and $[\mathrm{n}]$ are nasal realizations of $/ \mathrm{b} /$ and $/ \mathrm{j} /$, there is a clear link

Nouns can also be divided into subclasses corresponding to their animacy (inanimates vs. animates, with consequences for classifier selection; see Section 5.4); gender for animate nouns (masculine vs. feminine); and shape, function, and other properties for inanimates (see Section 5.4).

### 5.3 Nominal number and quantification

There are five attested plural suffixes in Jodï; Vilera Díaz (1985) discusses four of these. One is a dedicated suffix for animate plurals -di, exemplified in (10). A second animate plural with the form -mo <-mo> - not mentioned in Vilera Díaz - has a more restricted distribution; this suffix is exemplified with the word for 'child' in (11). The use of the animate suffixes seems to be lexically specified, and some animate roots take - $d i$ while others take -mo <-mo>.
(10) a. ho
person
'person'
c. 'ãũn
wife
'wife'
e. $\widetilde{d y} e^{\prime} \beta i$
dog
'dog'
(adapted from Vilera Díaz 1985: 48
(11) a. $\underline{i n} i$
ĩni
child
'child'
b. ini-mo
ĩni-mo
child-PL.AN $\mathbf{2}_{\mathbf{2}}$
‘children’
(adapted from Quatra 2008a: 318)

The other three plural suffixes discussed by Vilera Díaz are used for inanimate nouns. The most common and frequent, according to Vilera Díaz, is the suffix -do (represented by Quatra as -do <-dä>), and it is described as occurring with vowelfinal roots ending in /a/, /e/, /i/, /o/, and /u/. In (12), singular forms appear in the lefthand column, and plural forms appear on the right.

[^6](12)
a. dijje
b. dije-do
c. u'lika
d. u'lika-do
e. 'mĩhi
f. 'mĩhi-do
g. 'mũ:kuh $t u$
h. 'mũ:ku'tu-do
'hammock(s)'
'door(s); big hole(s)'
'small calabash(es), spoon(s)'
'knee(s)'
i. mõ
j. 'mõ'-do
'arm(s)'
(adapted from Vilera Díaz 1985: 45)

The second inanimate plural suffix is -je, which, according to Vilera Díaz's analysis, appears with a-final roots, as in (13), again with singular forms on the left and plural forms illustrated on the right.
a. 'nãla
b. 'nãl-je
'basket(s)'
c. 'tela
d. 'tel-je
'finger(s)'
e. 'mén $n a$
f. 'mê' $n$-je
${ }^{\prime} \operatorname{leg}(\mathrm{s})$ )
(adapted from Vilera Díaz 1985: 46)

Finally, the third inanimate plural marker given by Vilera Díaz is -(w)i, which she explains attaches to Co-final roots - where C stands for a consonant - and has two allomorphs: a -wi allomorph that attaches to roots with a non-nasal consonant preceding the final $/ 0 /$, and an $-i$ allomorph that attaches to roots with a nasal consonant preceding the final / $0 /$. This is exemplified in (14); compare the three first singular-plural pairs with the final one (singular left, plural right).

| (14) a. o'teiko | b. o'teik-wi | 'nipple (м)' |
| :---: | :---: | :---: |
| c. la'lubo | d. la'lub-wi | 'musical instrument (cuatro)' |
| e. mõ:'laho | f. mõ''lah-wi | 'articulation(s)' |
| i. mõ: ${ }^{\text {h }}$ tuno ${ }^{18}$ | j. món ${ }^{\text {h' }}$ tun-ĩ | 'arm muscle(s), biceps' |
| (adapted from | ra Díaz 198 |  |

An important observation is worth making here. Note that it is possible that the third inanimate suffix discussed by Vilera Díaz is limited in its distribution to a position that follows the classifier, rather than attaching to the noun itself, since all of the singular forms in (14) seem to include a classifier (e.g., -bo in (14c) which is used for hollow cylindrical objects (Vilera Díaz 1985: 51)).

While the description in Vilera Díaz suggests that different inanimate nouns take different plural markers based on their phonology, some of the forms in Quatra (2008a) suggest that for certain inanimate nouns, both the -do <-dä> and the -ije ~ -inє <-iyë ~-iñë> (Vilera Díaz’s -je) plural suffixes are available; in these instances, he calls the plural form marked with -do <-d $\overline{>}>$ a "specific plural" which contrasts

18 Note that Vilera Díaz gives this form as m:õ ${ }^{h}$ tunõ, with the length diacritic preceding the vowel in the first syllable; given the lack of consonant length and the fact that for the plural form, the length diacritic follows the vowel, I have regularized this form to mõ. ${ }^{\text {h1 }}$ tunõ.
with the other plural form which he calls a "generic plural". He explains that the generic plural form is used to "talk about many $[\mathrm{X}]$ or $[\mathrm{X}]$ in general" while the specific plural is used to denote "few [X] or some specific [X]" (Quatra 2008a: 28). ${ }^{19}$
(15) a. mëjna
$m \varepsilon^{\mathrm{h}} n \mathrm{a}$
leg
'leg’
(adapted from Quatra 2008a: 332)

## b. mëjn-iñë <br> $m \varepsilon^{\mathrm{h}} \mathrm{n}$-ing <br> leg-PL.INAN 2 <br> 'legs'

c. mëjna-dä
$m \varepsilon^{h} n a-d \boldsymbol{p}$
leg-PL.INAN ${ }_{1}$
'legs (taken together)'

Further, it seems that, in some instances, a simple noun can have a plural referent and that it needs to be individuated via a classifier. This is shown here in (16) and (17) where both words are individuated by the use of a classifier (see the (b) examples). The form in (17c) suggests that once the word is individuated via the classifier, it can then be pluralized with the inanimate plural marker $-d s<-d \ddot{a}>$.
(16) a. ië
b. ië-ja
ic-ha
egg-CLF:4
'egg.SG'


Other ways to quantify nouns include numerals and quantifying expressions. The Jodï numerals are listed here in Table 12.14. For the numerals 'one' and 'two', there is an animacy distinction, and for the animate numerals for 'one' a further distinction is made based on the gender - masculine versus feminine - of the referent. Interestingly, these animate numerals for 'one' seem to have the masculine and feminine singular classifiers as a formative: -hã <-ja> MASCULINE and -hau <-jau> feminine. ${ }^{20}$ The numeral 'two' also makes a distinction based on animacy via the

[^7]Tab. 12.14: Jodï numerals (adapted from Quatra 2008a).

| num | animate |  | inanimate |  | component parts |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | nahãdõwã | <ñajadowa> (M) | nãhodea, hodea | <najodea, jodea> |  |
|  | jahadauwe | <ñajadauwë> (F) |  |  |  |
| 2 | ${ }^{\text {h }}$ wek ${ }^{\text {j }}$-d d | <jwekya-dï> |  | <jwekya-dä> | two-PL.AN ${ }_{1}$ and two-PL.INAN ${ }_{1}$ |
| 3 | - | - | abah ${ }^{\text {l }}$ d $\varepsilon$ ae | abajlëdë ae> | other-? father? |
| 4 | - | - | jaaba ${ }^{\text {h }}$ lعka | <ñaabajlëka> | ?-other-? |
| 5 | - | - | hodea mo- ${ }^{\text {h }}$ wa ${ }^{\text {h }}$ wa | <jodea mo-jwajwa> | one hand-clafflat |


| Vilera form | gloss | Quatra form |  | additional gloss |
| :---: | :---: | :---: | :---: | :---: |
| 'aiha ~ aihadł | 'many people or animals' | ajadi $\sim$ aehadł | <ayadï ~ aejadï> |  |
| 'aiwa | 'many things (InAN)' | aewa ~ aehawa ~ ajowa | <aewa ~ aejawa ~ ayowa> |  |
| 'k ${ }^{\text {w }}$ eta | 'to denote a numerous pack' | ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}}$ ¢ da | <jkwëda> | 'many (for things) (for people)' |
| t. 0 | 'a lot (for inexact quantities like sand, fire)' |  | - |  |
| 'bwetfa | 'everything (INAN)' | $b \varepsilon k^{\text {ja }}$ | <bëkya> |  |
| 'bwet $\int$ adi | 'everyone (AN) | bekjadł | <bëkyadï> |  |
| ho'deja | 'few (InAN)' | - | - |  |
|  |  | hãniwa | <janiwa> | 'few (for things)' |
| ho'deanã | 'few, a little (INAN)' | hodana | <jodana> | 'few (for people and animals)' |

plural suffixes -dì <-dï> and -ds <-dä>. The forms for 'three', 'four', and 'five' were only given as being used with "things", but it is not clear from the available information if they can be used with animate referents.

In addition to the numerals above, Vilera Díaz (1985: 143) gives two terms for
 are also provided by Vilera Díaz (1985: 143), summarized in Table 12.15; if available, I also list the corresponding forms given in Quatra (2008a) and any gloss that adds to or differs from the ones provided by Vilera Díaz.

### 5.4 Gender and classification

Jodï distinguishes between masculine and feminine gender in third-person singular pronouns (see Table 12.12). In addition, Jodï has masculine and feminine classifiers, as shown in Table 12.13. These animate classifiers are part of a larger system of classifiers that also includes classifiers for inanimate nouns, mostly referring to shape but also to function and consistency.

For inanimate referents, according to Quatra (2008a), Jodï speakers can use either a generic inanimate classifier (Table 12.13) or one of 41 possible specific inanimate classifiers. These classifiers and the demonstrative forms in which they are used appear in Table 12.16. While at first glance the system seems to be quite irregular, a closer look reveals that there are possible groupings for the classifiers based on their morphophonological behavior, especially with respect to pluralization. These four groups are discussed in order.
(i) The first group contains the forms for CLF:4 to CLF:13 all ending in /a/ or /ã/, and they all take the same plural marker, which has two allomorphs -عj〕 <-ëyä> if the singular classifier ends in an oral vowel and -ena <-eña> if it ends in a nasal vowel. Within this group, all except for clf:4 show a full reduplication pattern in the singular form.
(ii) The second group comprises CLF:14 to CLF:23, all of which end in /o/ or /õ/, and they all take - $\varepsilon i<-e \ddot{i}>$ (if oral) or $-\varepsilon \tilde{\imath}<-e \ddot{e}\rangle$ (if nasal) in their plural form. Within this group, there are two regular processes in the formation of the plural for all forms except CLF:14. First, the plural forms of CLF:15 to CLF:18 show an additional vowel $/ \mathrm{u} /$ or $/ \tilde{\mathrm{u}} /$ before the initial consonant, and, second, the consonants in the plural forms of CLF:19 to CLF:23 undergo a process of labialization. This group also shows reduplication for CLF:15 to CLF:21 in the singular form.
(iii) The third group is composed of CLF:27, and CLF:32 to CLF:36, which all take the suffix $-^{h} t \supset$ <-j $t \ddot{a}>$ in the plural.
(iv) CLF:28 to CLF:31, all of which take the plural suffix -do <-dä>, form the fourth group. This -do <-d $\ddot{c}>$ also applies to one of the plural forms available to CLF:25.

However, these groupings leave out clf:24, clf:25, and ClF:38 to ClF:44, which have more variability in their plural formation processes.
Tab. 12.16: Specific inanimate classifiers and demonstratives (adapted from Quatra 2008a: 32-40).

| $\begin{aligned} & \text { gloss } \\ & \text { \# } \end{aligned}$ | examplars | classifiers |  |  |  | proximate demonstrative |  |  |  | distal demonstrative |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | singular |  | plural |  | singula |  | plural |  | singula |  | plural |  |
| 4. | hammocks, eggs, bananas, yams, corn cobs, guamas, etc. | ha | 〈ja> | i $¢$ ja | <ïèya> | bihe | <bijë> | mine-i $¢$ ja | <miñe-ïèya> | dihe | <dijë> | kiē-̇̇ja | <kye-iëya> |
| 5. | dense liquids (soup and mud) | ${ }^{\text {hta }}{ }^{\text {hta }}$ | <itajta> | ${ }^{\text {nteja }}$ | <jiëya> | bi ${ }^{\text {h }}$ ¢ | <bijtë> | mine- <br> ${ }^{n} t \varepsilon j a$ | <miñe-jtëya> | di't $\varepsilon$ | <dijtë> |  | <kye-jtëya> |
| 6. | flat things | baba ~ ba | <baba ~ ba> | beja | <bëya> | bibe | <bibë> | mine-brja | <miñe-bëja> | dibe | <dibë> | kiẽ-beja | <kye-bëya> |
| 7. | things with branches (tree roots, veins, etc.) | ${ }^{\text {h }}$ a ${ }^{\text {hla }}$ | <jlajla> | ${ }^{\text {n }}$ ¢ja | <jlëya> | $\mathrm{bi}^{\mathrm{h}}$ \| $\varepsilon$ | <bijlë> | mine- ${ }^{\text {² }}$ ¢ja | <miñe-jlëya> | $\mathrm{di}^{\mathrm{h}}$ l $\varepsilon$ | <dijlë> | kiè- ${ }^{\text {h }}$ - ${ }^{\text {aja }}$ | <kye-jlëya> |
| 8. | flat surfaces (roof, shelf, etc.) | ${ }^{\text {h }}$ wa ${ }^{\text {b }}$ a | <jwajwa> | ${ }^{\text {n }}$ w $¢ \mathrm{ja}$ | <jwëya> | $\mathrm{bi}^{\text {h}} \mathrm{w}$ ¢ | <bijwë> | mine- <br> ${ }^{\text {h }}$ weja | <miñe-jwëya> | di'w ${ }^{\text {a }}$ | <dijwë> | $\mathrm{k}^{\mathrm{j}}$ - ${ }^{\text {h }}$ w $\mathrm{l}^{\text {ja }}$ | <kye-jwëya> |
| 9. | bones, tree branches, etc. | wãwã | <wawa> | wย̃กa | <wëña> | miw ${ }^{\text {c }}$ | <miwë̈> | mine- <br> wย̃ja | <miñe-wënña> | dĩw | <di̇wë> | kiẽ-w $\check{\text { a }}$ a | <kyewërina> |
| 10. | sticky substances | nana | <nana> | nยาа | <nëña> | $\min \varepsilon$ | <minë> | mine- <br> nยла | <miñe-nëña> | dĩn $\tilde{1}$ | <dinnë>> | kiẽ-nยла | <kyę-nëña> |
| 11. | pulp from seeds or coconuts, brains, feces, tied hammocks, tied fibers to make rope, etc. | ${ }^{\text {hn }}{ }^{\text {h }}$ na | <jnajna> | ${ }^{\text {nn}}$ nga | <jnëña> | $m i^{\text {h }}$ n $\varepsilon$ | <mijnë> | mine- <br> ${ }^{\text {hn }}$ हла | <miñe-jnëña> | $d i^{\dagger} n \varepsilon$ | <dijnë> | $\mathrm{k}^{\mathrm{j}} \mathrm{e}^{-\mathrm{h}} \mathrm{n}$ ¢ла | <kye-jnëña> |
| 12. | holes, cavities | ${ }^{\text {hka }}{ }^{\text {b }}$ ka | <jkajka> | ${ }^{\text {nk }}$ ¢ja | <jkëya> | $\mathrm{bi}^{\mathrm{h}} \mathrm{k} \varepsilon$ | <bijkë> | mine- <br> ${ }^{\text {nk }}$ kja | <miñe-jkëya> | di'k ${ }^{\text {c }}$ | <dijkë> | $\mathrm{k}^{\mathrm{j}} \mathrm{e}^{-1} \mathrm{k}$ kja | <kye-jkëya> |
| 13. | vertical cut trunks, seats made of trunks | ${ }^{\text {nkan }}{ }^{\text {n }}$ kã | <jkajka> | ${ }^{\text {hk }}$ ¢̃na | <jkëña> | $m i^{\mathrm{h}} \mathrm{k} \tilde{\varepsilon}$ | <mijkë̈> | mine- <br> ${ }^{\text {h }} \mathrm{k} \varepsilon$ हna | <miñe-jkëña> | dî'k ${ }^{\text {r }}$ | <dijkë̈> |  | <kye- <br> jkëña> |


| 14. | empty things, horizontal trunks, penises, bird beaks, horns, etc. |  | <bo> | bei | <bëi> | bibo | <bibo> | mine-bei | <miñe-bëi> | dibo | <dibo> | kiè-bri | <kye-bëi> |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 15. | dresses, cloths and weavings, hot chili peppers | nono | <nono> | ũnย1ั | <unë̈i> | mino | <mino> | mine-ũnعİ | <miñe- unël> | dĩno | <dino> | kiè-ũnعĩ | <kye-unëì> |
| 16. | handles of axes/ knives/machetes/etc. | ${ }^{\text {nno }}{ }^{\text {hn }}$ no | <jnojno> | ưhnعıิ | <ujnël> | mi ${ }^{\text {h }}$ no | <mijno> | mine- <br> ũhnعĩ | <miñe-ujnël> | ditho | <dijno> |  | <kye- ujnëì |
| 17. | loincloths, scrotums, etc. | dodo $\sim$ do | <dodo ~ do> | udzi | <udëi> | bido | <bido> | mine-udzi | <miñe-udëi> | dido | <dido> | kiè-udzi | <kye-udëi> |
| 18. | nails, pinapple peels, palm spathes, etc. | lolo | <lolo> | ulદi | <ulëi> | bilo | <bilo> | mine-ulci | <miñe-ulëi> | dilo | <dilo> | $\mathrm{k}^{\mathrm{j}}$-̃-ulıi | <kye-ulë̀> |
| 19. | things tied in a bundle, corn cobs tied together, garlic/ onions tied together in strings, plants that come out of the ground without a trunk, etc. | ${ }^{\text {h }}$ ko ${ }^{\text {h }}$ ko ~ "ko | <jkojko~ jko> | ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}}$ ¢i | <jkwëi> | bi ${ }^{\text {² }}$ o | <bijko> | mine- <br> ${ }^{n}{ }^{n}{ }^{w} \varepsilon$ i | <miñe-jkwëi> | di ${ }^{\text {h }}$ \% | <dijko> |  | <kye-jkwëi> |
| 20. | sugarcane flowers, waistband strings, braided cotton necklaces, braided things | hoho ~ ho | <jojo ~ jo> | ${ }^{\text {n }}$ w i | <jwëi> | biho | <bijo> | mise- ${ }^{\text {hw }}$ wi | <miñe-jwëi> | diho | <dijo> |  | <kye-jwëi> |
| 21. | palm buds, (body) muscles, bundles of fused vines, bundles in general | hõhõ | <jojo> | ${ }^{\text {h}}$ w $\check{\text { İ }}$ | <jwë̈i> | mihõ | <mijo> |  | <miñe-jwëli> | dīhõ | <dijo> |  | <kye-jwëli> |

Tab. 12.16 (continued)

| gloss | examplars | classifiers |  |  |  | proximate demonstrative |  |  |  | distal demonstrative |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | singular |  | plural |  | singular |  | plural |  | singular |  | plural |  |
| 22. | ground things, rain, baskets, hampers, etc. | o | <0> | w $\mathrm{i}^{\text {i }}$ | <wëi> | bio | <bio> | mine-wei | <miñe-wëi> | dio | <dio> | kiẽ-w ${ }^{\text {i }}$ | <kyē-wëi> |
| 23. | some types of honeycombs, mouths of blowguns, craniums, etc. | õ | <0¢ | w $\check{\varepsilon}$ | <wëli> | miõ | <miop | mine-w ${ }^{\text {İ }}$ | <miñe-wëli> | diõ | <diō> | $k^{j}$ ẽ-w ${ }^{\text {İİ }}$ | <kyē-wëli> |
| 24. | leaves and thin things, papers, notebooks, books, plastic bags, etc. | ${ }^{\text {jo }}$ a | <jya> | aij $\varepsilon$ | <aiyë> | bi ${ }^{\text {j }}$ a | <bijya> | mine-aije | <miñe-aiyë> | di ${ }^{\text {hja }}$ | <dijya> | $k^{j i}{ }^{\text {en-aij }}$ ع | <kye-aiyë> |
| 25. | hair, feathers, palm folioles, teeth, etc. | he ${ }^{\text {h }}$ J | 〈jejkä> | $\begin{aligned} & \text { ї } \sim \\ & \text { hkJd } \end{aligned}$ | <ï̈~ <br> jkädä> | $\mathrm{bi}^{\text {h }}$ J | <bijkä> | mine-ia ~ <br> mine- <br> ${ }^{n} \mathrm{k} \jmath \mathrm{d} \supset$ | <miñe-ï̈ ~ miñe-jkädä> | di'k ${ }^{\text {a }}$ | <dijkä> |  | <kye-iö ~ <br> kyẹ-jkädä> |
| 26. | flowers | bu | <bu> | buds | <budä> | bibu | <bibu> | mine-bu minebud | <miñe-bu miñe-budä> | dibu | <dibu> | kiẽ-bu kiẽ-budэ | <kyé-bu <br> kyẹ-budä> |
| 27. | (plant) shoots | bu | <bu> | $b u^{\text {h }}$ t | <bujtä> | bibu | <bibu> | mine- <br> bu'to | <miñe-buhtä> | dibu | <dibu> | $k^{j}$ è-buhtı | <kye-bujtä> |
| 28. | thorns, stones | hi ${ }^{\text {h }}$ i | <iijti> | ${ }^{\text {ntido }}$ | <jitidä> | bi ${ }^{\text {h }}$ i | <bijti> | mine- <br> ${ }^{h}$ tid | <miñe-jitid̈> | di ${ }^{\text {h }}$ i | <dijti> | $k^{j} \mathrm{e}^{-1}$ tid ${ }^{\text {a }}$ | <kye-jtidä> |
| 29. | wood planks, ribs | hehte $\sim$ hte | <jejte ~ jte> | ${ }^{\text {nteds }}$ | <jtedä> | bi'te | <bijte> | mine- <br> ${ }^{\text {hted }}$ | <miñe-jtedä> | di'te | <dijte> | kiè- ${ }^{\text {hted }}$ - | <kye-jtedä> |
| 30. | grass, hair tufts, nests made of hay, etc. | ${ }^{\text {hterntẽ }}$ | <jitejite> | ${ }^{\text {hteẽdo }}$ | <jtedä> | mihtẽ | <mijtele> | mine- <br> htẽd | <miñe- jtedä> | dintẽ | <dijtè> | $k^{j} \mathrm{e}^{-}$'tẽd | <kye- jtedä> |


| 31. | seeds or palm fruit shells，calabashes for eating，glasses， shoes，fingers，etc． | he ${ }^{\text {hta }}$ | 〈jejta＞ | ${ }^{\text {ntado }}$ | ＜jtadä＞ | $\mathrm{bi}^{\text {h }}$ ta | ＜bijta＞ | mine－ <br> htad） | ＜miñe－jtadä＞ | di ${ }^{\text {h }}$ ta | ＜dijta＞ | kiè－${ }^{\text {radad }}$ | ＜kye－jtadä＞ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 32. | twigs，pencils，pens， spines，etc． | hel $\varepsilon \sim 1 \varepsilon$ | 〈jelë～lë＞ | $\mathrm{al} \varepsilon^{\text {ht }}$ ） | ＜alë̈tä＞ | bile | ＜bilë＞ | mine－ <br> al $\varepsilon^{h} t \supset$ | ＜miñe－alëjtä＞ | dile | ＜dilë＞ | kiè－alc ${ }^{\text {h }}$ t | ＜kyee－alëtä＞ |
| 33. | flour，dust，gun powder，powders in general | ${ }^{\text {njowa }}$ | ＜jñowa＞ | wãht ${ }^{\text {a }}$ | ＜wagtä＞ | mi＇howã | ＜mijinowa＞ | mine－ <br> wãht | ＜miñe－wajtä＞ | dithnowã | ＜dijñowa＞ | $k^{\text {kẽ }}$－wãhto | ＜kye－wajtä＞ |
| 34. | fruit peels，bark | mi | ＜mi＞ | mi＇to | ＜mijitä＞ | mimi | ＜mimi＞ | mine－mi～ <br> mine－ <br> minta | ＜miñe－mi＞～ miñe－mijtä＞ | dĩmi | ＜dimi＞ | $k^{j} \mathrm{e}-\mathrm{mi}$～ $k^{i} \mathrm{e}-\mathrm{mi}^{\mathrm{h}} \mathrm{t}$ ว | ＜kye－mi～ <br> kyé－mijtä＞ |
| 35. | open nests，any class of woven mats | ${ }^{\text {h we }}{ }^{h}$ we～ ${ }^{\text {h we }}$ | ＜jwejwe～ jwe＞ | ${ }^{\text {h }}$ we ${ }^{\text {hto }}$ | ＜jwejtä＞ | bi＇we | ＜bijwe＞ | mine－ <br> ${ }^{\text {h }}$ we ${ }^{h}$ to | ＜miñe－jwejtä＞ | di＇we | ＜dijwe＞ |  | ＜kye－jwejtä＞ |
| 36. | bunches／clusters | hẽme | 〈jeme＞ | $m e^{\text {ht }}$ ） | ＜mejtä＞ | mime | ＜mime＞ | mine－ <br> me ${ }^{h}$ t | ＜miñe－mejtä＞ | dĩme | ＜dime＞ | $k^{j}$ ẽ－me ${ }^{\text {hto }}$ Ј | ＜kye－mejtä＞ |
| 37. | fruits，round objects， vines，lianas，thread， hoses，cables，etc． | hu | 〈ju＞ | $u^{h}$ tə～ ebo ${ }^{\text {h }}$ to ibo ${ }^{\text {h }}$ to | ＜ujtö～ <br> ebojto～ <br> ibojto＞ | mi＇hu～ bihu | ＜bijtu～ biju＞ | mine－unta <br> ～mine－ <br> ebo ${ }^{\text {ht }}$ to <br> mine－ <br> ibo ${ }^{\text {h }}$ to | ＜miñe－ujtö＞～ <br> miñe－ebojto <br> miñe－ibojto＞ | $\mathrm{di}^{\mathrm{h}} \mathrm{t}$ u dihu | ＜dijtu～ diju＞ | $k^{j}$ ẽ－uhtə <br> kẽe－ebo ${ }^{\text {h }}$ to <br> kiẽ－ibo ${ }^{h}$ to | ＜kyẹ－ujtö <br> kyé－ebojto <br> kye－ibojto＞ |
| 38. | palm trees | hĩ | ＜ji＞ | ãhtaĩ～ <br> ãihto | ＜ajtaí～ aijtä＞ | mihĩ | ＜miji＞ | mine－ <br> ãhtãĩ～ <br> mine－ãi＇to | ＜miñe－agtaị～ <br> miñe－aijtä＞ | dîhĩ | ＜dijij＞ | kiē－ãhtaĩ $k^{\mathrm{j}} \mathrm{ẽ}^{-a i^{h} t \mathrm{o}}$ | ＜kye－ajtai <br> kyẹ－aijtä＞ |
| 39. | honey，corn stalks， blowguns，etc． | hẽna | 〈jena＞ | ãnapa | 〈anaña＞ | mina | ＜mina＞ | mine－ <br> ãnaga～ <br> mine－ <br> ãna ${ }^{h}$ t | ＜miñe－anaña <br> miñe－anajtä＞ | dĩna | <dinina> | kiẽ－ãnaュa <br> kiẽ－ãnahtว | ＜kyé－anaña kye-_anajtä> |

Tab． 12.16 （continued）

| gloss | examplars | classifiers |  |  |  | proximate demonstrative |  |  |  | distal demonstrative |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \＃ |  | singular |  | plural |  | singular |  | plural |  | singular |  | plural |  |
| 40. | seeds | dalع | ＜dale＞ | ad $\varepsilon$ | ＜adë＞ | bide | ＜bidë＞ | mine－ade | ＜miñe－adë＞ | did $\varepsilon$ | ＜didë＞ | kiẽ－ad $\varepsilon$ | ＜kye－adë＞ |
| 41. | drinks and liquids in general | ${ }^{\text {joju }}$ | ＜jyu＞ | auk ${ }^{\text {j }}$ | ＜aukye＞ | bi ${ }^{\text {ju }}$ | ＜bijyu＞ | mine－ <br> auk ${ }^{j}$ e | ＜miñe－ aukye＞ | di ${ }^{\text {jou }}$ | ＜dijyu＞ | kiè－auk ${ }^{\text {j }}$ | ＜kye－aukye＞ |
| 42. | living trees | ${ }^{\mathrm{j}} \mathrm{j}$ ¢ $\dagger$ | 〈јуёї＞ | ${ }^{\text {htau }}$ | ＜jtau＞ |  | ＜bijyëì＞ | mine－${ }^{\text {htau }}$ | ＜miñe－jtau＞ | di ${ }^{\text {² }}$ ¢ $¢$ | ＜dijyëī＞ | kiē－${ }^{\text {² }}$ tau ～ kiè－antai | ＜kye－jtau～ kyẹ－ajtaï＞ |
| 43. | roads，lines | mana～ ma | $\begin{aligned} & \text { <mana> ~ } \\ & \text { ma> } \end{aligned}$ | $m a^{\text {h }} \mathrm{k}^{\mathrm{j}} \mathrm{a}$ | ＜majkya＞ | $\operatorname{mim\varepsilon }$ | ＜mimë＞ | mine－ <br> $m a^{\text {h }}{ }^{\text {j }}{ }^{\text {a }}$ | ＜miñe－ majkya＞ | $\operatorname{dim} \varepsilon$ | ＜dime＞ | $k^{\text {jex }}$－ma ${ }^{\text {h }}{ }^{\text {j}}{ }^{\text {a }}$ | ＜kye－ majkya＞ |
| 44. | rivers，creeks，etc． | heds | 〈jedä＞ | adวdว | ＜adädä＞ | bido | ＜bidä＞ | mine－ <br> adっdっ | ＜miñe－ <br> adädä＞ | did 3 | ＜didä＞ | kiẽ－adวdว | ＜kye－ adädä＞ |

Note that, as Table 12.16 shows, these classifiers can combine with the demonstrative roots bi- <bi-> and di-<di->. When they do, nasal classifiers nasalize the /i/ in the distal root and both the /i/ and the /b/ in the proximate. This process is further illustrated and discussed in Table 12.8 and applies to the forms of CLF:9 to CLF:11, CLF:13, CLF:15 and CLF:16, CLF:21, CLF:23, CLF:30, CLF:33 and CLF:34, CLF:36, CLF:38, CLF:39, and CLF:43. A second phonological process seems to be at play in the formation of the demonstratives for CLF:4 to CLF:13. As mentioned above, these all end in /a/ or /ã/, but in the demonstrative this vowel is raised to $/ \varepsilon /$ - represented by Quatra as <ë>. Finally, the demonstrative forms show that, except CLF:43, for all those classifiers that have an initial non-reduplicative $j V$ syllable (<j> represents a voiceless glottal fricative) in their singular form, the second syllable is used as the classifier in the demonstrative. This applies to ClF:25, clf:28 to clf:32, clf:36, CLF:39, and clF:44.

Despite the large number of classifiers included in Table 12.16, this list seems not to be exhaustive. For instance, as comparison of the examples in (18) suggests, a classifier -wã <-wa> is likely part of the word for 'mountain'.

rock-CLF:28
'rock'
c. innë-bo
in $\varepsilon$-bo
rock-CLF:31
'big rock that comes out of a mountain' (adapted from Quatra 2008a: 86-87)
b. $\underline{\underline{i n}} n \ddot{\text { en }}-b a$
ĩne-ba
rock-CLF:6
'flat rock'
d. ine $e$-wa

Ĩnc-wã rock-CLF:? 'mountain'

As in many other northwest Amazonian classification systems (Seifart \& Payne 2007), the loci of these markers include nouns (Section 5.2), numerals (Section 5.3), demonstratives (Section 5.1), adjectives (Section 4), and the question words for 'what' and 'which' (Section 7.4). There are minimal differences between the forms when attached to different hosts, suggesting that they are instantiations of the same system as realized in different contexts.

The functions of classifiers include individuation (see Section 5.3, particularly examples (16) and (17)), noun derivation (see Section 5.5, particularly example (20)), specification, and classification. The examples in (19) illustrate the specification function. A root like ${ }^{h}$ walule <jwalulë> 'plantain' can be further specified to refer to a specific part of the plant (leaf, bunch) or of the fruit (peel). It is possible that, like in other South American languages, Jodï classifiers also serve discourse functions such as reference tracking; however, the lack of naturalistic connected speech data makes this hypothesis currently untestable.
(19)
a. jwalulë
b. jwalulu
${ }^{\text {h }}$ walulu
plantain.PL
'plantains'
e. jwalulë-jkojko
${ }^{\text {h }}$ walule- ${ }^{\text {h }} \mathbf{k o}{ }^{\text {h }} \mathbf{k o}$
plantain-CLF:19
d. jwalulë-mi
${ }^{\text {h }}$ walule-mi
plantain-CLF:34
'(one) plantain peel'
'(one) plantain bunch'
(adapted from Quatra 2008a: 163, 111, 188, 341)

### 5.5 Compounding and derivation

Word formation processes for nouns or verbs in Jodï have not been investigated; however, based on the available data, it is possible to discuss at least three distinct processes that derive new nouns.

First, attaching a classifier to a noun root serves, in some sense, as a derivational process, as it can create new nominals that denote referents that are distinct from - but related to - the underived noun. Example (20) illustrates this process with the noun ${ }^{h} t u<j t u>$ 'head' taking different specific inanimate classifiers to form the nouns for 'hair', 'cranium', 'brain', and 'skull'.
(20) a. jtu
${ }^{\mathrm{h}} \mathrm{tu}$
head
'head'
d. jtu-jnajna
${ }^{\text {h }}$ tu- ${ }^{\text {h }}$ na ${ }^{\text {h }}$ na
head-CLF:11
'brain'
b. jtu-jejkä
${ }^{h}$ tu-he ${ }^{\text {h }} \mathbf{k}$ o
head-CLF:25
'hair'
e. $\boldsymbol{j} t u-\underline{O}$
${ }^{h}$ tu-
head-CLF:23
'skull'
(adapted from Quatra 2008a: 155-156)

Additionally, simple nouns can combine to form compound nouns via apposition. In this construction, the head is the right-hand element of the compound. As shown in (21), ${ }^{h}$ joba e ${ }^{h}$ ko <jyoba ejko> is a type of snake and not a type of parrot, and mali ibuhu $e^{h} k o$ <mali ibuju ejko> is a type of snake rather than a type of man or a type of liana. It is unclear, however, how compounds with more than two simple nouns, such as the one in (21c), should be interpreted: [mali $+i b u h u]+e^{h} k o<[m a l i+i b u j u]$ $+e j k o>$ where the first two elements are a compound that then attaches to the third element, or mali $+\left[i b u h u+\mathrm{e}^{\mathrm{h}} \mathrm{ko}\right]<m a l i+[i b u j u+e j k o]>$ where the first element is a simple noun that attaches to a compound formed by the last two elements.

Tab. 12.17: Deverbal nouns with dekae/dekawa (adapted from Quatra 2008a).

| verb |  | gloss | noun |  | gloss |
| :---: | :---: | :---: | :---: | :---: | :---: |
| ${ }^{\text {h }}$ u ${ }^{\text {n }} \mathrm{k}^{\text {w }}$ ee | <jtu jkwae> | 'cut hair (v.)' | ${ }^{\text {h }}$ tu ${ }^{\text {h }}$ w ${ }^{\text {ae dekae }}$ | <jtu jkwae dekae> | 'scissors' (SG) |
| ${ }^{\text {h }}$ tu ${ }^{\text {h }} \mathrm{k}^{\text {w }} \mathrm{aj}$ | <jtu jkwaï> | 'comb (v.)' | ${ }^{\text {htu }}$ ¢ ${ }^{\text {k }}{ }^{\text {w }}$ ȧ̇ dekae | <jtu jkwaï dekae> | 'comb (n.)' (SG) |
| ${ }^{\text {ntuk }}$ wãĩbi | <jtukë wailbi> | 'climb (to the top) (v.)' | ${ }^{\text {h }}$ tuk $\varepsilon$ wãĩbi dekae | <jtukë waíbi dekae> | 'ladder' (SG) |
| ${ }^{\text {n }}$ wai | <jwaï> | 'write, sign' | ${ }^{\text {h w wai dekae }}$ | <jwaï dekae> | 'chalk' (sG) |
| nibat | <nibaï> | 'whip (v.)' | nibai dekae | <nibaï dekae> | 'whip' (sG) |
| hobe | <jobe> | 'sing' | hobe dekae | <jobe dekae> | 'musical instrument' (sG) |



Finally, there is also a process that derives a noun denoting an instrument from a verb by adding dekae <dekae> in the singular and dekawa <dekawa> in the plural. This process is illustrated with the verb-noun pairs in Table 12.17. The meaning of dekae <dekae> alone is not given in Quatra (2008a). However, comparison with dêkã <dęka> in wع dẽkã <wë dẹka> 'friend' and we deka- ${ }^{h} j a$ <wë deka-jya> 'book', which can be understood as being formed by w $\langle$ wë> 'watch, see, guard' + deka <deka> + -hã <-ja> CLF:M.SG and we <wë> 'watch, see, guard' + deka <deka> + - ${ }^{h} j a<-j y a>$ CLF:24, respectively, suggests that dekae <dekae> could be formed by deka <deka> + the generic classifier hae <jae>. The function of deka <deka>, however, is not clear.

### 5.6 Characteristics of the noun phrase and nominal modification

A noun phrase (NP) in Jodï is minimally formed by a personal pronoun, a demonstrative, or a noun. More complex NPs are formed by combining multiple nouns or nouns and pronouns - for example, see the noun + noun and pronoun + noun possessive phrases in Section 5.7 - as well as a noun and other types of words such as demonstratives (22), numerals (23), and quantifiers (24). In such combinations, one or more components serve a modifying function (e.g., a demonstrative as a modifier of a noun) and one serves as the head.
(22) a. $b^{w} o$
'hwanã
PROX.INAN.GEN blowgun
'this blowgun'
(adapted from Vilera Díaz 1985: 96)
b. ta 'hwanã
dIST.INAN.GEN blowgun 'that blowgun'

| DEMONSTRATIVE <br> PRONOUN | NOUN | UNIDENTIFIED <br> MORPHEME | ATTRIBUTE | SUFFIXES OF <br> ATTRIBUTE <br> (-ha/-hae) |
| :--- | :--- | :--- | :--- | :--- |

Fig. 12.1: Template for long modification, adapted from Vilera Díaz (1985: 78-79).
(23) jwekya-di ini-mo
${ }^{\text {h }}$ wek ${ }^{j}$ a-di ĩni-mo
two-AN. $\mathrm{PL}_{1}$ child-AN. $\mathrm{PL}_{2}$
'two children'
(adapted from Quatra 2008a: 359)
(24) jodana inini-mo
hodana ĩni-mo
few.AN child-AN.PL ${ }_{2}$
'few children'
(adapted from Quatra 2008a: 334)

An important characteristic of complex NPs is that there is (optional) nominal classifier concord between the modifier(s) and the head noun. In brief, some noun modifiers, such as demonstratives, take the classifier corresponding to the head noun; this concord is exemplified in (25) and (26) where the demonstrative agrees with the noun it modifies.

| (25)jye $=k a$ bi-bo jtawï-bo | jkami di! |  |  |
| :--- | :--- | :--- | :--- |
| ${ }^{\text {h }}$ je=ka | bi-bo | htawi-bo | ${ }^{\text {h }}$ kami di |
| 1SG.PRO=COM | PROX-CLF:14 | tree-CLF:14 | carry |
|  | ACT.IMP |  |  |

'Carry this trunk with me!'
(adapted from Quatra 2008a: 242)

## (26) bi-bu bu jíbï dë <br> bi-bu bu 'hibi d $\varepsilon$

PRox-CLF:26 flower smell.good 3sG.ACT.PRS
'This flower smells good.'
(adapted from Quatra 2008a: 102)

In all instances, the head noun is the right-most constituent of the phrase. Conversely, Vilera Díaz (1985: 78-79) discusses what she calls adjetivación larga 'long modification', which she says follows the schema in Figure 12.1.

In this construction, an attribute follows the noun. However, the unidentified morpheme is $\tilde{n} a$, which acts as a copula in this construction. Therefore, this con-
struction can better be understood as a case of two distinct noun phrases in a copulative construction.

### 5.7 Possession

Possession is accomplished by juxtaposition of a possessor and the possessed noun. The possessor can be expressed via a full noun or a pronoun. Both constructions appear in the complex noun phrase in (27), where the first-person singular pronoun ${ }^{h} j e$ <jye> is the possessor of the aba ${ }^{h} l a u$ <abajlau> 'sister', and this possessive phrase is in turn the possessor of innimo <inimo> 'children'. The paradigmatic examples in (28) show that the pronouns used in this construction are the person pronouns given in Table 12.12.
(27) [ jye abajlau] ini-mo
${ }^{\text {h }}$ je $\quad$ abahlau ĩni-mo
1SG.PRO sister child-PL.AN 2
'my sister's children'
(adapted from Quatra 2008a: 266)
(28)
a. jye $\quad$ ama
hye áma
1SG.PRO mother
'my mother'
b. jyedï ama
hjedi ãma
1PL.PRO mother
'our mother'
c. $\boldsymbol{j k} \quad \underline{e} \quad a m a$
${ }^{\text {h }} \mathbf{k} \varepsilon \quad$ ãma
2SG.PRO mother
'your (sG) mother'
$\begin{array}{lr}\text { e. jkye } & \underline{a m a} \\ { }^{\mathbf{h} k} \mathbf{k}^{\mathbf{j}} \mathbf{e} & \text { ãma }\end{array}$
3SG.M.PRO mother
'his mother'
d. jkëdï ama
${ }^{\mathrm{h}}$ kedi ãma
2PL.PRO mother
'your (PL) mother'
f. bidï ama
bidi ãma
3PL.PRO mother
'their mother'

| g. kyu | $\underline{\text { a }}$ ma |
| :---: | :---: |
| $k^{\text {j }} \mathbf{u}$ | ãm |

3SG.F.PRO mother
'her mother'
(adapted from Quatra 2008a: 170, 119, 120, 131, 61, 173)

Inanimate possessees are marked by the same strategy used to mark animate possessees in (27) and (28), as illustrated by the contrast between the noun phrases in (29). In (29), all examples share the same possessor - second-person singular
marked with the pronoun ${ }^{h} k \varepsilon<j k e ̈>-b u t ~ e a c h ~ h a s ~ a ~ d i f f e r e n t ~ p o s s e s s e e: ~ ' b a b a ~$ <bába> 'father' in (29a), dodo <dodo> 'loincloth' in (29b), and mo <mo> 'hand' in (29c). These examples also illustrate possession of a kinship term, an object, and a body-part term, respectively.
(29)

| a. jkë | bába | b. jkë | dodo |
| :---: | :---: | :---: | :---: |
| ${ }^{\text {h }}$ k e | 'baba | ${ }^{\text {h }} \mathrm{k} \varepsilon$ | dodo |
| 2SG.PRO father 'your father' |  | 2SG.PRO loincloth.clf:17 |  |
|  |  | 'you | cloth' |
| (adap | from | a 200 | 49, 80) |

c. jkë mo
${ }^{h} k \varepsilon \quad$ mo
2SG.PRO hand
'your hand'

Importantly, examples like (30) and (31) show that possession marking is not obligatory, even for some nouns for which this may be expected. In (30), 'leg' enters in a possessive construction marked with ${ }^{h} j e$ <jye> 1SG.PRo; however, in (31) 'leg' appears alone without a possessive modifier.
(30) jye mejnä labokinï kye
hje me ${ }^{\text {h }} \mathrm{n}$ labokini $\mathrm{k}^{\mathrm{j}} \mathrm{e}^{2}$
1SG.pro leg swell 3sG.ACT.REC.PST
'My leg got swollen.'
(adapted from Quatra 2008a: 174)
(31) mejnä mëmëbï dinnëe ${ }^{21}$
$\mathbf{m e}^{\mathrm{h}} \mathbf{n} \boldsymbol{\jmath}$ memebí dĩne
leg itch 3SG.ACT.MED.PST
'(My) leg was itchy.' (Lit. 'itched’)
(adapted from Quatra 2008a: 294)

### 5.8 Case marking, postpositions, and relational nouns

According to the available descriptions, Jodï marks case via postpositions (Quatra 2008a) or via suffixes (Vilera Díaz 1985); it is, thus, unclear if these case markers are independent words, clitics, or suffixes. Given that they are called "enclitic postpositions" by Quatra (2008a) and that the author writes them together with the noun, I represent them here as clitics. All four case markers described by Quatra and/or Vilera Díaz, as well as a fifth case marker not identified in the literature as such, are discussed here. I then illustrate the encoding of spatial relations via dedi-

21 The verb form dĩn <dinië>, used here as well as in examples (90), (93) and (110), seems to be a reduced form of dedĩn <dëdịnë>; see Table 12.19.
cated locational terms (which Quatra describes as postpositions but which I posit are relational nouns).

According to Quatra (2008a: 200), Jodï has an enclitic postposition $=n \dot{t}<=n \ddot{i}>$ that occurs with the direct object of a verb, with an instrument, with locations (where it can variably appear as $=n \varepsilon<=n e ̈>$ or $=n a<=n a>$ ), ${ }^{22}$ and with time expressions. Examples (32)-(34) show $=n \dot{i}<=n \ddot{i}>$ on the direct objects of 'call', 'stop', and 'tie', respectively. Quatra (2008a: 200) affirms that, when it occurs on direct objects, this postposition is used when the noun refers to "people or animals"; (32) and (33) illustrate the use of $=n \dot{i}$ <=n $\ddot{>}\rangle$ with human animate nouns and (34), with a nonhuman animate noun. Numerous examples in Quatra (2008b) with 'eat' (see below) suggest that inanimate direct objects are not flagged with this case marker, confirming the claim that it occurs only or primarily on animate nouns. Two additional examples of inanimate objects with no $=n \dot{i}<=n \ddot{i}>$ marking appear in (35) and (36). This system is reminiscent of the differential object marking described by Stenzel (2008) for Kotiria (Tukanoan) and other northwest Amazonian languages. ${ }^{23}$
(32) $\underset{\sim}{a} m a=\boldsymbol{n} \boldsymbol{i} \quad a b e d i!$
ãma=ni abe di
mother=OBJ call ACT.IMP
‘Call (your) mother!’
(adapted from Quatra 2008a: 200)
(33) $\operatorname{in} n i-m o=n i ̈ \quad j k a i d e ̈ w a e ~ d i!~$
ĩni-mo=ni $\quad{ }^{\text {h }}$ kaidewae di
child-PL.AN ${ }_{2}=\mathbf{O B J}$ stop ACT.IMP
'Stop the children!'
(adapted from Quatra 2008a: 110)
(34) yëwi=nï anïdï jto
jewi=ni ãnide ${ }^{\text {h }}$ to
dog=OBJ tie 1SG.ASSEV.ACT.PRS
'I am going to tie the dog.'
(adapted from Quatra 2008a: 53)

22 Note, however, that Quatra (2008a) does not provide any examples of the other two variants with locations. An example of $=n a<=n a>$ is available with a time expression: ${ }^{h} t u w \partial=n \dot{i} \sim{ }^{h} t u w \partial=n a$ <jtuwö=nï ~ jtuwö=na> 'in summer' (Quatra 2008a: 157). An additional use of =na is observable in the expression 'slap' (Lit. 'hit on the cheek') in (78).
23 It is possible that this is in part what led Vilera Díaz (1985: 99) to treat the -ni suffix in her object pronouns paradigm as a marker of complementos indirectos 'indirect objects', since it would correspond to the Spanish preposition $a$ which is used with indirect objects (recipients) as well as animate direct objects.
(35) balo jwëu jto
balo ${ }^{\mathrm{h}} \mathrm{w} \varepsilon \mathrm{u}{ }^{\mathrm{h}}$ to
garden clear 1SG.ASSEV.ACT.PRS
'I am going to clear the garden.'
(adapted from Quatra 2008a: 165)
(36) jela aji jtë
hela ahi ${ }^{\mathrm{h}}$ t $\varepsilon$
machete sharpen 1SG.ACT.PRS
'I am sharpening the machete.' (adapted from Quatra 2008a: 44)

The examples in (37) and (38) illustrate $=n \dot{i}<=n \ddot{>} \gg$ on an instrumental argument; (39) and (40) show it on a locative argument and a time expression, respectively. Note that in the context of a non-core argument, unlike when it occurs on a direct object, $=n \dot{i}$ <=nï> can attach to an inanimate noun - for instance, contrast hela <jela> 'machete' in (38) with its use in (36).
(37) jkwë-jae=nï?
${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}} \varepsilon$-hae=$=\mathbf{n i}$
what.thing=OBL
'With what?'
(38) jela=nï
hela=ni
machete $=\mathbf{O B L}$
'with the machete'
(39) jye $\quad n u w \underline{e}=\boldsymbol{n}$
${ }^{\text {hje }} \quad$ nuwẽ $=\mathbf{n i}$
1sG.PRO house=OBL
'in my house'
(40) baede jtuwö=nï
baede ${ }^{\text {h }}$ tuwə $=\mathbf{n i}$
before year=0BL
'many years ago'
(adapted from Quatra 2008a: 200)

The difference in selection behavior for $=n \dot{i}$ <=n $\ddot{>}>$ - that is, only nouns with an animate reference for object arguments but nouns with inanimate referents for non-
core arguments - and Quatra's mention of two other possible allormorphs for $=n \dot{i}$ <=nï> on locative arguments - suggests that these might be two distinct case markers (perhaps diachronically as well as synchronically) rather than one. For this reason, I have glossed them as овј and obl, but this hypothesis requires further testing.

Quatra (2008a: 233) describes an additional post-position like <lïkë>, written separately, that marks the indirect object argument of a ditransitive verb, as in example (41).

2SG.PRO mother Io give ACT.IMP
'Give (it) to your mother!'
(adapted from Quatra 2008a: 233)

Additionally, Quatra (2008a: 172) mentions an enclitic postposition with the form $=k \dot{i}\langle=k \ddot{i}\rangle$, exemplified in (42), with two variants $=k a<=k a>$, in (43), and $=k \varepsilon<=k e ̈>$ in (44). ${ }^{24}$ This postposition encodes the goal argument of a verb. Note that Vilera Díaz (1985: 55-59) proposes that these are two distinct suffixes with -ka marking general movement toward a given direction and -ke marking a more specific meaning of upward motion.
(42) jkyo=kï waí di!
${ }^{\mathrm{h}}{ }^{\mathrm{k}}{ }^{\mathrm{j}}=\mathbf{k i} \quad$ wãĩ di
outside=ALL go ACT.IMP
‘Go outside!'
(43) jtädä=ka waí di!
${ }^{\text {h }}$ todっ=ka wãĩ di
far=ALL go ACT.IMP
'Go away/far!'
(44) jtïkë maị!
${ }^{\text {htike }}$ maĩ
there InACT.IMP
‘Excuse me!’ (Lit. ‘Stay there!')
(adapted from Quatra 2008a: 172)

24 Note that the word given as instantiating the use of the $=k \varepsilon<=k \ddot{>}>$ allomorph in (44) is a place adverb. However, the third example in Table 12.17 illustrates the use of this allomorph attached to ${ }^{h} t u<j t u>$ 'top'.

Finally, Quatra (2008a: 172) mentions =ka <=ka> which has a comitative meaning ('together with', in his translation). This marker is exemplified in (45) and (46), where it occurs on a noun and a pronoun, respectively.
(45) jye amajno=ka waí jtoba
hje ãma ${ }^{\text {h }}$ nõ=ka wãĩ ${ }^{\text {h }}$ toba
1SG.PRo brother=COM go 1sG.ACT.FUT.INTN
'I will go with my brother.'
(adapted from Quatra 2008a: 172)


It is possible that this is not a complete list of case markers in Jodï, as (47)-(49) suggest. These examples illustrate the use of a marker $=a \sim=j a<=a \sim=y a>$ that is not explicitly discussed in Quatra (2008a) or Vilera Díaz (1985). If the examples here are representative of the use of this case marker, its function could be to mark source arguments.

| balo $=\boldsymbol{a}$ | lu | jtë |
| :--- | :--- | :--- |
| balo $=\mathbf{a}$ | lu | ${ }^{\text {h }}$ t $\varepsilon$ |

garden=ABL come.back 1SG.ACT.PRS
'I come from the garden.'
$\begin{array}{rll}\text { (48) jadä=a } & \text { lu } & \text { jtë } \\ \text { had }=\mathbf{a} & \text { lu } & { }^{\text {h }} \text { t }\end{array}$
river.CLF:44=ABL come.back 1sG.ACT.PRS
'I come from the river.'
(49) jye $n u w \underline{e}=y a \quad j l i \quad j t e ̈$
${ }^{\text {h }} \mathrm{je} \quad$ nuwẽ $=\mathbf{j a}{ }^{\mathrm{h}} \mathrm{l}$ ̀ ${ }^{\mathrm{h}} \mathrm{t} \varepsilon$
1SG.Pro house=ABL come 1SG.ACT.PRS
'I come from my house.'
(adapted from Quatra 2008a: 149)

As (50) and (51) show, spatial relations can also be marked via dedicated locational terms. A relatively comprehensive list of these is given in Table 12.18. Some of these

Tab. 12.18: Relational nouns (adapted from Quatra 2008a).

| form |  | gloss | form |  | gloss |
| :---: | :---: | :---: | :---: | :---: | :---: |
| mini | <mïnï> | 'over' | ${ }^{\text {n }}{ }^{\mathrm{j}} \mathrm{oki} \sim{ }^{\text {h }} \mathrm{k}^{\mathrm{j}}$ oka | <jkyokï ~ jkyoka> | 'toward outside' |
| mak | <mïkë> | 'upward' | ${ }^{\text {h }}$ wini | <jwïnï> | 'on top of' |
| $\min \varepsilon$ | <minë> | 'over' | ${ }^{\text {h wiki }}$ | <jwïkï> | 'on top of' |
| mike | <mike> | 'over' | ${ }^{\text {h }}$ wela | <jwëla> | 'beside' |
| ${ }^{\text {h }}$ kuwe | <jkuwë> | 'below' | ${ }^{\text {h }}$ kaladena | <jkaladena> | 'between 2 things or people' |
| ${ }^{\text {h }}$ kuk \% | <jkukë> | 'downward' | beka | <bëka> | 'over, uphill' |
| ${ }^{\text {n }}$ kwa | <jkwa> | 'inside' | baladeka | <baladeka> | 'in front of' |
| ${ }^{\text {h }}$ k ${ }^{\text {w }}$ aki | <jkwakï> | 'toward inside' | $\mathrm{a}^{\text {h }}$ kune | <ajkunë> | 'in the middle of' |
| ${ }^{\text {h }}$ K ${ }^{\text {joni }}$ | <jkyonï> | 'outside' | ${ }^{\text {hl }}$ leka | <jleka> | '(towards) back' |

are labeled as postpositions by Quatra (2008a), while others are not. ${ }^{25}$ It is possible, however, that at least some, if not all, of these terms are indeed nouns themselves hence the label 'relational nouns'. For instance, (50) shows that a nominal interpretation is available for ${ }^{h}$ wela <jwëla>. Furthermore, the base ${ }^{h} w i$ <jwï> for 'on top of ${ }^{\prime}$ is homophonous with the noun '(someone's) back' and the base for 'outside' is given the translations of lugar 'place', fuera 'outside', bosque 'forest', selva 'jungle', and cielo 'sky' by Quatra (2008a: 133). Finally, although the translation for ${ }^{h} k u w \varepsilon<j k u w e ̈>~$ is given as debajo 'below', the contrast between the examples presented in (51) suggests that it may mean 'base'.
(50) nuwe jwëla
nuwẽ ${ }^{\mathrm{h}}$ wとla
house (be)side
'around the house' (Lit. 'the house's side')
(adapted from Quatra 2008a: 165)
(51)

| a. $\underline{\text { inëwa }}$ | jkuwë |
| :---: | :---: |
| Ĩn¢wã | ${ }^{\text {h }}$ kuwe |
| moun | base |
| foot/b | he mou |

 (adapted from Quatra 2008a: 87)

Comparing the different forms in Table 12.18 indicates that in many instances there are pairs with the same base that take a different case marker, either $=n \dot{i}<=n \ddot{u}>$ or

25 Vilera Díaz (1985: 53-55) only explicitly discusses two forms, namely $k^{w}$ a 'inside' and $k^{w} e$ 'in', saying that the latter is less specific. She also argues that these are suffixes and that they only occur accompanied by a -mã suffix.
$=k i<=k i ̈>$ (or their allomorphs). These case-marked forms probably provide further semantic content not reflected in Quatra's glosses; for example, 'over'. It seems that only ${ }^{h}$ wela <jwëla>, ${ }^{h}$ kaladena <jkaladena>, and beka <beka> do not have a casemarked counterpart. However, as (52) shows, ${ }^{h}$ wela <jwëla> can also occur with the goal marker $=k i ̉<=k \ddot{l}>$.
(52) jye jwëla=kï dowaki di!
${ }^{\text {h}}$ je $\quad{ }^{\text {h}}$ wとla=ki dõwãki di 1SG.PRO side=ALL sit ACT.IMP
'Sit beside me!'
(adapted from Quatra 2008a: 165)

## 6 The verb phrase

This section starts with a discussion of verb classes (Section 6.1) and then moves on to the treatment of verbal morphology, including tense, aspect, mood, and evidentiality (Section 6.2); pronominal agreement (Section 6.3); pluractionals (Section 6.4); and valence-changing devices (Section 6.5). It is important to highlight that this is not an exhaustive treatment of Jodï verbal morphology and that there are numerous other suffixes that are not treated here, as the available examples in the extant sources are not sufficient for determining their distribution and/or function(s).

There are two important differences between the available analyses of verbal inflection. The first concerns the existence of two main verb classes; Vilera Díaz (1985) does not make this distinction while Quatra (2008b) does - see Section 6.1. The second lies in whether inflectional categories are marked via bound morphology as Vilera Díaz (1985) proposes or marked via auxiliaries as Quatra (2008b) suggests. Examples (53) and (54) illustrate the suffix analysis for the verbs ' $k^{w} 0$ onn 'eat' in (53), and a'bu 'sleep' in (54). These can be contrasted with the corresponding forms given by Quatra, namely ${ }^{h} k^{w} \tilde{a} \tilde{t}{ }^{h} t \varepsilon$ <jkwaï $j t e ̈>~ ' I ~ e a t ' ~ i n ~ T a b l e ~ 12.19 ~ a n d ~(55) ~ a n d ~$ ${ }^{h} k^{w}$ ãã ${ }^{h} t o<j k w a i ̈$ jto> 'I am going to eat' in Table 12.25 and (56). ${ }^{26}$
(53) ${ }^{\prime} k^{w}$ oñn-t-e
eat-1SG.AFFR-PRS
'I eat.'

26 Note that Vilera Díaz (1985: 36) does not gloss the -i in the form for 'sleep' in (54), but it is possible that this corresponds to the derived active verb abuwi given in Table 12.21, which would explain the use of ${ }^{h}$ to <jto> rather than ${ }^{h}$ nomo <jnomo>.
(54) $a^{\prime} b u-i^{-h} \boldsymbol{t}-\boldsymbol{o} \quad n u ̃ 1 w e-k i$
sleep-?-1SG-1SG.FUT house-DIR
'I'm going to sleep to the house.'
(adapted from Vilera Díaz 1985: 137, 36)
(55) jkwaï jtë
${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}} \mathrm{a}$ i ${ }^{\mathrm{h}} \mathrm{t} \varepsilon$
eat 1SG.ACT.PRS
'I eat.'
(56) jkwaï jto
${ }^{h} k$ wãã ${ }^{h}$ to
eat 1SG.ASSEV.ACT.PRS
'I am going to eat.'

It is unclear whether there are phonological or morphosyntactic reasons to prefer one analysis over another, although Quatra (2008b: 16) suggests that the inflectional material (his "auxiliaries") can occur without a main verb. In the following sections, I attempt to provide an analysis of TAME and pronominal agreement that considers both existing analyses.

### 6.1 Verb classes

Two main classes of verb roots are distinguished in Jodï according to Quatra (2008b), who calls these verb classes "active aspect" and "non-active aspect". The semantic difference, according to Quatra, is that active verbs denote dynamic events - that is, movements, physical or mental activities, and processes - while non-active verbs, called here inactive and glossed as INACT, are used for static events. Crucially, these two classes influence the marking of TAM and polarity. First, active verbs such as ${ }^{h} k^{w} \tilde{a} \tilde{t}$ <jkwaï> 'eat' in (57) differ from inactive verbs like abu <abu> 'sleep' in (58) in the choice of TAM auxiliary; contrast ${ }^{h} k \dot{k} d \varepsilon$ <jkïdë> with ${ }^{h} k \tilde{t} m \varepsilon$ <jkïmë>. Secondly, while both active and inactive verbs take the same auxiliaries when negated, negation marking itself is different, as shown in (59) and (60).
(57) jkë jwalulë jkwaï jkïdë
${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad \mathrm{h}^{\mathrm{w}}$ alul $\varepsilon \quad{ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}}{ }^{2}$ ã ${ }^{\mathrm{h}} \mathbf{k i d} \boldsymbol{\varepsilon}$
2SG.PRo plantain eat 2SG.ACT.PRS
'You eat plantain.'
(adapted from Quatra 2008b: 20)
(58) jkë abu jkïmë
${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad \mathrm{abu}{ }^{\mathrm{h}} \mathbf{k} \mathbf{z ̃} \mathrm{m} \varepsilon$
2SG.PRo sleep 2SG.INACT.PRS
'You sleep.'
(adapted from Quatra 2008b: 44)
(59) jkë jwalulë jkwaï-de jkïmë
${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad \mathrm{h}^{\mathrm{w}}$ alule ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w} a \tilde{a} \tilde{q}-\mathbf{d e}{ }^{\mathrm{h}} \mathrm{k} \tilde{\mathrm{q}} \mathrm{m} \varepsilon}$
2sG.PRo plantain eat-NEG 2SG.INACT.PRS
'You eat plantain.'
(adapted from Quatra 2008b: 76)

```
(60) jkë abu mïde jk\ddot{̈më}
    'h}\mp@subsup{}{}{\textrm{h}}\varepsilon\mp@code{abu mide \mp@subsup{}{}{\textrm{h}}\textrm{k}\tilde{\textrm{q}m}\varepsilon
    2SG.Pro sleep INACT.NEG 2SG.INACT.PRS
    'You sleep.'
    (adapted from Quatra 2008b: 94)
```

This description and the examples suggest that the distinction between stative and processual lexical aspect (Timberlake 2007) plays an important role in Jodï grammar.

Further differences between active and inactive verbs can be observed in the auxiliary paradigms in Table 12.19 and Table 12.20 for the verbs ${ }^{h} k^{w}$ ãa <jkwaï> 'eat' (active) and $a b u$ <abu> 'sleep' (inactive), based on Quatra (2008b). As the contrasting forms in Table 12.19 show, the marking of TAM categories differs between active and inactive verbs, as does the marking of person categories; the singular-plural distinction is neutralized for inactive verbs. ${ }^{27}$ The forms in Table 12.20 show that the differences in TAM marking between active and inactive verbs disappear when these are negated - specifically, the active verbs are inflected with the inactive markers (this means that the singular-plural contrast in affirmative active verbs is also lost when negated). However, the two classes remain distinct, since negation is marked differently: on the verb with a suffix -de <-de> or via an auxiliary dide <dïde> for active verbs, and with an auxiliary mide <mïde> for the inactive verbs (see additional information on negation in Section 7.5). These differences go beyond the declarative mood and are evidenced in all other moods.

Importantly, it is possible to derive an active verb from an inactive one via at least four, but possibly more, suffixes. Quatra (2008b: 57) provides the examples in Table 12.21. ${ }^{28}$ The available description of this derivational process suggests that 1)

27 However, note that Quatra (2008b: 20) says that the singular and plural forms are interchangable such that some speakers use either the singular form for a plural subject or vice versa and that this happens for all tenses in the declarative as well as the interrogative.
28 I have added all glosses from the Quatra dictionary (2008a).
Tab．12．19：TAM marking with affirmative declarative active and inactive verbs（adapted from Quatra 2008b）．

| tense／ | active stem：e．g．，${ }^{\text {h }}$ wãa $\langle j k w a \underline{\text { l }}$＞＇eat＇ |  |  |  |  |  |  | non－active stem：e．g．，abu＜abu＞＇sleep＇ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| person |  | 1 |  | 2 |  | 3 |  | 1 |  | 2 |  | 3 |  |
| PRS | SG | ${ }^{\mathrm{h}}$ t $\varepsilon$ | ＜itë＞ | ${ }^{\text {h }} \mathrm{k} \dot{\text { d }}$ d $\varepsilon$ | ＜jkïdë＞ | $\mathrm{d} \varepsilon$ | dë | ${ }^{\text {h }}$ nim ¢ | ＜jnïmë＞ | ${ }^{\text {h }} \mathrm{K}$ Tm ¢ | ＜jkÏmë＞ | ma | ＜ma＞ |
|  | PL | ${ }^{\text {htai }}$ | ＜jtai＞ | ${ }^{\text {h }}$ kai | ＜jkai＞ | hai | jai |  |  |  |  |  |  |
| REC．PST | SG | ${ }^{\mathrm{h}}$ k ${ }^{\text {e }}$ | ＜jkye＞ | ${ }^{\text {h }}$ K ${ }^{\text {k }}$ ，${ }^{\text {a }}$ | ＜jkïkye＞ | $k^{\text {j }}$ | kye | ${ }^{\text {h }}$ nimiẽ | ＜jnïmieِ＞ | ${ }^{\mathrm{h}} \mathrm{k}$ ¢̃miẽ | ＜jkïmiel $>$ | miẽ | ＜mié＞ |
|  | PL | ${ }^{\text {h }}$ taik ${ }^{\text {j }}$ | ＜jtaikye＞ | ${ }^{\text {h }}$ kaikje | ＜jkaikye＞ | haik ${ }^{\text {j }}$ | jaikye |  |  |  |  |  |  |
| MED．PST | SG | ${ }^{\text {ht }}$ ¢dĩn $\varepsilon$ | ＜jtëdinë＞ | ${ }^{\text {h }}$ kidĩn ¢ | ＜jkïdinë＞ | d $\varepsilon$ dĩn $\varepsilon$ | dëdinë | ${ }^{\text {n }}$ ṅmin $\varepsilon$ | ＜jnïminë＞ | ${ }^{\text {h }}$ kĩmin $\varepsilon$ | ＜jkïminë＞ | $\min \varepsilon$ | ＜minë＞ |
|  | PL | ${ }^{\text {htaidĩn }}$ ¢ | ＜jtaidinë＞＞ | ${ }^{\text {h }}$ kaidĩne | ＜jkaidin $n$ ¢ ${ }^{\text {l }}$ | haidĩne | jaidinë |  |  |  |  |  |  |
| REM．PST | SG | ${ }^{\text {htak }}$ ， | ＜jtëkä＞ | ${ }^{\text {hkiddek }}$ ， | ＜jkïdëkä＞ | dekJ | dëkä | ${ }^{\text {h }}$ nim k J | ＜jnïmëkä＞ | ${ }^{\text {h }}$ kĩm 2 k 〕 | ＜jkÏmëkä＞ | mako | ＜makä＞ |
|  | PL | ${ }^{\text {htaiko }}$ | ＜jtaikä＞ | ${ }^{\text {h }}$ kaik $~$ | ＜jkaikä＞ | haikJ | jaikä |  |  |  |  |  |  |
| FUT | SG | ${ }^{\text {h }}$ teke | ＜jtëke＞ | ${ }^{\text {h }}$ kid ${ }^{\text {deke }}$ | ＜jkïdëke＞ | d ke | dëke | ${ }^{\text {n }}$ nime ${ }^{\text {a }}$ | ＜jnïmëke＞ | ${ }^{\mathrm{h}} \mathrm{k}$ Tm 2 ke | ＜jkïmëke＞ | make | ＜make＞ |
|  | PL | ${ }^{\text {ntaike }}$ | ＜jtaike＞ | ${ }^{\text {h }}$ kaike | ＜jkaike＞ | haike | jaike |  |  |  |  |  |  |
| FUT．IntN | SG | ${ }^{\text {ntoba }}$ | ＜jtoba＞ | ${ }^{\text {h }}$ kodoba | ＜jkodoba＞ | doba | doba | ${ }^{\text {h }}$ nomoba | ＜jnomoba＞ | ${ }^{\text {h }}$ kõmoba | ＜jkomoba＞ | moba | ＜moba＞ |
|  | PL | ${ }^{\text {h }}$ K ${ }^{\text {oba }}$ | ＜jkyoba＞ | ${ }^{\text {h }}$ kajoba | ＜jkayoba＞ | joba | yoba |  |  |  |  |  |  |

Tab．12．20：TAM marking with negative declarative active and inactive verbs（adapted from Quatra 2008b）．

| tense／ person | active negated stem： <br>  |  |  |  |  |  | inactive negated stem： e．g．，abu mide＜abu mïde＞＇not sleep＇ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 |  | 2 |  | 3 |  | 1 |  | 2 |  | 3 |  |
| PRS | ${ }^{\text {h }}$ nime | ＜jnїmë＞ | ${ }^{\mathrm{h}} \mathrm{k}$ ¢me | ＜jkïmë＞ | ma | ＜ma＞ |  | 〈jnїmë〉 | ${ }^{\mathrm{h}} \mathrm{k}$ Tme | ＜jkïmë＞ | ma | ＜ma＞ |
| REC．PST | ${ }^{\text {h }}$ nimiẽ | ＜jnïmié＞ | ${ }^{\text {h }}$ kimiẽ | ＜jkïmiȩ＞ | miẽ | ＜mié＞ | ${ }^{\text {h }}$ nimiẽ | ＜jnïmię＞ | ${ }^{\text {h }}$ kĩmiẽ | ＜jkïmieِ＞ | miẽ | ＜miè＞ |
| MED．PST | ${ }^{\text {h }}$ nimine | ＜jnïminë＞ | ${ }^{\text {h }}$ kimine | ＜jkïminë＞ | $\min \varepsilon$ | ＜minë＞ | ${ }^{\text {n }}$ nimine | ＜jnïminë＞ | ${ }^{\text {n }}$ ¢famine | ＜jkïminë＞ | $\min \varepsilon$ | ＜minë＞ |
| REM．PST | ${ }^{\text {h }}$ nimek ${ }^{\text {a }}$ | ＜jnïmëkä＞ | ${ }^{\text {h }}$ kim ${ }^{\text {a }}$ \％ | ＜jkïmëkä＞ | mako | ＜makä＞ | ${ }^{\text {hnimimek }}$ | ＜jnïmëkä＞ |  | ＜jkïmëkä＞ | mak | ＜makä＞ |
| FUT | ${ }^{\text {h }}$ nimeke | ＜jnïmëke＞ | ${ }^{\text {h }}$ kim ${ }^{\text {bime }}$ | ＜jkïmëke＞ | make | ＜make＞ | ${ }^{\text {hnime }}$ ，${ }^{\text {a }}$ | ＜jnïmëke＞ | ${ }^{\text {h }}$ ¢ ${ }^{\text {armeke }}$ | ＜jkïmëke＞ | make | ＜make＞ |
| FUT．INTN | ${ }^{\text {hnomoba }}$ | ＜jnomoba＞ | ${ }^{\text {h }}$ kõmoba | ＜jkomoba＞ | moba | ＜moba＞ | ${ }^{\text {hnomoba }}$ | ＜jnomoba＞ | ${ }^{\text {hkõmoba }}$ | ＜jkomoba＞ | moba | ＜moba＞ |

Tab. 12.21: Derivation of active verbs from inactive verbs (adapted from Quatra 2008a, b).

it applies to all inactive verbs and 2) there are other suffixes that can be used beyond the ones listed. However, it is unclear if this process does indeed apply to all inactive verbs or just to positional verbs; in Table 12.21, all but one of the verbs is a positional verb. Beyond $a b u<a b u>$ 'sleep', the only other non-positional example I have been able to identify is ${ }^{h} j u$ <jyu> 'shine (static)' and ${ }^{h} j u l i b i$ <jyulibï> 'shine (dynamic)' (Quatra 2008a: 170). This process thus deserves further research.

In addition to the two main verb classes, Quatra (2008b) distinguishes a third verb class, which he calls "aspecto de ser" ('to be aspect'), that can be understood to be a copula. The declarative paradigms provided by Quatra for the Jodï copula are given in Table 12.22, with differences of form according to person, tense, and polarity.

At first glance, the affirmative and negative paradigms in Table 12.22 seem rather different, but a number of phonological processes obscure the form of the copula, which, according to my analysis, is ba. First, the copula is nasalized in the negative, resulting in /b/ being produced as [m]; compare the realization of the copula in the third-person singular of the proximate past where it combines with -ĩn <-i्inë>. Second, the /b/ lenites to [w] in the first and second persons in the affirmative (contrast with the third person). Finally, it participates in the more general processes of nasalization and vowel harmony that affect subject markers and described here in Section 6.3. Note, however, that it is possible that the paradigms in Table 12.22 are incomplete, for, as examples (9) and (84) suggest, it is possible for the copula to take the form $m a$ in affirmative contexts.

One important observation with respect to the verb classes is that TAME auxiliaries that co-occur with the affirmative forms of inactive verbs like abu <abu> 'sleep' (Table 12.19) and with the negated forms of both active and inactive verbs (Table 12.20) correspond exactly to the forms of the copula, as can be seen in comparison to Table 12.22. However, the auxiliaries that co-occur with the affirmative forms of active verbs like ${ }^{h} k^{w} \tilde{a} \tilde{t}$ <jkwaï> 'eat' (Table 12.19) are built on a different base, which I posit has the form $d \varepsilon<d e ̈>-$ except for the present plural forms.

### 6.2 Tense, aspect, mood, evidentiality

Much remains to be investigated in the area of tense, aspect, mood, and evidentiality for Jodï, especially concerning aspect, but a brief characterization of tense marking and evidentiality is offered here. Sentential mood is treated in Section 7.4. With respect to grammatical aspect, neither Vilera Díaz (1985) nor Quatra (2008b) discuss aspectual distinctions; it is possible, however, that some of the suffixes included in Quatra (2008b) but not discussed here are aspectual markers. ${ }^{29}$

29 See, for instance, -nì <-nï> (Quatra 2008b: 26), which may be a completive aspect marker.

Vilera Díaz's treatment of tense is rather cursory, and she identifies only three tenses, namely present, immediate past, and future, with allomorphic differences in marking depending on polarity. Quatra (2008b), on the other hand, describes six tenses: present, three different pasts, and two futures. The paradigms for these are included in Table 12.19 (affirmative) and Table 12.20 (negated) for an active verb (namely, ${ }^{h} k^{w}$ ãz <jkwaï> 'eat') and an inactive verb (namely, abu <abu> 'sleep') in the declarative mood. The present tense, which is morphologically unmarked, encodes an action that is taking place at the moment of speaking and which the speaker is either watching or hearing as it happens. In the past, there are three degrees of anteriority: a recent past marked by -ie <-ie>, which is used for events that happened a short time ago and/or in the same day; a medial past - called a "proximate past" by Quatra (2008a) and an "immediate past" by Vilera Díaz (1985: 117) marked by -ine <-i्inë>, which is used for events that took place the day before the moment of speaking (i.e., yesterday) or a "few days, weeks or months ago" (Quatra 2008b: 29); and a remote past marked by -ko <-k $\ddot{a}>$, which is used for events that took place "several months or a year ago or more" (Quatra 2008b: 31). The recent past is similar to a hodiernal past tense, but some of the uses described by Quatra suggest that the contrast between the present tense and the recent past tense lies in whether the event was experienced firsthand (either visually or aurally) by the speaker or not. Finally, Quatra (2008b) describes two different constructions employed to convey future reference. ${ }^{30}$ The first is formed with -ke <-ke> and denotes that the speaker "will carry out the action because others asked (or told them to) or [he/she] is not enthusiastic to carry out the action" (Quatra 2008b: 34, my translation). The second is formed with -oba <-oba> and can convey different meanings according to the person of the subject. More specifically, first-person (singular and plural) denotes that the subject "will carry out the action of their own accord" hence fUT.InTN for 'intentional future' in Table 12.19, Table 12.20, and Table 12.22 -; second-person forms "sound like an order"; and third-person forms can encode "an order or a warning, depending on the tone of voice" (Quatra 2008b: 34, my translation).

Finally, evidentiality is only treated in passing in Quatra (2008b: 26). According to this author, there are three evidential markers: - $d \dot{i}\left\langle-d i ̈>(61)\right.$, $\tilde{i} k^{j} e<\underline{i} k y e>(62)$, and -bae <-bae> (63). The suffix -d $\tilde{t}<-d i \gg$ is used when the speaker did not see the action described by the verb but rather was told about it. This marker also encodes some degree of uncertainty, according to Quatra, because the source of the information is perhaps not fully reliable. By contrast, the use of $\tilde{z} k^{j} e ~<\underline{i} k y e>~ i n d i c a t e s ~ t h a t ~ t h e ~ s p e a k-~$ er has a reliable source and is providing a direct report of information as told to the speaker by someone else. Finally, -bae <-bae> is described as attaching to a verb phrase to indicate that the speaker did not experience the event firsthand and, cru-

30 In contrast to the past tenses, he does not give the two futures unique labels but rather says that they are two variants - (a) and (b) - of the future.
cially, was also not told about it; rather, the speaker is reporting on their own reasoning and/or imagination. Based on this description, the system can be understood as contrasting direct (visual) evidence, not marked overtly, and indirect evidence of two kinds - reports and inference -, which are marked overtly. The first two suffixes, therefore, can be analyzed as reportative evidentials that also encode reliability judgements regarding the source of information, and the third one as an inferential.
(61) jawa jkwaï kye-dï
hawa ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w} a ̃} \mathfrak{z} \mathrm{k} \mathrm{k}^{\mathrm{j}}$-di
food eat 3sG.ACT.REC.PST-REP ${ }_{1}$
'(He) ate food, it is said but I'm not sure.'
(62) jawa jkwaï kye îkye

food eat 3sG.ACT.REC.PST REP $\mathbf{2}_{2}$
'(He) ate food, I'm told.'
(63) jawa jkwail kye-bae
hawa ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}} \mathrm{a}^{\mathrm{ar}} \mathrm{k}^{\mathrm{j}} \mathrm{e}$-bae
food eat 3sG.ACT.REC.PST-INFR
'(He) ate food, I think/imagine.'
(adapted from Quatra 2008b: 26)

Note that Quatra only gives examples of the evidentials in combination with the recent past and the remote past, but he says that these markers can combine with other tenses.

### 6.3 Agreement

As noted at the beginning of Section 6, there are two proposals for analyzing Jodï verbal morphology that differ in how analytical the Jodï verb complex is understood to be; this discrepancy also applies to subject marking. In particular, Vilera Díaz (1985) proposes that subject markers are directly suffixed to the verb, followed by TAM suffixes, whereas Quatra (2008b) takes the same TAM morphemes to be nondecomposable auxiliaries.

Vilera Díaz (1985: 106-116) proposes that subjects are realized on the verb via three suffixes $-t \sim-n \tilde{t} \sim-n$ for first person, in (64); $-k \sim-k i$ for second person, in (65) and (66); and $\emptyset$ for third person, with some allomorphy conditioned by the polarity of the clause (cf. (65) and (66)).

## (64) 'nẽwãmbu bi'dì-t-o'ba

cotton spin-1SG-FUT.AFFR
'I will spin cotton.'
(65) 'nẽwãmbu bi'dí-ki-do'ba
cotton spin-2SG-FUT.AFFR
'You will spin cotton.'
(66) 'nẽwãmbu bi'dì-k-omõmba
cotton spin-2sG-FUT.NEG
'You will not spin cotton.'
(adapted from Vilera Díaz 1985: 109-110)

The conjugation paradigms given by Quatra (2008b), on the other hand, suggest that subjects are marked at the beginning of seemingly morphologically opaque auxiliaries which vary depending on whether the verb is in active - such as ${ }^{h} k^{w} \tilde{a} \tilde{t}$ <jkwaï> 'eat' in (67) - or inactive aspect - such as abu <abu> 'sleep' in (68). Additionally, he explains that active verbs pattern with inactive ones when negated (cf. (68) and (69)). See Section 6.1 for additional details and full paradigms.
(67) jye jwane jkwaï jtoba
${ }^{\text {hje }} \quad{ }^{h}$ wãne ${ }^{\mathrm{h}} \mathrm{k}^{\text {wã }}{ }^{\text {h }}$ toba
1SG.PRo taro eat 1SG.ACT.FUT.INTN
'I will eat taro.'
(68) jye abu mïde jnomoba
${ }^{\text {hje }}$ abu mide ${ }^{\text {h }}$ nomoba
1sG.PRo sleep NEG.INACT 1sG.INACT.FUT.INTN
'I will not sleep.'
(69) jye jwalulë jkwaï-de jnomoba
${ }^{\mathrm{h}}$ je $\quad{ }^{\mathrm{h}}$ walule ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}}{ }^{\mathrm{w}} \tilde{\mathrm{y}}$-de ${ }^{\mathrm{h}}$ nomoba
1SG.PRo plantain eat-NEG 1SG.INACT.FUT.INTN
'I will not eat plantain.'
(adapted from Quatra 2008b: 33, 84, 102)

However, a comparison of the auxiliaries in Quatra (2008b) allows for the identification of the first-person subject marker as $t \dot{t}\langle t i\rangle$, the second-person one as $k i\langle k i\rangle$, and the third-person one as $\emptyset$, with the observed variation in form due to three regular phonological processes: 1) reduction, 2) nasal spread, and 3) vowel harmony.

First, the present active auxiliaries - compare the forms in (70), (71), and (72) show that a process of morphological reduction has applied to the first-person singular form of active verbs resulting in ${ }^{h} t \dot{t}+d \varepsilon<j t \ddot{t}+d \ddot{e}>$ to ${ }^{h} t \varepsilon<j t e ̈>$. This same process also applies to the first-person singular marker in the future intentional: ${ }^{h} t \dot{t}+d o b a$ <jtï+doba> to ${ }^{h}$ toba <jtoba>.
(70) jye jwalulë jkwaï jtë
${ }^{\mathrm{h}} \mathrm{je} \quad{ }^{\mathrm{h}}$ walule ${ }^{\mathrm{h}} \mathrm{h}^{\mathrm{w}}$ ã̃ ${ }^{\mathrm{h}}$ t $\varepsilon$
1SG.PRo plantain eat 1sG.ACT.PRS
'I eat plantain.'
(71) jkë jwalulë jkwaï jkïdë
${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad{ }^{\mathrm{h}}$ walule ${ }^{\mathrm{h}} \mathrm{k}^{w}$ ã ${ }^{\mathrm{h}}{ }^{\mathrm{h}} \mathbf{k i d} \varepsilon$
2SG.PRO plantain eat 2SG.ACT.PRS
'You eat plantain.'
(72) bijkye jwalulë jkwaï dë
bi ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{j}} \mathrm{e} \quad{ }^{\mathrm{h}}$ walule ${ }^{\mathrm{h}} \mathrm{k}^{w}$ ã $\mathrm{d} \varepsilon$
3SG.PRO plantain eat 3SG.ACT.PRS
'S/he eats plantain.'
(adapted from Quatra 2008b: 20)

Secondly, a comparison of the second-person inactive auxiliaries with the first-person ones shows that the realization of $t \dot{t}\langle t i\rangle$ as [ $\left.{ }^{h} n \tilde{n}-\right]$ stems from nasal spread. This is illustrated by the comparison between ${ }^{\boldsymbol{h}} \boldsymbol{n} \boldsymbol{i m} \varepsilon$ <jnïmë> in (73) and ${ }^{\boldsymbol{h}} \boldsymbol{k} \boldsymbol{k} \tilde{m} \varepsilon$ <jkëmë> in (74); notice that the vowel in the latter is nasalized, which suggests a leftward nasalization process. ${ }^{31}$ The following bilabial nasal is likely the trigger for the nasalization of the vowel itself, as the second form in the active paradigm is not nasalized - compare with (71).
(73) jye abu jnïmë

1SG.PRO sleep 1SG.INACT.PRS
'I sleep.'
(74) jke abu jkï̈më
${ }^{\mathrm{h}} \mathrm{ke} \quad \mathrm{abu}{ }^{\mathrm{h}} \mathbf{k}$ z̃me
2SG.PRO sleep 2SG.INACT.PRS
'You do not sleep.'
(adapted from Quatra 2008b: 44)

Finally, the realization of the first-person subject marker as ${ }^{h}$ no- <jno-> in forms like those in (68) and (69) can be explained as a process of vowel harmony with the following syllable, that is, the /i/ in the subject prefix harmonizes with the /o/ in

31 This is obscured by the orthographic choice made by Quatra and colleagues to not write nasalization on vowels when they follow a nasal consonant (Quatra 2008a: 25).
the future marker. This process also applies to the second-person marker, which is realized as ${ }^{h} k o-<j k o->$ in (75) and ${ }^{h} k \tilde{o}$ <jko-> in (76) when followed by the future marker, instead of as ${ }^{h} k \dot{i}<j k i ̈>$ as in (71), or ${ }^{h} k \tilde{t}<j k i ̈>$ as in (74).
(75) jkë jwane jkwaï jkodoba
${ }^{h} k \varepsilon \quad{ }^{h}$ wãne ${ }^{h} k$ wãa ${ }^{\text {h }}$ kodoba
2SG.PRo taro eat 2SG.ACT.FUT.INTN
'You will eat taro.'
(76) jkë $a b u$ jkomoba
${ }^{\mathrm{h}}$ ke abu ${ }^{\mathrm{h}}$ kõmoba
2SG.PRo sleep 2SG.INACT.FUT.INTN
'You will sleep.'
(adapted from Quatra 2008b: 33, 52)

This reanalysis of the data suggests that it is possible to segment the singular subject markers as $t \dot{1} 1 \mathrm{sg}$, ki 2 SG , and $\emptyset 3$ SG. Two questions remain. First, there is the pre-aspiration of the stops, which is not represented by Vilera Díaz but present in the Quatra materials. Second, it is unclear where the word boundaries are. While Vilera Díaz represents these markers as suffixes that are part of the verbal word with the lexical root preceding them and the TAM material following, Quatra represents them as prefixes to TAM auxiliaries.

The preceding discussion has focused on person marking for singular subjects. Plural subjects for active verbs like 'eat' are marked with tai <tai> 1pl, kai <kai> 2PL, and hai <jai> 3PL in all tenses except the intentional future where there is some reduction at play, as the forms in Table 12.19 show.

The available data suggest that objects are not obligatorily indexed on the verb - see (32) and (33) for transitive verbs with an animate object and (70)-(72) for a transitive verb with different inanimate objects. However, further investigation is needed to determine whether some form of object marking might be available in limited contexts, as suggested in the discussion of a -ju suffix in imperatives by Vilera Díaz (1985: 125-127).

### 6.4 Pluractionals

A number of verb entries in the Quatra (2008a) dictionary suggest that pluractionality could be a relevant category in Jodi. The additional parenthetical information given by Quatra in a number of entries to differentiate the two verb forms that correspond to a single Spanish meaning suggests that the "plural" form of the verb can encode pluractionality: the action is repeated because either the subject, in Ta-

Tab. 12.23: Verbs that indicate pluractionality (adapted from Quatra 2008a).

|  | singular |  | plural |  | gloss |
| :---: | :---: | :---: | :---: | :---: | :---: |
| a. | ${ }^{h} 1$ | <jli>> | ${ }^{\text {h }}$ le | <jle> | 'arrive, come' |
| b. | bai | <baï> | bae | <bae> | 'weave' |
| c. | dał | <daï> | dae | <dae> | 'sew' |
| d. | dili | <dïli> | dile | <dile> | 'wash' |
| e. | hũnedł | <junedï> | hũnede | <junede> | 'cook' |
| f. | hãf ${ }^{\text {k }}$ k $\mathrm{dj}^{\text {¢ }}$ | <joil̃ jkëdï> | hãf ${ }^{\text {² }}$ ¢ $\varepsilon$ de | <jail̃ jkëde> | 'put inside (something)' |
| g. | ãnidł | <anïdï> | ãnide | <anïde> | 'tie' |
| h. | manadł | <manadï> | manade | <manade> | 'grind' |
| i. | ũdithti | <udïjti> | undithte | <udïte> | 'say, explain, teach' |
| j. | $i^{\text {h }}$ ti | <ijtï> | $i^{\text {h }}$ te | <ijte> | 'give a gift' |

ble 12.23 (a), or the object, in Table 12.23 (b)-(i), is plural. Example (77) illustrates the use of the bai <baï> versus bae <bae> forms of the verb 'weave'.
(77)
a. dodo
baï
dodo
bai
jtë
loincloth.SG weave.SG 1sG.ACT.PRS
'I'm weaving one loincloth.'
$\begin{array}{cll}\text { b. udëi } & \text { bae } & \text { jtë } \\ \text { ud } \varepsilon i & \text { bae } & { }^{\text {ht }} \varepsilon\end{array}$
loincloth.PL weave.PL 1SG.ACT.PRS
'I'm weaving some loincloths.'
(adapted from Quatra 2008a: 57)

The forms in Table 12.23 suggest that the singular is marked with $-i\langle-i\rangle$ and the plural with $-e\langle-e\rangle$; however, there are a number of counterexamples to this generalization in the dictionary. For instance, bebe <bebe> and bebi <bebï> for 'transform' are given as the exact opposite, with the first form indicating a singular object and the second, a plural one - pluractional marking, therefore, requires further research.

Additionally, some verb roots appear to be intrinsically pluractional, with their non-pluractional counterparts derived with the addition of a suffix. This contrast is exemplified in (78).
(78) a. $a b e k a=n a ~ j w i \underline{i}$
abeka=na ${ }^{\mathrm{h}}$ w $\tilde{1}$
face-obl hit
'slap (repeatedly)'
> b. abeka-na jwï-yu
> abeka-na ${ }^{h}$ wĩ-ju
> face-obl hit-SGACT 'slap (only once)'
c. jiti
${ }^{\text {h }}$ t̃
step
'step on something (repeatedly or for an extended period of time)' (adapted from Quatra 2008a: 43, 152)
d. $j t i \underline{-}-y u$
${ }^{\text {h }}$ tĩ-ju
step-SGACT
'step on something (only one time)'

### 6.5 Valency-changing morphology

Quatra (2008a: 29) mentions a verb prefix with the form ${ }^{h} k a-\sim^{h} k a ̃-<j k a-\sim j k a->$ which is used in a series of verbs: ${ }^{h} k a ̃ a ̃ n i d i ~<j k a a n n i ̈ d i ̈>~ ' h a n g ~ b y ~ t y i n g ', ~ ' h k a h a u ~<j k a-~$ jau> 'open', ${ }^{h} k a^{h} k a \tilde{e}{ }^{h} w i ~<j k a j k a \underline{e j w i>}$ 'break', ${ }^{h} k{ }^{h} t i z m i ~<j k a j t i m i>~ ' w a k e ~ u p / s t a n d ~ u p ', ~$ ${ }^{h} k a l a u$ <jkalau> 'swallow', ${ }^{\text {h }}$ kanu <jkanu> 'throw (out)', and others. A comparison of the first and second verb pairs in Table 12.24 suggests that one possible function of this prefix is causativization, and the fact that ${ }^{h}$ kadai <jkadai> 'light (up)' can alternate with hãz̃ dai <jail dai> (Quatra 2008a: 110) where hãz̃ <jaï> is the verb 'make’ supports this hypothesis. However, the link between the verb pairs in the third and fourth rows is less straightforward.

Vilera Díaz (1985: 102-103) discusses a reflexive with the form -'akí, exemplified here in (79). She also says that, at least in one case, this morpheme has a CV allomorph -kí (80).

## (79) wel-'akit ${ }^{\text {h }}-t-e$

see-REFL-1SG.AFFR-PRS
'I am seeing myself.'
(80) $d \dot{i}-\boldsymbol{k i}^{h}-t-e$
touch-REFL-1SG.AFFR-PRS
'I am touching myself.'
(adapted from Vilera Díaz 1985: 103)

Further, note that the Quatra (2008a: 226) dictionary gives the forms in (74) for a verb 'look'.

Tab. 12.24: ${ }^{\text {² }} \mathrm{ka}$ - <jka-> prefixed verbs (adapted from Quatra 2008a, b).

| simple verb |  | gloss | ${ }^{\text {h }}$ ka- <jka->-verb |  | gloss |
| :---: | :---: | :---: | :---: | :---: | :---: |
| dai | <dai> | 'shine' | ${ }^{\text {h }}$ kadai | <jkadai> | 'light up, turn on' |
| hau | <jau> | 'be open' | ${ }^{\text {h }}$ kahau | <jkajau> | 'open' |
| ãnł̇dł | <anïdï> | 'tie (with singular object)' | ${ }^{\text {h }}$ kããṅd ${ }^{\text {di }}$ | <jkáanïdï> | 'hang by tying' |
| lau ~ lauju | <lau ~ lauyu> | 'bite (an insect)' | ${ }^{\text {h }}$ kalau | <jkalau> | 'swallow' |

(81) a. wとli <wëlì> 'look'
b. wعlaki <wëlakï> 'look at one self, see one's own image'
c. we ${ }^{\text {h }}$ laki <wëjlakï> 'look at one another'
(adapted from Quatra 2008a: 226)
These forms allow us to isolate the reflexive morpheme suggested by Vilera Díaz by comparing (79) and (81b) with (81a). In turn, the form in (81c) suggests that there is also a reciprocal marker with a segmental form that is similar to the reflexive but which causes a change in the last segment of the root - namely, the /l/ becomes pre-aspirated. Unfortunately, no other examples could be found in the dictionary to (dis)confirm this.

### 6.6 Multi-verb constructions

There are a few instances of multi-verb constructions in the Quatra (2008a) dictionary, but it is not clear whether these constitute serial verb constructions, verb-verb compounds or an auxiliary and main verb sequence. The verb forms in (82) illustrate two such multi-verb constructions.
(82) a. jwi
nowañae
nowãnaẽ
hit.repeatedly put.out
'put out (the fire) by hitting'
b. jaï nowañae
hãã nowãnaẽ
make put.out 'put out'
(adapted from Quatra 2008a: 95, 167, 201)

Note that the verb hãã <jaï> in particular readily combines with other verbs. There are 25 such verb-verb combinations in Quatra (2008a: 95-97), who explains that the verb 'to make' can be reduced to hã- <ja-> and appear fused with the main verb, as in (83).
(83) a. hã ${ }^{\text {h }}$ wabe <jaï jwabe 'turn on (radio, etc.)' (Lit. 'make play')
~hãh ${ }^{\text {h }}$ wabe $\sim$ jajwabe>
b. hãã bidine <jaï̈ bidinë 'turn off (radio, etc.)' (Lit. 'make shut up')
~ hãbidine ~ jabidine>
(adapted from Quatra 2008a: 29, 60, 96, 160)

## 7 Simple clauses

This section is concerned with simple clauses. Section 7.1 presents the two main types of predicate: nominal and verbal. Sections 7.2 and 7.3 focus on verbal predi-
cates, discussing basic word order and alignment, respectively. Section 7.4 discusses sentential mood and sentence types, while Section 7.5 deals with negation of both nominal and verbal predicates.

### 7.1 Types of predicate

There are both verbal and nominal predicates in Jodi. Verbal predicates can be minimally composed of a verb, but they can also include core and/or oblique arguments. The following subsections discuss and illustrate this predicate type more in-depth. Nominal predicates are formed using the copula ba, discussed above in Section 6.1, illustrated here in (84).

```
(84) bidï adï
    bidi \tilde{di wai}\mp@subsup{}{}{h}lo-di bide ma
    PROX.AN.PL woman.PL toad-PL.AN N NEG 3SG.PRS.COP
    'These women are not old.' (Lit. 'These women are not toads.')
    (adapted from Quatra 2008b: 111)
```

It is important to note that, although adjectives have been argued to exist in Jodï (see Section 4), it is unclear whether adjectival predication exists. Most examples of the copula in Quatra (2008b) suggest that words encoding property concepts need to be nominalized via a classifier, as with jalu-hã <yalu-ja> 'angry' and $o^{h}$ tewakahadì <ojtewaka-jadi>> 'fat' in (85) and (86) respectively, to serve as predicates. This is also confirmed by the examples provided in Vilera Díaz (1985: 147-152). There are, nonetheless, some examples that seem to allow an adjective to occur without derivation, as in (87).
(85) jye bába S $_{\mathrm{S}} \boldsymbol{y}$ alu-j $\boldsymbol{a}_{\text {PRED }} \quad$ bada $a_{\text {COP }}$
$h_{j e}$ 'baba jalu-hã bada
1SG.PRO father angry-CLF:M 3sG.AFFR.PRS.CoP
'My father is angry.' (Lit. 'My father is the angry one.')
(adapted from Quatra 2008b: 61)
(86) didï $\quad$ ojtewaka-jadï ${ }_{\text {PRED }}$ minë ${ }_{\text {COP }}$
$\operatorname{did} \ddagger \mathbf{o}^{\text {h }}$ tewaka-hadi $\min \varepsilon$
3SG.M.PRO fat-CLF:PL 3SG.AFFR.MED.PST.COP
'They are fat.'
(adapted from Quatra 2008b: 63)
(87) jkë mo jkwa jolojk $_{\text {PRED }} m a_{\text {COP }}$
${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad \mathrm{mo} \quad{ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}} \mathrm{a}$ holo ${ }^{\mathrm{h}}$ ka ma
2SG.PRO hand inside rough 3SG.AFFR.PRS.COP
'The inside of your hand is rough.'
(adapted from Quatra 2008b: 106)

### 7.2 Basic constituent order

For nominal predicates, the basic word order is S Pred Cop, as the examples in Section 7.1 illustrate. The available data suggest that the basic order in verbal predicates when all the arguments are expressed is SV and AOV for monovalent and bivalent verbs, respectively. ${ }^{32}$ Examples (88) and (89) illustrate the SV order of monovalent verbs with a nominal (88) as well as a pronominal (89) S argument. The AOV order in a bivalent clause is exemplified in (90); note that at least in some contexts it is possible to have OAV and AVO orders as in (91) and (92). Finally, there are not sufficient examples of trivalent verbs with all arguments expressed to make a generalization about the basic word order of this type of predicate, but based on the examples available, it is possible to say that the R argument can precede the verb (see (41)) or follow it, as in (93) where the order is AOVR.
(88)
waijlos dïdekï $d \ddot{e}_{\mathrm{V}}$
wai ${ }^{\text {h }}{ }^{\text {lo }}$ dideki $\mathrm{d} \varepsilon$
toad jump.repeatedly 3sG.ACT.PRS
'The toad is jumping.'
(adapted from Quatra 2008a: 71)
(89) $j k y e_{\mathrm{S}}$ jnaï $\quad$ dë ${ }_{\mathrm{V}}$
${ }^{\text {h } k j e ~}{ }^{\text {j}}$ naz̃ $d \varepsilon$
3sG.m.PRo limp/jump 3sG.ACT.PRS
'He is limping.'
(adapted from Quatra 2008a: 140)
(90) $m u-d \ddot{\mathrm{~A}}_{\mathrm{A}} \quad j y e=n \ddot{i}_{\mathrm{O}} \quad$ jlëbe $\operatorname{din}^{2} \ddot{e}_{\mathrm{V}}$
$\mathrm{mu}-\mathrm{di} \quad{ }^{\mathrm{h}} \mathrm{j}=\mathrm{ni} \quad{ }^{\mathrm{h}}$ lebe dĩn $\varepsilon$
wasp-AN.PL ${ }_{1}$ 1SG.PRO=OBJ sting.PL 3SG.ACT.MED.PST
'The wasps stung me.'
(adapted from Quatra 2008a: 175)
(91) $j y e=n \ddot{i}_{\mathrm{O}} \quad m u-j \underline{a}_{\mathrm{A}} \quad$ lau-yu $\quad$ kye ${ }_{\mathrm{V}}$
${ }^{\text {h }} \mathrm{j}=$ =ni $\quad$ mu-hã lau-ju kie
1SG.PRO=OBJ wasp-CLF:M sting-SGACT 3sG.ACT.REC.PST
'A wasp stung me.'
(adapted from Quatra 2008a: 175)

32 In this discussion, I use O as a label for the most patient-like argument of a transitive or ditransitive verb, and $R$ is used as a label for the most recipient-like argument of a ditransitive verb, following the convention in Haspelmath (2005; 2015).
(92) $j y e_{\mathrm{A}} \quad$ bajkiye $j t \ddot{\mathrm{~V}}_{\mathrm{V}} \quad j w a l a l u=n \ddot{l}_{\mathrm{O}}$
${ }^{\text {h }}$ je $\quad$ ba ${ }^{\text {h }}{ }^{\text {kije }}{ }^{\text {h }}$ t $\varepsilon \quad{ }^{\text {h }}$ walalu $=n i$
1SG.PRO raise 1SG.ACT.PRS chicken=OBJ
'I'm raising a chicken.'
(adapted from Quatra 2008a: 97)
(93) jye $\quad \underset{\text { ama }}{ } \quad$ jawa ${ }_{\mathrm{O}}$ jkajtï ajtenï dīnë̈ ${ }_{\mathrm{V}}$ jye likë ${ }_{\mathrm{R}}$
${ }^{\mathrm{h}} \mathrm{je}$ ãma hawa ${ }^{\mathrm{h}} \mathrm{ka}^{\mathrm{h}}$ ti a ${ }^{\text {h}}$ teni dĩne ${ }^{\mathrm{h}} \mathrm{je}$ like
1SG.PRo mother food send 3SG.ACT.MED.PST 1sG.PRO io
'My mother sent me food.'
(adapted from Quatra 2008a: 277)

### 7.3 Alignment

Jodï exhibits nominative-accusative alignment in simple verbal clauses. Verb alignment is accomplished via pronominal cross-referencing on the verb for S/A, which are marked with the same set of affixes (prefixes on auxiliaries or suffixes attached to the verb, depending on analysis of the verb complex); it is unclear whether 0 arguments are indexed on the verb (Section 6.3). In terms of case marking, S/A also behave similarly in never taking any case marker; in contrast, animate Os are marked with a case marker: $=n \dot{i}<=n \ddot{i}>$ (Section 5.8). Finally, as shown in Section 7.2, S and A are usually treated similarly in terms of word order. This said, further research on active and stative lexical aspect verbs and any potential interplay with alignment is needed.

### 7.4 Sentential mood and sentence types

There are at least two sentential moods: declarative and imperative. The declarative is not explicitly treated as a mood in Quatra (2008b), but the paradigms provided allow us to consider the declarative as a default mood that stands in contrast with the imperative and two other moods labeled by Quatra as the "desiderative" and the "asseverative", for which he gives only partial paradigms. ${ }^{33}$ The declarative is discussed in Section 6.2, and the focus here is on the other three moods, as well as the interrogative.

33 Specifically, only the present tense desiderative and asseverative paradigm is provided for all persons (see Table 12.25), and paradigms for the three past tenses (recent, medial, and remote) include forms for only some cells. Importantly, no future tense (either for the "simple" future or for the intentional future) forms are given for the desiderative or the asseverative, and it is not clear whether this is an omission or whether the future is incompatible with these two moods.

First, the imperative is encoded via two auxiliaries, according to Quatra (2008b): di <di> for active verbs and maĩ <mai> for inactive verbs, in (94) and (95), respectively. These forms are used with second-person subjects, both in singular and plural.
(94) jkë jawa jkwaï di!
${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad$ hawa ${ }^{\mathrm{h}} \mathrm{k}$ wã $\mathbf{~ d i}$
2SG.Pro food eat ACT.IMP
‘Eat food (SG)!’
(95) jkë abu maị!
${ }^{\mathrm{h}} \mathrm{k} \varepsilon$ abu maĩ
2SG.PRO sleep INACT.IMP
'Sleep (sG)!'
(adapted from Quatra 2008b: 41, 57)

By comparing the imperative forms with the declarative, it is possible to conclude that the imperative marker is the suffix $-i\langle-i\rangle$, which is attached to a $d-\langle d->$ base for active verbs and to a ma- <ma-> base for inactive verbs.

While the examples above from Quatra (2008b) include an overt subject pronoun, it is important to note that this is optional as indicated by the imperative sentential examples in Quatra (2008a), most - if not all - of which do not include a subject pronoun. This optionality is illustrated here in (96) and (97).
(96) jlabo amiñe di!
${ }^{\text {h }}$ labo ãmine di
bottle.CLF:14 fill ACT.IMP
'Fill the bottle (sG)!'
(97) abu maị!
abu maĩ
sleep INACT.IMP
'Sleep (sG)!'
(adapted from Quatra 2008a: 53, 43)

Additionally, Quatra (2008b: 41, 57) gives an imperative form for third person that is formed by adding $\tilde{i}<\underline{i}>$ to the simple imperative, as in (98) and (99). Alternatively, the imperative markers di <di> and maĩ <mail> can be replaced by dowae <dowae> and mowae <mowae> - two forms that are not glossed in Quatra (2008b) and which also do not appear in the Quatra (2008a) dictionary. These third-person imperative constructions are used, Quatra (2008b) explains, when the speaker is not giving a direct command to the interlocutor but rather telling the interlocutor to command
someone else (a third person) to do something - hence the REL.IMP for 'relayed imperative’ gloss used here.

| (98) jkye | jawa jkwaï di |
| :---: | :---: |
| ${ }^{h} k{ }^{\text {j }}$ e | hawa ${ }^{\text {h }}$ kwã ${ }^{\text {a }}$ di |

3sG.M.PRO food eat ACT.IMP REL.IMP
'Eat food (tell him/her)!'

3sG.m.pro sleep inact.IMP REL.IMP
'Sleep (tell him/her)!'
(adapted from Quatra 2008b: 41, 57)

The other two moods are the desiderative and the asseverative. According to Quatra (2008b), the former expresses wishes or desires while the latter is used for actions that are about to take place and which are certain to happen - he calls these "decisions" as opposed to "wishes". Table 12.25 gives the present tense paradigm for the active verb ${ }^{h} k^{w}$ ãt <jkwaï> 'eat' and the inactive verb abu <abu> 'sleep'.

A comparison of these two paradigms and those in Tables 12.19 and 12.20 allow for some generalizations. First, the desiderative and the asseverative share the same construction, and the only difference seems to be the addition of -eẽ <-eِi> in the desiderative versus -o <-0> in the asseverative. Second, note that, unlike in the declarative mood, the unmarked form in the desiderative and the asseverative moods is the first person (rather than third), since second and third persons require an additional auxiliary: ${ }^{h} k \tilde{q} n \varepsilon<j k i \underline{i n} n \ddot{>}>$ and $n \varepsilon<n ̃ e ̈>$, respectively. Note that the available data is insufficient to determine the meaning or function of all the different formatives in these two constructions. Finally, in both the desiderative and the asseverative, the singular-plural distinction for active verbs is optional, and speakers can use the singular form with plural reference. According to Quatra (2008b: 39), in this case they must use the plural pronoun overtly or add the suffix -lidit-lidï> to the main verb.

Based on Quatra (2008b), it is possible to identify three main constructions which mark polar interrogatives. These seem to be specific to different tenses, as the paradigms in Table 12.26 for the inactive verb $a b u$ <abu> 'sleep' show. First, Quatra mentions that polar interrogatives are formed with the addition of an optional da- <da-> prefix; he explains that there is variation among speakers in the use of the prefix but that some general tendencies can be observed: (i) optional for first person, (ii) dispreferred by most speakers for second person, and (iii) almost always used in third person (Quatra 2008b: 22). The exception to this generalization is the future tense, where $-d a<-d a>$ is added as a suffix and appears in all persons. Second, note that $-\partial\langle-\ddot{\partial}\rangle$ occurs where in the declarative there is $-\varepsilon\langle-\ddot{e}\rangle-$ that is,
Tab. 12.25: Present tense paradigm for the desiderative and asseverative moods (adapted from Quatra 2008b).

| mood/ person |  | active stem: e.g., ${ }^{\text {h }} \mathrm{k}^{\mathrm{w}} \mathrm{a}$ - <jkwaï> 'eat' |  |  |  |  |  | inactive stem: e.g., abu <abu> 'sleep' |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1 |  | 2 |  | 3 |  | 1 |  | 2 |  | 3 |  |
| DESID | SG | ${ }^{\text {htẽĩ }}$ | <jteli> |  | <jteِi jkïlinë> |  | <jteil $\tilde{\text { në }}$ > | ${ }^{\text {hnimeĩ }}$ | <jnïmei> | ${ }^{\text {h }}$ nimeĩ <br> ${ }^{n} \mathrm{k}$ ก๊̃ $\varepsilon$ | <jnїmei jkïñ̈̈̈> | ${ }^{\text {hṅmeĩ }}$ ¢ $\varepsilon$ | <jnïmeị ñë> |
|  | PL | ${ }^{\mathrm{h}}$ kiẽĩ ~ <br> ${ }^{\text {htẽĩ }}$ | <jkyei ~ jteli> |  <br> $\sim{ }^{\text {htẽĩ }}{ }^{\text {h }}$ kĩnを | <jkyẹi jkï̈̃ïë ~ jteí jkïnĩë> | ${ }^{h}$ k ${ }^{\text {jẽĩ }} \Omega \varepsilon$ лย | <jkyeí ñë ñë> |  |  |  |  |  |  |
| ASSEV | SG | ${ }^{\text {h }}$ to | <jto> | ${ }^{\text {hto }}{ }^{\text {h }}$ kĩf $\varepsilon$ | <jto jkïñë> | ${ }^{\text {h }}$ to $\mathrm{n} \varepsilon$ | <jto ñë> | ${ }^{\text {h }}$ nomo | <jnomo> | ${ }^{\text {h }}$ nomo <br>  | <jnomo jkïñ̈ё> | ${ }^{\text {n }}$ nomo n ع | <jnomo ñë> |
|  | PL | $\begin{aligned} & { }^{\text {h}}{ }^{\text {k }} \text { jo } \sim \\ & \text { hto } \end{aligned}$ | <jkyo~ jto> | ${ }^{\mathrm{h}} \mathrm{K}^{\mathrm{j}} \mathrm{O}{ }^{\mathrm{h}} \mathrm{K} \mathrm{FTn} \varepsilon \sim$ ${ }^{\text {hto }}{ }^{\mathrm{h} k \tilde{\mathrm{H}} \mathrm{n} \varepsilon}$ | <jkyo jkïñë ~ jto jkïn̈̈̈>> |  ${ }^{h}$ to $\rho \varepsilon$ | <jkyo ñë ~ jto ñë> |  |  |  |  |  |  |

Tab. 12.26: Declarative vs. interrogative paradigms for inactive verbs; for example, abu <abu> 'sleep' (adapted from Quatra 2008b).

| tense/ person | declarative |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 |  | 2 |  | 3 |  |
| PRS | ${ }^{\text {n }}$ nime | <jnїmë> | ${ }^{\mathrm{h}} \mathrm{k}$ Tm $\varepsilon$ | <jkïmë> | ma | <ma> |
| REC.PST | ${ }^{\text {h }}$ nimiẽ | <jnïmię> | ${ }^{\text {h }}$ kĩmiẽ | <jkïmiè> | miẽ | <mié> |
| MED.PST | ${ }^{\mathrm{h}}$ nimine | <jnïminë> | ${ }^{\text {h }}$ KıTmine | <jkĭminë> | $\min \varepsilon$ | <minë> |
| REM.PST | ${ }^{\text {h }}$ nimeko | <jnïmëkä> |  | <jkïmëkä> | mako | <makä> |
| FUT | ${ }^{\text {h }}$ nimeke | <jnïmëke> | ${ }^{\text {h }}$ kĩm 2 ke | <jkïmëke> | make | <make> |
| FUT.INTN | ${ }^{\text {h }}$ nomoba | <jnomoba> | ${ }^{\text {h }}$ ozmoba | <jkomoba> | moba | <moba> |
| tense/ person | interrogative |  |  |  |  |  |
|  | 1 |  | 2 |  | 3 |  |
| PRS | da ${ }^{\text {n }}$ nimə | <dajnїmö> | ${ }^{\text {hkirmə }}$ | <jkïmö> | damə | <damö> |
| REC.PST | da ${ }^{\text {h }}$ nimi | <dajnïmi> | ${ }^{\text {h }}$ Kı̃mi | <jkïmi> | dami | <dami> |
| MED.PST | da ${ }^{\text {h }}$ +minı | <dajnïminö> | ${ }^{\text {h }}$ Kı̃minə | <jkïminö> | daminə | <daminö> |
| REM.PST | dahnimək | <dajnïmökä> |  | <jkïmmökä> | damək | <damökä |
| FUT | ${ }^{\text {hnimeneda }}$ | <jnïmëkeda> | ${ }^{\text {h }}$ kr̃m 2 keda | <jkïmëkeda> | ~damak <br> makeda | ~ damakä> <makeda> |
| FUT.INTN |  | - |  | - |  | - |

in the present, medial past, and remote past tenses. Finally, in the recent past, the suffix is -bi <-bi> for active verbs (cf. ${ }^{h} k^{w} \tilde{a} \tilde{t}{ }^{h} k i k j e<j k w a i ̈ l o u k i z k y e>~[d e c o m p o s a b l e ~ a s ~$ <jkï-dë-ie>] 'You ate' and ${ }^{h} k^{w}$ ãã $\left.{ }^{h} k i d i b i ~<j k w a i ̈ l ~ j k i ̈ d i b i>~ ' D i d ~ y o u ~ e a t ? '\right), ~ w h i c h ~ h a s ~ a ~$ nasal allomorph -mi <-mi> in the inactive paradigm. Crucially, no interrogative form is given for the future intentional of either active or inactive verbs.

Content questions, on the other hand, are formed by adding a content question word or phrase. These are presented in Table 12.27 with additional information about their internal structure. As the data show, there seem to be four main interrogative roots: ${ }^{h}$ wai <jwai>, ${ }^{h} k^{w} \varepsilon<j k w e ̈>,{ }^{h} t i \sim{ }^{h} t e<j t i \sim j t e>$, and hibí <jibï>. While both the question word roots for 'who' and 'what' combine with classifiers - the first with the animate classifiers, and the second with the inanimate ones -, ${ }^{h} t i<j t i>$ combines with demonstrative pronouns and place adverbs, and hibi <jibï>, with a wide range of other words such as adjectives and quantifiers.

Examples (100)-(103) illustrate the four question word roots. Example (100) illustrates the masculine form for 'who', while (101) illustrates the use of 'what' with the generic inanimate classifier attached to it. In addition to this generic classifier, ${ }^{h} k^{w} \varepsilon<j k w e ̈>$ can also take specific inanimate classifiers, so a form like ${ }^{h} k^{w} \varepsilon^{-}{ }^{h} j u<j k w e ̈-$ jyu>, which has the classifier for drinks (see clF:41 in Table 12.16) is translated by Quatra (2008a:128) as 'what sugar cane juice'. ${ }^{34}$ Examples (102) and (103) show the

34 Presumably, this could have a more general translation as 'what drink'.

Tab. 12.27: Content question words.

| Quatra form |  | internal composition | gloss |
| :---: | :---: | :---: | :---: |
| ${ }^{\text {h waidł }}$ | <jwaidï> | $j w a i+a n i m a t e ~ p l u r a l ~ c l a s s i f i e r ~$ | who.PL |
| ${ }^{\text {hwanja }}$ | <jwanña> | $j w a i+$ masculine classifier | who.sG.M |
| ${ }^{\text {hwaiju }}$ | <jwaiyu> | $j w a i+$ feminine classifier | who.SG.F |
| ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}}$ ع-CLF | <jkwë-CLF> |  | what |
| ${ }^{\mathrm{h}} \mathrm{k}^{\mathrm{w}}$ - -jaen ${ }^{\text {¢ }}$ | <jkwë-jaenï> | $j k w e ̈+$ generic singular inanimate classifier + postposition $=n \ddot{ }$ | what with |
| ${ }^{\text {hti}}$ + DEM | <jiti+DEM> |  | which X? |
| ${ }^{\text {htebəna }}$ | <iteböna> | jte + place adverb | where |
| ${ }^{\text {htibja }}$ ¢ | <jtibïkë> | $j t i+$ place adverb | where to |
| ${ }^{\text {htibic }}$ | <jibibiè> | $j t i+$ place adverb? ${ }^{35}$ | where from |
| hibi ${ }^{\text {n }}$ ti | <jibï jti> | $j i b i ̈+j t i$ | how |
| hibi + ADJ | <jibï + ADJ> |  | how X? |
| hibf aewa | <jibï aewa> | $j i b i ̈+$ inanimate quantifier | how many? (INAN) |
| hibł ajadł | <jibï ayadï> | $j i b i ̈+$ animate quantifier | how many? (AN) |
| hibł baede | <jibï baede> | jibï + 'before, long ago, old' | when? |
| hibł ibł | <jibï ibï> | $j i b i ̈+?$ | why? |
| hibj dzke | <jibï dëke> | $j i b i ̈+?$ | what for? (INAN) |
| hibł $\mathrm{ik}^{\text {j }}$ e | <jibï ikye> | $j i b i ̈+?$ | what for? (AN) |

${ }^{h} t i+\mathrm{DEM}<j t i+\mathrm{DEM}>$ and hibi + ADJ <jibï + ADJ> constructions, respectively. While the construction with the demonstrative is written as a single word by Quatra (2008a), the demonstrative can occur on its own as shown in Table 12.13.
(100) jwaña jkawö?
${ }^{\text {h wãjna }}{ }^{\text {h}}$ kawə
who.SG.M 2SG.ACT.INT.PRS.COP
'Who are you?'
(adapted from Quatra 2008a: 164)
(101) jkwë-jae da?
${ }^{\mathbf{h}} \mathbf{k}^{\mathbf{w} \boldsymbol{\varepsilon} \text {-hae da }}$
what-CLF:INAN.GEN 3SG.ACT.INT.PRS.COP
'What is this?'
(adapted from Quatra 2008a: 128)
(102) jtibijkye da jkë bába?
${ }^{\text {h tibi }}{ }^{\text {h }} k^{\mathrm{j}}$ da ${ }^{\mathrm{h}} \mathrm{k} \varepsilon \quad$ 'baba
which+PROX.SG.M 3SG.ACT.INT.PRS.COP 2SG.PRO father
'Which one is your father?'
(adapted from Quatra 2008a: 149)

35 While Quatra (2008a) includes the place adverbs bəna <böna> and bik <bïkë> (see Table 12.11), there is no place adverb bic <bië>. However, given that the semantics of this question word includes
(103) jibï jtami-jau jkë jayu da
hibi ${ }^{h}$ tãmi-hau ${ }^{\mathrm{h}} \mathrm{k} \varepsilon$ haju da
how tall-CLF:F 2sG.PRO daughter 3sG.ACT.INT.PRS.COP
'How tall is your daughter?'
(adapted from Quatra 2008a: 102)

These examples and other similar ones in the original sources suggest that content question words are always fronted; however, this requires more in-depth investigation.

### 7.5 Negation

As Rosés Labrada (2021) shows, Jodï uses a single marker, the suffix -de <-de>, to encode negation in all domains. This includes the negation of simple declarative clauses - commonly known as "standard negation" -, imperative negation, negation of non-verbal predicates, and existential negation. The available information is limited with respect to the existential and non-verbal types, and, given the lack of work on subordination (see Section 8), nothing can be said about negated subordinate classes. I illustrate the use of $-d e<-d e>$ in declarative and imperative clauses.

Quatra (2008b) shows that there is a difference in the expression of negation between the two aspectual verb classes posited in his analysis (see Section 6.1). For inactive aspect verbs like $a b u$ <abu> 'sleep', negation is accomplished by adding a negative-marked auxiliary mide <mïde>, as in (104), which is also realized as made <made> by some speakers (Quatra 2008b: 93). For active aspect verbs like ${ }^{h} k^{w} \tilde{a} \tilde{t}$ <jkwail> 'eat', on the other hand, negation is formed either via a suffix -de <-de> that attaches to the lexical verb or by adding the negative-marked auxiliary dide <dïde>, as shown in (105) and (106), respectively.
(104) jkë abu mïde jkïmë
${ }^{h} \mathrm{k} \varepsilon \quad \mathrm{abu}$ mide ${ }^{\mathrm{h}} \mathrm{k} \neq \mathrm{m} \varepsilon$
2SG.PRo sleep NEG.INACT 2SG.INACT.PRS
'You do not sleep.'
(adapted from Quatra 2008b: 94)
(105) jye jwane jkwaiï-de jnïmë
${ }^{\text {h }}$ je $\quad{ }^{h}$ wãne ${ }^{h}$ kããã-de ${ }^{h}$ nime
1SG.PRO taro eat-NEG 1SG.INACT.PRS
'I do not eat taro.'
(adapted from Quatra 2008b: 90)

[^8]$\begin{array}{lll}\text { (106) jye } & \text { jwane jkwäï dïde } & \text { jnïmë } \\ { }_{\text {hje }} & { }^{\mathrm{h}} \text { wãne }{ }^{\mathrm{h}} \mathrm{k}^{w} \text { ãã dide } & { }^{\mathrm{h}} \text { nim } \varepsilon\end{array}$
1sG.PRO taro eat NEG.ACT 1SG.INACT.PRS
'I do not eat taro.'
(adapted from Quatra 2008b: 90)

A comparison of these examples allows us to isolate - de <-de> as the negative marker for Jodï. This conclusion agrees with Vilera Díaz (1985: 104), who also argues that negation is marked by -de.

According to Quatra (2008b), the Jodï negative imperative is formed, as in declaratives, by adding mide <mïde> after the main verb if the root belongs to the inactive aspect class (107) or by suffixing -de to the main (lexical) verb if the root belongs to the active aspect class (108); in the latter case the auxiliary is the one for inactive aspect verbs.

(108)


## 8 Complex clauses

Clause-linking, information structure, and discourse are effectively unexplored areas in the description of Jodï. This section brings together the limited available data to consider subordination and coordination. The data needed to understand information structure in Jodï, and how narrative, conversation, and other types of discourse are organized, is even scarcer, and I therefore do not address those two areas here.

Quatra (2008a) gives three forms that he lists as "conjunctions" but for which he does not give a translation; these are dĩme <dïmë>, ĩme <ịmë>, and hãĩme <jaimë>. It is therefore unclear what type of constituents these forms can join or what their associated meaning is. Some examples of complex sentences in the dictionary, however, suggest that temporal adverbial clauses are marked with a temporal marker ${ }^{h}$ tõna <jtona>, as in (109) and (110); note that in both examples the sub-
ject of the temporal clause is first person singular and that it is possible that this is encoded in the form of the adverbial marker with the ${ }^{h} t$ - <jt-> first-person subject prefix discussed previously in Section 6.3. Additionally, Quatra (2008a) provides an example of a subordinate clause, given here in (111), that suggests that the subordinate clause is finite and that a possible subordinator $i b \dot{i}<i b i$ '> 'because' exists in the language.
(109) [jye lëjteko jkamï jtona], jkajkaejwi kye


1sG.PRO dirt.clod grab when break 3sG.ACT.REC.PST
'When I grabbed the dirt clod, it broke.'
(adapted from Quatra 2008a: 111)
(110) [jye jkyo u jtona ], yëwi jkëmajli dinë

1SG.PRo forest walk when dog follow 3sG.ACT.MED.PST
'While I walked in the forest, the dog followed me.'
(adapted from Quatra 2008a: 120)
(111) [ me bude dë] ibï wëbao jtë
me bude $\mathrm{d} \varepsilon$ ibi webao ${ }^{\mathrm{h}}$ t $\varepsilon$
plains burn 3sG.ACT.PRS because worry 1SG.ACT.PRS
'It worries me to see the plains burning.' (Lit. 'I worry because the plains are burning.')
(adapted from Quatra 2008a: 225)

Finally, there is a marker ${ }^{h} n u w \tilde{\varepsilon}$ <jñuwë̈> 'again, later’ that can join two temporally sequential clauses. In (112), this marker introduces the second clause, while the first clause is introduced by namulije <ñamuliyë> 'first'.

Generally speaking, this area of grammar requires significantly more work. One of the challenges is the fact that the available data stems primarily from (translation) elicitation; more naturalistic data from conversations and narratives may serve to study clause-combining, information structure, and discourse.

## 9 Conclusions

Jodï is still relatively little known, even to Amazonianists. This is certainly due, at least in part, to the fact that the main descriptive works on the language are an unpublished undergraduate thesis (Vilera Díaz 1985) and two books with limited circulation which are aimed primarily at the Jodï community (Quatra 2008a; 2008b). However, understanding Jodï grammar has the potential to inform discussions of phenomena of cross-linguistic interest such as evidentiality and classifier systems, as well as future research into the genetic and areal relationships of Jodï and other Amazonian languages. It is my hope that the grammar sketch presented here will bring the Jodï language to the attention of typologists and area specialists and that it informs future documentation and descriptive efforts.

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[^0]:    Jorge Emilio Rosés Labrada, University of Alberta

[^1]:    4 The article is a nearly identical version of the Lexema Nominal section included the thesis (pages 43-66).
    5 In the sections that follow, I use examples from these four sources. In all cases, I have adapted the examples by adding English glosses and translations and where needed, I have also added morpheme breaks that represent my own analysis of the Jodï data available. For the Vilera Díaz examples, I have regularized her transcription to standard IPA, following the conventions explained in Rosés Labrada (2019) and in footnote 6. For the interlinearized examples from Quatra (2008a; 2008b), a second line has been added that provides a phonemic transcription based on the orthography. In all the examples, the morpheme or construction being discussed is boldfaced and/or in brackets. Not used here are the materials created by New Tribes Mission such as the wordlist by Rodman \& Rodman (2000) and the 1979 reading primer (Cartilla No. 1 Yuana 1979). Glosses of particular specific classifiers are given as a number that corresponds to the table provided in Quatra (2008a: 32-39) and adapted here in Table 12.16.

[^2]:    7 The original data are given in a modified International Phonetic Alphabet (for ease of typing in a typewriter) with the following non-IPA values: $c$ for $t, j$ for $d \xi, y$ for $j, \tilde{n}$ for $n, r$ for $\kappa$, and a raised ${ }^{\mathrm{y}}$ to indicate palatalization. Additionally, the author explains that intervocalic $l$ should be understood to be $l$ (Vilera Díaz 1985: 41).

[^3]:    9 This form seems to violate the previously-described open syllable pattern; however, the syllablefinal [ m ] in this form is likely better understood as part of the realization of the nasal vowel before an oral consonant.
    10 Vilera Díaz (1985: 32) also gives two examples of what she considers a CVC syllable but both her examples are better analyzed as CV.CjV, where the /j/ represents a palatal approximant.

[^4]:    13 These glosses represent my analysis based on the data and on Quatra (2008a). Vilera Díaz glosses them in the following way: 'hae 'thing', wa 'things', ha 'animate being (м)', 'hau 'animate being (F)' and 'hadì 'animate beings' [my translations].

[^5]:    14 While Quatra (2008a) does not label the pairs with similar meaning as pronunciation variants of one another (something he does in many other instances throughout the dictionary), I have assumed here that they are, based on the allomorphy of the locative and allative case markers (see Section 5.8).
    15 Note that all of these, except for $k e<k e>$ and $d \varepsilon<d \ddot{e}\rangle$, are given with a following exclamation mark in their citation form in the dictionary.

[^6]:    between the singular and the plural proximate forms. Further research into Jodï phonological processes may help elucidate this issue.

[^7]:    19 My translation. I also substituted the specific noun used by Quatra - namely 'mountain' - with the X between square brackets.
     CLF:M-wë>, with the masculine classifier -ã <-a> causing vowel harmony in the last syllable (we<wë> to $w \tilde{a}\langle w \underline{a}\rangle$ ) in addition to the nasalization of the vowels in previous syllables. The surface form $\tilde{o}$ < $\underline{0}$ > for the masculine classifier can be understood as a coalescence effect with an /a/vowel in the root if we compare these forms with the forms for 'other' and 'others', namely ãma'no < ${ }^{h}$ amajno> and $a b a^{h} l a-d \dot{t}<a b a j l a-d i ̈>$, in Quatra (2008a: 52). The meaning of the formative -w <-wë> is unclear.

[^8]:    a source location, it is possible that bic <bië> is a place adverb built on the same demonstrative root as the other two adverbs and employing the allative case marker described in Section 5.8.

