A DESCRIPTIVE GRAMMAR OF DESANO

by

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ABSTRACT

This dissertation provides a linguistic description and analysis of Desano, an endangered Tukanoan language of the Vaupés region of Brazil. Much valuable knowledge would be lost if this language were to become extinct without documentation. Several of the Tukanoan languages in the upper Amazon are highly endangered. The Eastern Tukanoan people are famous for their linguistic exogamy and 'obligatory' multilingualism; there are some twenty languages in the region whose speakers must marry someone who speaks a different language.

There are a number of linguistic traits in Desano described in this dissertation which are of particular interest to linguists in general, because they are rare in the world's languages, and they stand to contribute much to our understanding of the full range of possibilities in human grammar (and consequently also of some of the limits of human cognition). These include: nasal harmony (in phonology), the noun classifier system (in morphology), and the evidential system (in the interface of morphology-syntax-semantics). The dissertation begins with an introduction of the Desano people and their language; including sociolinguistic information and some historical background. The second chapter presents a phonological description. It then proceeds with a description of the parts of speech in Desano and the characterization of the 'word' in Desano, in Chapter 3. The bulk of the dissertation is devoted to the morphosyntax of Desano, with chapters devoted to nominal morphology and verbal morphology.

This dissertation provides a reasonably comprehensive description and documentation of Desano, one of the most endangered Tukanoan languages. The descriptions of unusual typological traits (i.e., nasal harmony, evidentiality, verb serialization, etc.) contribute to the general linguistic scholarship in significant ways, since accurate accounts of the traits mentioned are of considerable interest for linguistic typology and theory generally.

To my parents Wilson and Socorro with love.

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ABBREVIATION LIST

1	first person
2	second person
3	third person
ABSTR	abstract
ADD	additive
ADMON	admonition
ADV	adverbializer
ADVER	adversative
AN	animate
ASP	aspectual
AUG	augmentative
CEL	celerative
CLS	classifier
COM	comitative
COMPL	completive
CONCR	concrete
CONJ	conjunction
CONT	continuative
CONTR	contrary
DEIC	deictic
DEM	demonstrative
DEON	deontic
DES	desiderative
DIM	diminutive
DIREC	direction
DIST	distal

DUB	dubidative
DUR	durative
EMPH	emphatic
EVID	evidential
EXCL	exclusive
EXIST	existential
EXRT	exhortative
F	feminine
FOLK	folklore
FRUST	frustrative
HSAY	hearsay
IMP	imperative
IMPERF	imperfect
IN	inanimate
INCEPT	inceptive
INCL	inclusive
IND	individualizer
INSTR	instrument
INTER	interrogative
INTERJ	interjection
LOC	locative
M	masculine
MAN	manner
MOD	modality
MODIF	modifier
MOT	motion
MOV	movement
N	noun
NEG	negation
NP	noun phrase
NOM	nominalizer

NON	non-
NUM	number
OBJ	object
PARTIC	participial
PERF	perfect
PERM	permission
PL	plural
POSS	possessive
PREDIC	prediction
PROX	proximal
QUANT	quantifier
QUOT	quotative
RC	relative clause
REAS	reason
REF	referential
RESUL	resultative
SG	singular
SOL	solitary
SPECUL	speculative
SUBJ	subject
TMP	temporal
TOTAL	totalizer
VBLZ	verbalizer

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CHAPTER 1

THE DESANO PEOPLE AND THEIR LANGUAGE

1.1 Goal of the Dissertation

The goal of this dissertation is to provide an in-depth linguistic description and analysis of Desano, an Eastern Tukanoan (ET) language of the Vaupés Region of Brazil. Study of ET languages is important for advancing understanding of various aspects of linguistic theory. The ET languages exhibit important typological traits little known elsewhere in the world, such as a complex system of noun classifiers, a unique evidentiality system, and nasal harmony.

This dissertation contributes to the linguistic scholarship in three areas: (1) it provides a reasonably comprehensive description and documentation of Desano, one of the most endangered ET languages of the region; (2) it contributes to the language community by providing material to aid in the communities' language revitalization efforts; and, (3) it contributes to general linguistic scholarship in significant ways, by furthering understanding of: (i) typological understanding of languages; (ii) theoretical linguistics, providing evidence on the basis of which theoretical claims will be tested; (iii) historical linguistics, providing material needed for the study of language change, language contact, and the genetic relationships among languages of the Vaupés area; and

(iv) the study of ET languages, contributing to a growing body of work on languages of the Vaupés area.

1.2 A Brief History of the Reseach

The present work is part of my ongoing investigation of Desano. I first made contact with the Desanos during the summer of 2007.[1] Desano leaders and community members had long searched for a linguist to help them with language documentation and revitalization activities. I was received enthusiastically by the group. This first field trip was important in establishing a relationship with the leaders of the group and discussing the viability of conducting linguistic research with them. The Desano leaders, the directors of FOIRN (*Federação das Organizações Indigenas do Rio Negro*), the official indigenous organization with jurisdiction in the region, and I agreed to a long-term commitment between myself and the Desano group. On the same occasion, FOIRN asked me to supervise their linguistic efforts with one of their projects. One of the projects for which I was the linguistic superviser was the '*Projeto Bayawi*'. The goal of this project was to provide activities in which the young generation of Desanos would be exposed (immersed) to traditional activities of the group.

In 2008, I returned to the field and organized the first meeting with Desano teachers, community leaders and community members to discuss a plan in order to start a collaborative project for the documentation and revitalization of the language. During this fieldwork, I also did preliminary linguistic research to ascertain the viability of documentation, as well as a project to undertake a linguistic analysis of the language. I organized multiple linguistic workshops in the communities in order to develop an orthography for use by the Desano. During these workshops, participants also received preliminary training in language documentation. Fieldwork was conducted in the Desano communities on the Brazilian side of the Papuri River. Community members also created the "Desano Committee," comprised of six Desanos who would advocate on behalf of the group and serve as intermediaries between me and the community members in order to ascertain that the project activities in the Desano communities in Brazil were being executed as planned. In 2009, the Desano Committee chose two Desano speakers to work with me as 'Indigenous Research Assistants' (IRA). These IRAs have received training in language documentation and basic linguistic analysis, and they have worked and continue to work closely with me and with the communities.[2]

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[1] The field trip was supported by a small grant from *The Endangered Language Fund.*

Since 2010, the two IRAs have been actively working on transcription, translation and collection of material in the communities – these materials have been parsed and translated. Museu do Índio and UNESCO secured support for the work with the Desano communities in Brazil for the years 2011 and 2012. During three years of work in the Desano communities in Brazil, the project team has recorded, transcribed, and translated forty-five texts in a variety of genres (stories, tales, myths, dialogues, songs, poems, etc.), comprising a total of more than twenty-five hours of audio and video recorded materials. In addition, the project team has made audio recordings of all items for a digital Desano dictionary. It has prepared booklets to be used in the schools as aids for the communities' language revitalization efforts.

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[2] The work conducted during the years of 2008 and 2009 was funded by NSF/DEL (Doctoral Dissertation Improvement Grant, BCS-0756067) and *The Hans Rausing Endangered Languages Project* (ELDP Field Trip Grant, FTG 055)

One of the most significant results of the project, however, is this dissertation, which will be translated into Portuguese. Other important results involve consultation and active participation of community members regarding the goals and plan of work for the ongoing documentation project among the Desano communities in Brazil with the support of Museu do Índio. The 'Desano Committee' and I have continued to organize annual meetings and linguistic workshops with Desanos from communities on the Tiquié and Papurí rivers in Brazil. These meetings and workshops have always been well attended. In the workshops, we discuss issues regarding language revitalization and language policy; we also define the goals and discuss the methodologies of the ongoing project activities in the communities. Concrete accomplishments include resolving a number of orthographic controversies (particularly the representation of intervocalic flapping of /d/ and the high central vowel /ɨ/), and a sociolinguistic survey of all the Desano communities in Brazil, which showed that the number of fluent speakers of Desano is very small: only 150 individuals speak the language fluently in this region (although the number of fluent speakers in Colombia is assumed to be larger).

1.3 Methodology and Corpus

Data for this dissertation were collected during my own fieldwork with native speakers of Desano. This fieldwork employed traditional methods: elicitation of data; audio and video recording of elicitation and of naturally occurring speech in numerous genres (narratives, including oral history, traditional tales, dialogue, conversation, recipes and direction-giving, jokes, songs, etc.); and transcription and analysis of these data in the field with the assistance of native speakers. The majority of the recordings of naturally occurring speech were collected largely by the trained community members to ensure the "naturalness" (i.e., authenticity) of the data.

Linguistic questionnaires (lexical and morphosyntactic) were also employed.[3] One of the questionnaires used was a lexical questionnaire of about 1,000 words based on Kaufman and Berlin's (1987) questionnaire for South American languages and on Kaufman's (1967) questionnaire for Mayan and other Mesoamerican languages.

The approach I took to the description and analysis was worked out inductively, based on texts of natural occurring speech and from elicited utterances (based on these texts). Thus, my goal was to describe Desano in its own terms, in a user-friendly fashion, employing terminology from linguistic typology.

1.4 Typological Profile of Desano

The basic (or preferred) constituent order in Desano is SV for intransitive sentences and SOV for transitive utterences. The language exhibits a nominative-accusative alignment system; generally the accusative is marked by the suffix *-re* (this suffix has multiple functions and its cognate is a current topic of investigation in other ET languages, see Stenzel 2008). Both pronouns and other referential NPs can be omitted in discourse when they are recoverable from contexts (usually through agreement suffixes attached to the verb).

Desano is agglutinative and exclusively suffixing (except for the possessive marker *yaa*, which functions as a clitic and can be attached at the beginning of nouns). Verbs and nouns are the two major lexical classes (parts of speech). Adjectival notions are generally coded by either qualitative verbs or nominal roots. The verbal morphology is highly complex, with verb suffixes encoding tense, number, person, gender, mood, and evidentialilty. The language also has complex verb serialization, which can take up to four verbal roots. Like other Tukanoan languages (cf. Gomez-Imbert 2007), Desano exhibits extensive nominal classification, including noun classes and noun classifiers. All Desano nouns fall into one of four classes: animate plural, masculine singular animate, feminine singular animate, and inanimate. Membership is generally predictable on semantic grounds, except for the split of animals between the two animate genders (i.e., some animals are treated as human-like nouns). The evidential system of Desano is highly complex. In Desano, evidentiality is a grammatical category that is obligatorily marked on the verb root. In a 'declarative' sentence in Desano, besides including information such as 'tense/aspect', 'person', 'gender', and 'number', the speaker has to indicate how he or she knows the information.

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[3] These included personal/social information from each participant (all relevant metadata).

Phonologically, Desano exhibits a classic Amazonian six-vowel system (including a central high vowel), with contrastive nasality, and an inventory of nine consonants (the status of the glottal stop (*ʔ*) and the glottal fricative (*h*) as full consonant segments is in question and is under investigation (Silva, *to appear*). Desano also exhibits nasal harmony that occurs on the word level (i.e., nasality can spread from the root morpheme to affixes). This suprasegmental nasalization is common in many Tukanoan languages (Barnes 1999: 211-212; Barnes 1996; Gomez Imbert and Kenstowicz, 2000; Stenzel, 2007). Desano exhibits a two-level tone system. Desano verbal and nominal roots may exhibit either HH, HL, or LL tone patterns, and a number of verbal affixes bear lexical high tone. Tone spreading seems to be limited, affecting only word-final inflectional suffixes. Desano shows multiple lexical and grammatical homonymy.

1.5 A Brief History of Contact

It is believed that before the arrival of the Europeans conquerers in Brazil in 1500 the number of indigenous languages spoken in Brazil was at least double of what are spoken today (Rodrigues 2002). As for the number of languages spoken today, figures vary somewhat. Rodrigues (2005) lists approximately 180; ISA (Instituto Socioambiental) lists more than 180; and Moore (2006) talks about the existence of about 160 indigenous languages (some consider Moore 2006 the more accurate count, cf. Stenzel 2005). The count of the indigenous groups in Brazil that speak these languages also varies somewhat; Moore (2006) counts 220 groups, ISA (Instituto Socioambiental) lists 222, and CIMI (Conselho Indigenista Missionário) gives 235.[4] Nearly all that is known about Desano history is based on oral traditions of the group. Buchillet (1990b) and Wright (1987, 1991) present some history about the first contacts with the Eastern Tukanoan groups. Ramirez (1997:12-14) also presents a brief history of this contact and summarizes it in five phases:

1. *Slavery* (1739-1760). During this period, the Portuguese invaded the Upper Rio Negro region to capture Indians and sell them as slaves. Approximately 20,000 indigenous people were taken from their villages and sold as slaves during that time.

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[4] Instituto Socioambiental is a nonprofit organization which directs several projects in indigenous communities of the region; CIMI is a nonprofit organization vinculated to the Catholic Church which supports (educational) projects in indigenous communities.

2. *Creation of new indigenous villages* (1761-1829). During this period, the Portuguese administration created villages in 'strategic locations' and started to place the indigenous people there, taking them from their traditional communities to these new villages. According to Ramirez, this process explains why some of the groups are spread out in the region.
3. *Commerce and other governmental programs* (1830-1920). It is during this period that the first missionaries arrived in the region, motivated by the governmental program 'civilização e catequese' (civilization and conversion). It was also during this period that the exploitation of natural rubber in the Amazon reached its peak. Many indigenous people were taken from their villages and forced to work as collectors of rubber. It was also during this time that the first ethnographic reports were made by scientists who traveled to the region (for example, Wallace 1858; and Koch-Grünberg 1906).
4. *The Salesian Missions* (starting from 1916). The Salesians arrived in the Upper Rio Negro and slowly freed the indigenous people from oppression and slavery. However, the missionaries forced the indigenous children to go into boarding schools, where they were forbidden to speak their native languages. They were allowed to speak only in Portuguese. Many groups (like the Desano) did not resist this process, which resulted in the end of the traditional long houses, and in abandonment of traditional rituals and other cultural practices.

5. *Modern society* (starting from 1960). Nowadays, many of the indigenous people in the region have a different lifestyle. Many of them have moved to villages (missions), where they have access to electricity and live in individual houses, and the children go to school and receive an education in Portuguese. In the case of the Desano in Brazil, for example, they are abandoning their traditional villages and moving to other places, like Iauaretê and São Gabriel da Cachoeira; as a consequence, they abandon their native language.

1.6 The Vaupés Region of Northwestern Amazonia

The Vaupés Region is named after the river with the same name (Vaupés in Colombia, Uaupés in Brazil). The Vaupés River is one of the largest tributaries of the Rio Negro. It starts in the Colombian territory and part of it serves as the border between Brazil and Colombia. The Vaupés Region, as defined here, is an area that includes the main tributaries to the Vaupés (the Papurí and Tiquié Rivers) and also the Apaporis, Mirití-Paraná and Pirá-Paraná Rivers, as shown in the marked area in the map in Figure 1.1. The first records (travel letters/journals/reports) about the indigenous people of the Vaupés date from 1759.

These early reports refer to the people of the Vaupés as “Vaupés Nations” [Nações Uaupés] due to the homogeneity of the culture and similarities among the languages spoken in the region (cf. Brüzzi A. da Silva 1977:26).

The Vaupés region of the Brazilian-Colombian border is characterized by numerous cultural traits shared by indigenous groups that speak the languages of three different language families (Arawakan, Nadahup [or Makuan] and Tukanoan). This region is famous for extensive multilingualism and linguistic exogamy (a spouse must marry someone who speaks a different language), where people know at least two languages and often several. Consequently, the language-contact situation has had great influence in language change among the languages of the region, and the linguistic exogamy has been a topic of much interest in the literature. For example, discussion of the multilingualism and the exogamous marriage practices in the Vaupés region are found in Aikhenvald (2002), Ardila (1989), Chernela (1982, 1989, 1993), Correa Rubio (1984, 1997), Gomez-Imbert (1991, 1993, 1999), González Ñáñez (2004), S. Hugh-Jones (1993), Jackson (1974, 1976, 1983, 1984, 1988), Sorensen (1967, 1985) and Stenzel (2005, 2006), among others.

The region is also known for other cultural traits shared among the different groups – specific forms of hunting, fishing, ceremonial greeting, shamanism, myths, discourse forms, etc. General descriptions and discussions about the cultural practices of the Tukanoan people (and other groups) in the Vaupés region are found in Århem (1981, 1989, 1996), Brüzzi (1977), Buchillet (1983, 1985a, 1985b), FOIRN and ISA (2000), Giacone (1949), Goldman (1948), C. Hugh-Jones (1977, 1979, 1988), S. Hugh-Jones (1994a, 1994b, 1995, 2002), Jackson (1991, 1995), Koch-Grünberg (2005 [1909]), Meira (1991, 1993), Reichel-Dolmatoff (1971, 1996, 1997), Santos-Granero (2002), and Wright (2002).

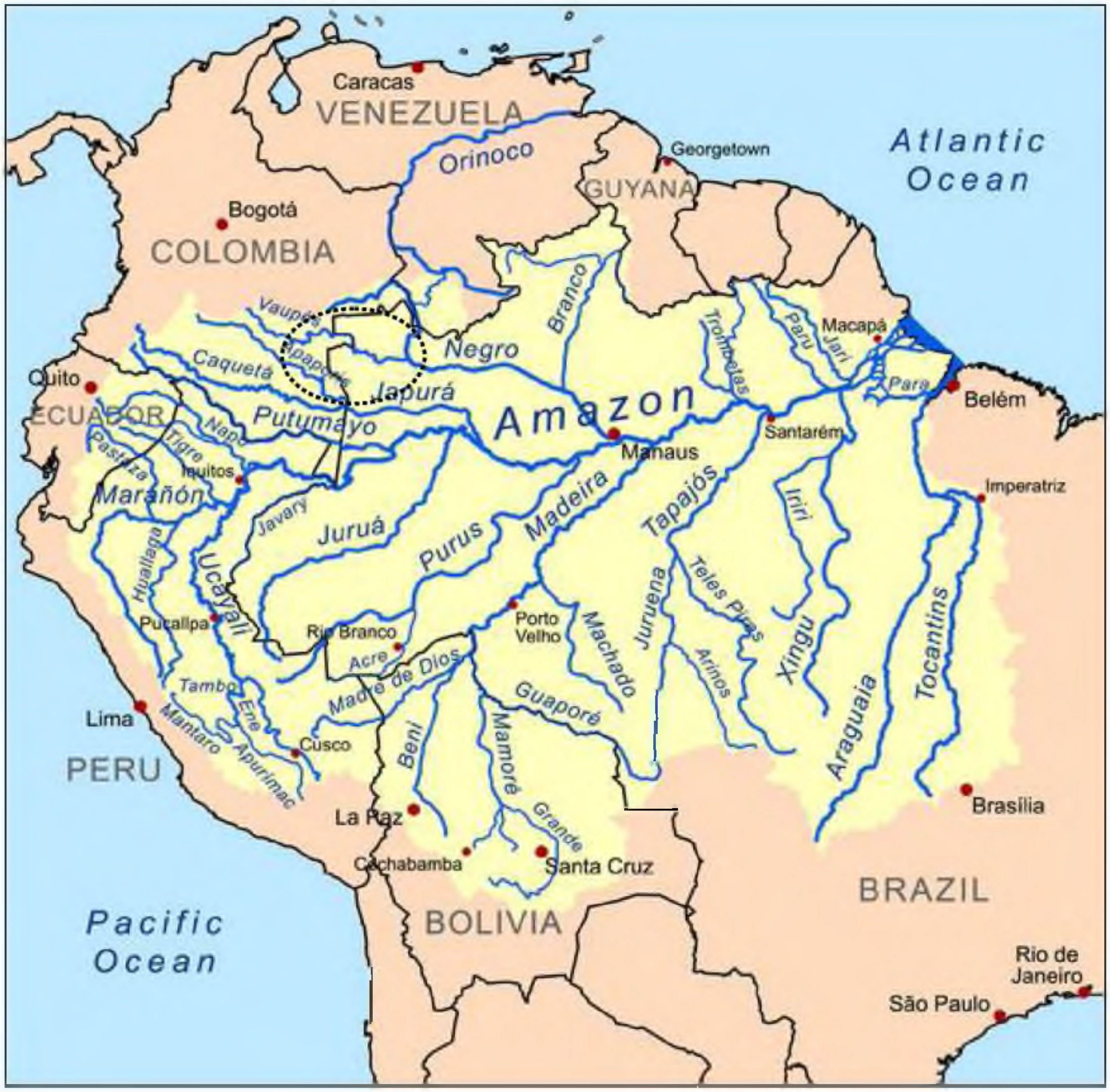
Caracas
VENEZUELA
Orinoco
Georgetown
GUYANA
Atlantic
Ocean
Bogotá
COLOMBIA
Vaupés
Apaporis
Caquetá
Japurá
Negro
Branco
Trombetas
Paru
Jari
Macapá
Pará
Belém
Quito
ECUADOR
Putumayo
Napo
Tigre
Pastaza
Iquitos
Marañón
Amazon
Manaus
Santarém
Imperatriz
Javary
Juruá
Purus
Madeira
Tapajós
Iriri
Huallaga
Ucayali
Pucallpa
Rio Branco
Acre
Porto
Velho
Juruena
Teles Pires
Machado
Arinos
Xingu
Araguaia
Tocantins
Tambo
Ene
Madre de Dios
Guaporé
Lima
Mantaro
Apurímac
Cusco
PERU
Beni
Mamoré
La Paz
Grande
Cochabamba
Santa Cruz
Brasília
BRAZIL
Pacific
Ocean
BOLIVIA
Rio de
Janeiro
São Paulo

Figure 1.1 The Vaupés Region in the Brazil-Colombia border[5]

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[5] Source: www.internationalrivers.org

1.7 The Languages of the Vaupés and the Language Contact Situation

The languages of the three language families that are usually recognized in the literature as belonging to the Vaupés Region are presented in Table 1.1.[6] One of the first studies describing a contact situation that resulted in diffusion of traits from one language to another was reported by Gomez-Imbert (1996). She showed that children from Baniwa [Arawakan]–Kubeo [Tukanoan] marriages, with Kubeo as their mother tongue and Baniwa as their father's language carry over aspects of animal classification and change the conceptual scheme from one language to that of the other. Their system now reflects the Baniwa distinctions of animacy and gender for animals and the Tukanoan categorization of inanimate entities in terms of shape, carried over to animate entities.

Table 1.1 Languages of the Vaupés Linguistic Area

Language Families
EASTERN TUKANOAN
Bará, Barasana, Desano, Karapana, Kotiria (Wanano), Kubeo, Makuna, Pisamira, Siriano, Retuarã, Taiwano, Tatuyo, Tuyuca, Tucano, Wa'ikhana (Piratapuyo) and Yuriti.
ARAWAKAN
Baniwa (Kurripako), Kawiyari, Tariana and Yukuna.
NADAHUP (or Makuan)
Hup, Kakua, Nukak and Yuhup.

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[6] See Stenzel (2004:20) for Eastern Tukanoan; Stenzel and Gomez-Imbert (2008) for Eastern Tukanoan and Arawakan; and Epps (2007) for Nadahup (Makuan) languages.

One of the best known cases of contact-induced structural change in the region is the Tariana (Arawakan)–Tukano (Eastern Tukanoan) contact, which was first reported by Aikhenvald (1996) and later extended and discussed in other studies (Aikhenvald 1999, 2001, 2002, 2003, etc.). Dixon and Aikhenvald (1999) presented a list of traits that characterize the languages (mostly Eastern Tukanoan) of the region as belonging to a sub-area within Amazonian Linguistic Area.[7] Aikhenvald (1999) compares traits of the three unrelated language families in the 'Içana-Vaupés basin' (Arawakan, Eastern Tukanoan, and Nadahup [Makuan]) and concludes that there might be a direction of diffusion from 'East Tu[k]ano[an] to Tariana and to Makú' (p. 411). Some generalizations were presented by Aikhenvald (2002), who characterizes the area as being a case of multilateral diffusion in which languages have influenced one another. This generalization has been debated (see Meira and Gomez-Imbert 2005; Stenzel 2005; Stenzel and Gomez-Imbert 2008). Aikhenvald also points out that indirect diffusion (development of a new category or a new term for a category) is more common than direct diffusion (lexical borrowing or borrowing).

Epps (2005) describes the development of the evidentiality system in Hup as due to the influence of Eastern Tukanoan languages (primarily Tukano) in the area. Other shared traits that have been reported to be the results of diffusion from Tukano to Hup – and to some extent also to Yuhup and Dâw – are presented in Epps (2007). She lists phonological and morphosyntactic shared traits that give strong support for the Vaupés as a linguistic area.

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[7] See Franchetto and Gomez-Imbert (2003) for a review of Dixon and Aikhenvald (1999).

Stenzel and Gomez-Imbert (2008) investigate the contact situation between Arawakan (Baniwa [Kurripako] and Tariana) and Eastern Tukanoan languages, with special attention to the impact of Baniwa on Kotiria (Wanano). They identify four sub-areas in the region that have been the focus of investigation on language contact and diffusion: (a) on the Upper Cananarí and Upper Papurí Rivers, where there is contact among the Eastern Tukanoan languages Tatuyo, Barasana and Taiwano (Eduuria) and the Arawakan language Kawiyari; (b) on the Apaporis, with contact between Retuarã/Tanimuca (ET) and Yukuna (Arawakan); (c) in the Vaupés area between Mitú (Colombia) and Querarí (Brazil), where there is contact with diffusion of traits from Baniwa (Arawakan) to Kubeo (ET) as reported by Gomez-Imbert (1996); and, (d) on the Vaupés, Papurí and Aiarí Rivers, where there has been contact and diffusion from Tukano (Eastern Tukanoan) to Tariana (Arawakan) as reported extensively by Aikhenvald (2000).

1.8 The Tukanoan Languages

The Tukanoan language family has twenty languages still spoken today. Many Tukanoan languages are extinct. For example: Western Tukanoan: Macaguaje* (Kakawahe, Piojé), Teteté* (Eteteguaje) Ecuador, Colombia (possibly a dialect of Siona), Tama* (sometimes said to be perhaps a Koreguaje dialect); Eastern Tukanoan: Miriti* (Miriti-Tapuyo, Neenoá), Kueretú* (Cueretú, Coretú, Curetú), Arapaso* (Arapaço, Arapasso, Koneá) (cf. Campbell 2012a).

There have been a few attempts to provide a classification for the Tukanoan family (Sorensen 1969, Waltz and Wheeler 1972, Ardila 1993, Ramirez 1997, Barnes

1999, Barnes 2006).[8] Stenzel (2004:21) compares the classifications available and points out that a conclusive classification of the Tukanoan languages is still needed. I follow Gomez-Imbert (2011), who states that the Tukanoan languages are divided in two main branches: Western and Eastern. [9] The Western branch consists of four languages: Koreguaje, Secoya, Siona and Orejón, spoken in areas of Colombia, Equador and Peru. The Eastern branch consists of sixteen languages: Bará, Barasana, Desano, Karapana, Kotiria (Wanano), Kubeo, Makuna, Pisamira, Siriano, Retuarã, Taiwano, Tatuyo, Tuyuca, Tucano, Wa’ikhana (Piratapuyo), and Yuriti.

The estimated number of people of all these Eastern Tukanoan languages combined is only 28,000. Tukano, the largest, has c.10,000 people (Stenzel 2004:20), and Pisamira is the smallest, with fewer than fifty people. As aforementioned, Eastern Tukanoan peoples are well known for their linguistic exogamy and ‘obligatory’ multilingualism.[10]

1.9 The Desano People

The Desano people call themselves **wĩrã** ‘wind’ or **ũmũrĩmãhsã** ‘people of the day’. According to the Desano origin myth, the first Desano existed in spirit and lived in the ‘sun’s house’ (*abewi’i*); they say they are the ‘offspring of the sun’. The spirit traveled to the ‘house of thunder’ (*buhpuwi’i*), the spirit’s grandfather; there it started to blow smoke and created the first humans from this smoke. The spirit's grandfather (the thunder) gave him more tobacco to continue traveling and creating the Desano people. Then, the first Desano people traveled inside a giant snake, known as the *Transformation Canoe* (Canoa da Transformação), where all the other Tukanoans were also traveling. The 'transformation canoe' stopped at Ipanoré Falls (located in the Vaupés River, between the missions of Taracuá and Iauaretê), where they all disembarked and celebrated with dances. The order in which the groups disembarked from the canoe established the hierarchy within the Tukanoan peoples. The first ones to disembark were the Tukano, followed by the Desano, then the Piratapuyo (Wa'ikhana) people, etc. After the celebrations, the Desano traveled upriver. They settled on the right bank of the Vaupés River between Mitú (the capital of the *Departamento del* Vaupés, Colombia) and Querarí (a small mission village in Brazil) on the *Abiú, Timbó, Murutinga* creeks.[11] Some Desano people still live in these traditional locations and are considered to be the 'head' of the group by the Desanos who live in other areas.

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[8] Barnes (1999) follows the classification presented in Waltz and Wheeler (1972). See Franchetto and Gomez-Imbert (2003) for some problems with Barnes’s classification.

[9] See also Stenzel (2004:20) for the same classification following Gomez-Imbert and Kenstowicz (2000).

[10] See Aikhenvald (2002); Chernela (1982, 2004); Correa Rubio (1997); Gomez-Imbert (1991); González Ñañez (2004); S. Hugh-Jones (1993); Jackson (1974); Sorensen (1967); and Stenzel (2005) for a detailed description of the exogamous system and the multilingualism in the region.

Due to fights between the two main Desano clans, *Boreká* and *Dihputiro*, the Desanos spread out southward to other areas, to the Papurí and Tiquié rivers.[12] The traditional Desano communities are located at the headwaters of small streams or creeks in the area of these rivers (cf. Bėksta 1988, Reichel-Doumatoff 1971). The Vaupés and Papurí Rivers form a natural border between Brazil and Colombia, and this is the main area where the traditional Desano communities are located (see Figure 1.2). The Boreká went to *Virarí Igarapé* (a stream that runs into the Papurí River, in Colombia); the Dihputiro went to *Igarapé Ingá* and *Igarapé Turi* (some of the streams that run into the Papurí River, in Brazil). Eventually, the Boreká started to migrate to other lands south of the Papurí, and ended up in the Tiquié River, in Brazil.[13]

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[11] This myth was recounted by five Desano elders (Aparício Caiseiro, Marcelino Belles, Quintino Dias, and Francisco Malha) from the community *São Luiz do Virarí*, in the Virarí stream (Papurí River), Colombia. The text was transcribed and translated with the assistance of Frank Matos (my main Desano consultant, also from Colombia).

[12] *Boreká* and *Dihputiro* are also considered the two main dialects of Desano.

Although the origin myths suggest that Desano is a member of the Tukanoan linguistic family, there are some alternative hypotheses in the literature. For example, it has been suggested that Desano was originally a member of the Arawakan linguistic family, but became 'tukanized' due to the exogamous marriage with Tukanos (cf. Béksta 1988, Koch-Grünberg 1909). These hypotheses are based solely on oral narratives.

Nowadays, the Desano people live in eighteen communities on the Papurí, Tiquié, and Vaupés rivers and their small tributaries in Brazil and Colombia. The Brazilian communities, starting in the Tiquié River area (and its tributary streams), are São João Batista, Santo Antônio, Cucura Manaus, Floresta, Sítio São Pedro, São Lourenço, Santa Rosa, São Sebastião, Urubu Lago, Tucandira, and Piracema. In most of these communities, speakers of Tukano, Yuhup, and Hup are also found. On the Papurí River, the communities are found on both the Brazilian and Colombian sides of the river, which is a natural border between the two countries.

The communities on the Papurí River, starting from downstream, are Turi, São João, Santa Cruz and Santa Marta in Brazil and Olinda, Piracuara, Montfort, São Luiz do Virari, and San José del Viña in Colombia. On the Vaupés River, the two Desano communities are found on the *Igarapé Abiu*, in Colombia. The Desano communities range in size from those with a couple of houses and a total of ten to twenty inhabitants found on the Papurí River in Brazil, to those with ten Desano families, with some thirty inhabitants (São Luis do Virari), also on the Papurí River on the Colombian side. In Brazil, there are concentrations of Desano in a few nineteenth-century mission communities such as Iauaretê, located on the Vaupés River, near the confluence with the Papurí River, and Taracuá, near the confluence with the Tiquié River. These communities are located within the *Alto Rio Negro* Indigenous Area, which belongs to the municipality of São Gabriel da Cachoeira, a town of approximately 18,000 people. Approximately ninety percent of the population of this town is indigenous from different ethnolinguistic groups (Tukanoan, Arawakan, Nadahup, Yanomaman, and Tupían [speakers of Nheengatu]). A few Desano speakers can be found in São Gabriel da Cachoeira itself (although there are many ethnic Desanos who do not speak the language). Outside the *Alto Rio Negro* Indigenous Area, in the *Médio Rio Negro* Indigenous Area, there are two communities, Balaio and Sargento Botelho, where some Desano speakers are also found. These communities are located by the BR-307 road, which links São Gabriel da Cachoeira and Cucuí, a military district on the border with Venezuela.

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[13] This part of the Desano migration was told by Guilherme Fonseca, in January 2009, in the community Monfort, in the Papurí River, Colombia. The text was transcribed and translated with the assistance of Frank Matos, my Desano consultant.

1.10 The Desano Language: The Sociolinguistic Situation

Desano, like most of the languages of the region, is highly endangered. In order to determine the degree of endangerment of Desano, I consider two factors. The first is that many of the Desano people who still live in the traditional communities are abandoning their traditional language and switching to Tukano, the dominant indigenous language in the region (see also Stenzel 2005:507). The second is a question of migration from their traditional communities to other towns or bigger villages where they abandon their traditional lifestyle and replace their language with Tukano and/or Portuguese (or with Spanish, in Colombia).

During my fieldwork trips, I found that the number of fluent speakers of Desano is relatively small (an estimate of 150 people in Brazil and about 300 in Colombia) when compared to the figures listed by other sources.[14] An accurate figure of the number of Desano speakers is difficult to determine. The *Ethnologue's* statistics for this area are outdated (Stenzel 2006). The Instituto Socioambiental[15] lists 1,531 ethnic Desanos in Brazil, though FOIRN (Federação das Organizações Indígenas do Rio Negro) – the local indigenous organization – estimates that there are only 800 Desano people in Brazil – not all of whom identify with this ethnic group are speakers of Desano. COAMA (Consolidation of the Colombian Amazon) gives an estimate of 2,457 ethnic Desanos in Colombia.[16]

Table 1.2 shows that number of ethnic Desanos compared with the number of actual speakers of the language in the communities I visited in Brazil. It is important to mention that many Desanos live in urban centers (São Gabriel da Cachoeira and Manaus, Brazil). The numbers presented here refer to the people still living in the traditional communities, or, as in the case of Iauaretê, a mission villages near their traditional communities to which the Desanos who live on the Brazilian side of the Papurí River have migrated. The Desano people are considered one of the most 'disperse' groups in the region.

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[14] I visited four Desano communities in the Colombian side of the Papurí River: Olinda, Montfort, Sao Luiz do Virari and Piracuara.

[15] www.socioambiental.org/pib/epi/uaupes/print_source.html

[16] www.coama.org.co

Table 1.2 Desano speakers in communities in Brazil.[17]

River	Community	Ethnic Desanos	Desano speakers
Tiquié River	Cucura Manaus	3	3
	Piracema	12	12
	Santa Rosa	9	9
	Santo Antônio	8	2
	São João Batista	7	7
	São Luís	4	2
	São Sebastião	29	24
	Tucandira	3	3
	Urubu Lago	8	8
Vaupés River	Iauaretê/Vaupés	62	35

1.11 Previous Works on Desano

There are a few linguistic works available on Desano (many of them done by members of the Summer Institute of Linguistics); they are useful, but in general are not extensive and do not provide sufficient understanding of the most salient properties of the language. There is also a considerable number of anthropological works on different aspects of the Desano culture. In this section, I present a survey of the available linguistic work, followed by a summary of the anthropological works. For the linguistic publications, I follow a chronological order, i.e., the year of publication. However, the anthropological works are presented following an alphabetic ordering by author.

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[17] See Appendix A for a list of other languages spoken in the communities in the Tiquié River.

1.11.1 Previous Linguistic Publications

The first published linguistic notes about Desano are the wordlists collected by Koch-Grünberg, which were published in *Anthropos* (between 1913 and 1916). Other wordlists were collected by the Salesian missionaries (cf. Stradelli 1910, Gianconne 1949, Da Silva 1961), and scholars such as Rivet et al. (1925). All these Desano wordlists were collected together with wordlists of other languages of the region (comparative lists). However, Koch-Grünberg's (1913, 1914, 1915) wordlists seem to be the most accurate regarding the (phonetic) transcription. He was consistent in transcribing nasalization and aspiration, two important phonological traits of the language.

The wordlist produced by Stradelli (1910) was transcribed using Portuguese orthography with some 'adaptations;' nasalization and aspiration are not marked consistently. The wordlist in Rivet (1925) also has some accurate information (although sometimes the same symbol is used to describe different segments). Giaconne (1949) is the least accurate wordlist (several inconsistencies can be found, for example different symbols are used for the same phoneme). Finally, the wordlist in Da Silva (1949) presents 139 items, and consistent transcription. This work was originally accompanied by an audio recording (on vinyl).[18]

The first linguistic works treating specific aspects of Desano were published in the late 1960s and early 1970s. Jonathan Kaye is responsible for the first academic works

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[18] Although I have been able to find a copy of the original book, I have not been able to find the accompanying audio material.

on the language that became available. In his master's thesis, Kaye (1965) presents a preliminary description of the phonology of Desano using two of the main theories in vogue at that time: the 'neo-Bloomfieldian' theory (American structuralism) and the newly developed 'generative theory' (Chomsky 1965). In his work, Kaye provides arguments in favor of generative theory as the best way to explain some phonological aspects of Desano. Kaye, however, acknowledges the limitation of the theory for explaining the data he has available. One of the main issues in his analysis was to treat as segmental properties what would later be considered as suprasegmental (e.g., nasalization). Kaye does not mention the tone system in the language, although he does mention stress. In the appendix of Kaye's thesis, we find a sample of Giacone's, Koch-Grünberg's and Rivet's wordlists parallel to his own wordlist. Kaye's (1968) article 'Nominalized Relative Clauses' offers an analysis to explain the nominalization process of verbal roots in light of the generative theory of the time. Kaye acknowledges that although that theory explains the nominalization of a limited set of verbs, it fails to provide an explanation for the process as a whole.

In his doctoral dissertation, 'The Desano Verb: Problems in Semantics, Syntax, and Phonology,' Kaye (1970) used the transformational grammar of Chomsky (1965) to explain some syntactic 'problems' in Desano, and uses Chomsky and Halle (1968) to explain some phonological 'problems' in the language. His dissertation has four parts (chapters). Parts I and IV are dedicated to phonology and parts II and III are dedicated to syntax. For the phonology, Part I is a summary of what he presented in his master's thesis, with revisions and a few additional topics. For example, he adds a topic on 'accent' (instead of stress) and a discussion of "glottalization" (i.e., the treatment of glottal stop). In Part IV, still dealing with phonology, he introduces new topics, such as the groundbreaking topic of 'nasal harmony' – the first treatment of nasalization as a suprasegmental feature in Tukanoan languages – vowel harmony, and other phonological processes found in the language. As for syntax, Part II presents an analysis of the verbal system with special attention to evidentiality, modality, aspect and tense. In Part III, Kaye discusses some other syntactic 'problems', giving emphasis to agreement and nominalization (Part III for the most part, repeats what was earlier published in Kaye 1968). Kaye's (1971) article 'Nasal Harmony in Desano' is his last work on Desano. Although the same topic is treated (identically) in his dissertation, his article became a standard reference in considerations of the nasal systems in other Tukanoan languages.

From the early 1970s to late 1990s, the works on Desano were produced mainly by members of the Summer Institute of Linguistics. Miller (1973) presented a basic description of Desano phonology. It provides a brief description of syllable structure, and it was the first work to mention a 'tone system' in Desano (composed of a High tone and a Low tone). It also suggests an orthography for the language, based primarily on Spanish orthography. Mountain (1978) presented a list of 267 words in twelve Tukanoan languages, including Desano. Mountain also presented a brief introduction to the languages in his book (including geographical information, and some of their phonological characteristics).

Miller (1999) is a sketch grammar of Desano and is the most extensive work published on the language. However it does not provide information about several important aspects of the language. For example, in the phonology chapter, Miller does not include tone, a topic mentioned in her ealier article (cf. Miller 1976), where she claims tone exists. In her grammar she mentions instead the existence of a pitch-accent system, basing her analysis on the work of Barnes (1996) for Tuyuca. In a review of Miller's work, Wichmann (2002:804) says, "there is a large set of noun classifiers (but too little said about how they work)." He indicates that the book seems to give equal weight to morphology and syntax, but "actually reads as morphology-in-disguise" (p.804).[19] Huber and Reed's (1992) '*Vocabulário Comparativo: Palabras Selectas de Lenguas Indigenas de Colombia*' is a comparative work with a list of 375 selected words in languages of different families, including Tukanoan, and thus, also includes the Desano language. It offers material for comparative studies, and includes a Spanish-English index of the vocabulary.

Ardila (2000) presents a summary of the typological characteristics of Desano based on Kaye (1970) and Miller (1999). Another recent work is the Desano-Spanish bilingual dictionary compiled by Alemán M., López H., and Miller (2000). This dictionary has only 896 words. Each word is followed by an example sentence. It includes illustrations for animals, birds, and fish. It is a very informative material, and it provides notes on different dialects, grammatical notes, and offers an orthography system based on Spanish.

More recently, my own contribution to the published linguistic work on Desano includes the article 'Acoustic Analysis of Voiceless Obstruents and Nasal Harmony in Desano' (Silva 2008), which presents an investigation of the acoustic properties of the voiceless stops in nasal versus oral contexts in order determine whether these segments are affected by nasal harmony. Although the study considers only a small set of data, I

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[19] Proulx (2003) offers another review of Miller (1999).

suggest that voiceless segments are phonetically affected by nasalization, although the articulation does not seem to be affected. Another work is Silva (*to appear*) 'The status of the glottals '*ʔ*' and '*h*' in Desano'. In this article, I offer an alternative analysis for the segments *h* and *ʔ* in Desano. I suggest that these segments are a prosodic realization of the suprasegmental laryngeal feature that occurs after the first vowel within the root. This analysis differs significantly from previous accounts that treated *h* and *ʔ* as full consonant segments (Miller 1999) or as a property of the (first) syllable (Kaye 1970).

1.11.2 Anthropological Publications

The number of anthropological studies on Desano is considerably large when compared to the available published linguistic studies. The first substantial anthropological investigation of aspects of the Desano culture is Reichel-Dolmatoff (1968) '*Desana, simbolismo de los indios Tukano del Vaupés*' (also published in French, cf. Reichel-Dolmatoff 1973). In this work, the author analyzes the cosmology and symbolism present in the Desano narratives, focusing on the creation myths.[20]

Besides being a detailed ethnographic study, Reichel-Dolmatoff's (1971) *Amazon Cosmos: the sexual and religious symbolism of the Tukanoan indians* offers an analysis of Desano ideology, religious beliefs, and social values.[21] Reichel-Dolmatoff also published several articles about Desano shamanism and symbolism (cf. Reichel-Dolmatoff 1976b, 1979, 1981, 1987); about the importance of ecology for the Desano people (cf. Reichel-Dolmatoff 1975, 1976a, 1990); about other cultural aspects, such as animal categorization and color categorization (cf. Reichel-Dolmatoff 1978); and general ethnographic studies about the group and its culture (cf. Reichel-Dolmatoff 1989, 1996).[22]

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[20] Morey (1971) offers a review of Reichel-Dolmatoff (1968).

[21] Furst and Furst (1981) provide a review of Reichel-Dolmatoff (1971).

Another anthropologist who has published extensively on Desano is Dominique Buchillet. She wrote many studies about the Desano material culture, traditions, symbolism, religious beliefs, medicine knowledge, etc. Buchillet (1983) is a doctoral dissertation about the traditional knowledge of medicine used by the Desanos to treat contagious diseases. Buchillet also published several other studies about the Desanos' knowledge of the ecosystem and its relationship to the treatment of diseases (cf. Buchillet 1987, 1988, 1990a, 1992, 1995a, 1995b).

James Miller and Marion Miller, members of the Summer Institute of Linguistics, have provided a brief description of the Desano people and their lifestyle, during the time they lived with the group (Miller and Miller 1973). Beksta (1988) *A Maloca Tukano-Dessano e seu Simbolismo* provides an analysis of the symbolism of the Desano longhouse within the context of Eastern Tukanoan culture.

Beginning in the 1980s, the Desano people started to write their own history.[23] For example, the book *Antes o mundo não existia* is a narrative by Firminiano Lana, which was transcribed by his son, Luís Lana (with assistance of Berta Ribeiro). In this work, Lana and Lana (1982) describe the origin of the universe and of the mankind, according to the Desanos' traditions. Another published work based on traditional narratives is Fernandes and Fernandes (1996) *Mitologia Sagrada dos Desana-Wari Dihputiro Pora*, with a narrative by Americo Fernandes and his son, Durvalino Fernandes

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[22] Several of these articles can be found in Reichel-Dolmatoff (1997), which is a collection of his most popular essays.

[23] These were written in Portuguese.

(with assistance of Dominique Buchillet). Lana (2002) *A origem da noite, ou como as mulheres roubaram as flautas sagradas* provides a narrative with illustrations by the author about the Desanos' sacred flute, called *yurupari*. The last work published by the Desano is Toramu and Guahari (2004) *Livro dos Antigos Desana – Guahari Dihputiro Pora*, a version of the origin myths narrated by Tomaru (Wenceslau Galvao) and transcribed by his son Guahari (Raimundo Galvao), with assistance from Dominique Buchillet. To conclude the list of anthropological and ethnographic works on Desano, there are the works produced by Menendez (2005, 2006, 2009) which present analyses of the paintings/drawings produced by the Desano.

Finally, there are several Desano pamphlets ("vernacular publications") prepared (mostly by indigenous teachers in educational projects). There is a small booklet (Castilho et al. 2002) with vocabulary words, and other language material that have been produced for use in the Desano communities.[24]

1.12 Language Maintenance and Educational Projects

The Desano people are aware that their language is highly endangered. One of the goals of my research is to assist the Desano communities with the creation of educational projects, which aim at language maintenance. In July 2008, I conducted an orthography workshop together with Desano leaders and local teachers. With support from FOIRN, we decided to work towards a standard orthography for the language. Historically the language has not been written and several community members have expressed their frustration with past attempts at writing the language without knowing how. Since the beginning of this research, we have promoted a series of community meetings and workshops with the goal of resolving orthography issues and establishing a standard orthography.

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[24] Some of these materials were produced with support from the Endangered Language Fund (ELF) and the Center for American Indian Languages (CAIL), at the University of Utah.

The Desano people are aware of the endangered status of their language and culture. In fact, Desano leaders report that the group is known in the region as 'the ones who speak a borrowed language,' an allusion to the fact that most of the Desano people now speak only Tukano. The elders show their concern for the new generations who do not speak the language, and Desano leaders have been looking for a linguist to help them since the 1990s. The Desano language faces a big challenge. The number of fluent speakers is relatively small, and they are spread out in different villages, days away from each other. Nevertheless, the Desano people are interested in finding ways to keep their language alive.

During 1998-2000 a series of meetings to train indigenous teachers to teach their language promoted by the Secretary of Education took place in São Gabriel da Cachoeira. Thirteen Desano teachers participated in this training; however, they were trained to teach in Tukano. It was during this period that these Desano instructors decided to look for ways to preserve their language. Their first step was to look for a linguist to help them to develop an orthography for their language. In 2000, they had some local educators to help them and attempted to develop an orthography, but the project did not succeed. Since then, the Desano people have been using the writing systems they know -- some based on the Tukano orthography, and others on Portuguese and Spanish. During my first fieldwork with the Desano people in June 2007, I met with some of the Desano leaders and teachers in São Gabriel da Cachoeira. They showed their interest in working together to revitalize their language and culture. During this first meeting they decided to write a project proposal aiming at revitalization of their language and culture and to plan a linguistic workshop to discuss the issues related to their orthography.

In December 2007, they started the ‘Projeto Bayawi’, supported by FUNAI, the Indigenous Foundation in Brazil (an organ of the Brazilian Federal Government). This project aims to revitalize Desano traditions (and the language) through an immersion program in which the target is the youth. Through this project, the Desano people had several meetings in different communities where the elders would pass their traditional knowledge to the younger generations. Other activities during these meetings involved rituals, songs, traditional stories, and arts and crafts. The Desano are willing to collaborate on projects that can aid in their efforts to preserve their language and culture.

CHAPTER 2

PHONETICS AND PHONOLOGY

2.1 Introduction

This chapter presents an overview of the sounds and their organization in the Desano phonological system. The data in this chapter are based on field transcriptions and instrumental analyses of speech recordings using Praat ©. The speech was recorded as digitalized .wav files, sampled at 44.1kHz, sixteen bit, using a lapel microphone ECM-CS10 and a Marantz 660 digital tape recorder. Speech varieties described here include samples of both the *Boreká* and *Dihputiro* dialects as spoken in communities of the Tiquié and Papurí rivers respectively. Thus, the sound system of Desano as described here is based on a variety of data from approximately fifteen speakers. In general, all varieties share the same phonemic inventory; differences between speech varieties involve only allophonic variation.

Section 2.2 describes the phonemic inventory of Desano. In Section 2.3, I present the suprasegmentals of Desano: the stress/tone system and nasalization. In Section 2.4, I describe two morphophonemic processes: vowel deletion and fusion, and syllable reduction. Finally, in Section 2.5, I provide some notes on the Desano orthography.

2.2 Segmental Phonology

I now provide an overview of the Desano segment inventory based on the analysis of my own data. Desano has a total of fifteen phonological segments, nine consonants, and six vowels. These segments are described here in terms of their phonological features (cf. Kenstowicz 1994), the articulations involved in their realization, and their acoustic properties. All vowels and voiced consonants have nasal counterparts. Nasalization is a suprasegmental feature of the morpheme.[25] Thus, nasality can be realized either on the word-level (with words containing only nasal morphemes) or, minimally, on the syllable-level (with words containing both nasal and oral morphemes), as discussed in detail in Section 2.3.3.

Vowels and the features that define them are given in Table 2.1 and discussed in Section 2.2.1. Consonants and their defining features in terms of manner and place of articulation are given in Table 2.2 and discussed in Section 2.1.2.

2.2.1 Vowels

As shown in Table 2.1, Desano has six underlying contrastive vowel segments. Table 2.3 illustrates the vowel distinctions according to the features [back], [front], [high] and [round]. These vowels are representative of the proto-vowel system for the Tukanoan languages (Barnes 1999: 210).[26]

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[25] Nasalization as a suprasegmental feature has been identified in all Eastern Tukanoan languages (Barnes, 1999:211).

[26] See also Stenzel's (2004:65) analysis for Wanano. See also Gomez-Imbert's analysis for Barasano (in Gomez-Imbert and Kenstowicz, 2001:421).

Table 2.1 Desano vowel inventory

	FRONT	CENTRAL	BACK
HIGH	i	ʉ	u
MID	e		o
LOW		a	

Table 2.2 Desano consonant inventory[27]

	LABIAL	DENTAL	VELAR	GLOTTAL
PLOSIVE				
[-voiced]	p	t	k	(ʔ)
[+voiced]	b	d	g	
FRICATIVE		s		(h)
APPROXIMANT	w	y		

---

[27] The status of the the glottals *ʔ* and *h* is unclear as discussed in Section 2.2.2.2.

Table 2.3 Desano Vowel Phonemes

	/i/	/e/	/ʉ/	/u/	/o/	/a/
[BACK]	-	-	-	+	+	+
[FRONT]	-	-	-	-	-	-
[HIGH]	+	-	+	+	-	-
[ROUND]	-	-	-	+	+	-

The features presented in Table 2.3 allow an interpretation of the vowel /ʉ/ as a high central unrounded vowel, as in Miller (1976:108; 1999:9).[28] Kaye (1968:6; 1970:12) characterizes the vowel /ʉ/ as a high back unrounded vowel.

In order to provide a quantitative description of the Desano vowels, I used an instrumental technique for characterizing vowels as suggested in Ladefoged (2003: 104-37), which plots the vowels in a vowel space defined by the first two formants (see Figure 2.1).

The words illustrating the six vowels (from two male speakers), and the measurement of the first three formants for each target vowel are shown in Table 2.4.[29] A plot of F1 vs. F2 provides a description of the vowel qualities in Desano. Figure 2.1 shows that the vowel **ʉ** in Desano should be characterized as a high central (unrounded) vowel. This account provides a symmetrical vowel system (cf. Lindblom 1986).

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[28] I use the barred-u (instead of the the IPA barred-i (high central unrounded vowel) for two reasons: (i) it is easier to read and recognize and; (ii) my Desano consultants and collaborators prefer to use 'ʉ' for easiness of representation (and also to differ from the Tukano's transcriptions/orthography).

[29] Individual phonemic segments or set of phonemic segments are presented between slashes / /. The phonetic realizations of the phonemes are presented between brackets [ ].

Table 2.4 Illustration of Desano vowels and formant measurements[30]

Vowels	Words[31]	Formant 1	Formant 2
/i/	[wiˀi] ‘house’	280	2023
/ʉ/	[dʉˀa] ‘to keep’	328	1614
/e/	[seɾo] ‘bench’	501	1663
/a/	[baa] ‘food’	612	1303
/o/	[koɾe] ‘to wait’	473	999
/u/	[duˀa] ‘to yank	328	1046

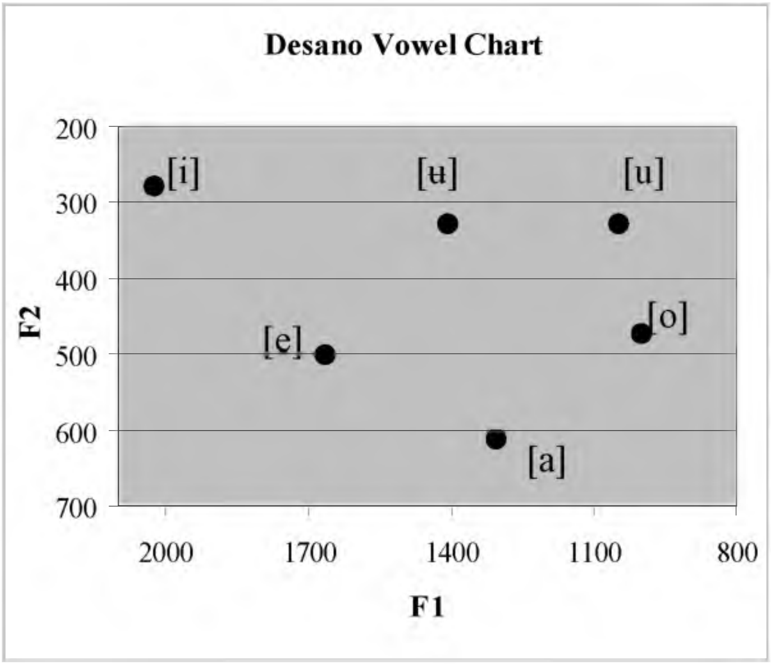

Figure 2.1 Formant plots of the six vowels of Desano

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[30] Formant values were measured using Praat © version 4.3.

[31] For now, I suppress the indication of tone (see Section 2.3.2 for a description of stress and tone).

Minimal pairs and/or near-minimal pair words illustrating the six contrasting vowels in oral contexts are shown in Table 2.5.[32]

All vowels have nasalized vowel counterparts [ĩ, ʉ̃, ẽ, ã, õ, ũ]. That is not to say that these vowel segments are marked as either oral or nasal. Nasalization is a suprasegmental feature of the morpheme. Words illustrating the six contrasting vowels in nasal contexts are illustrated in Table 2.6.

Table 2.5 Desano vowel contrasts in oral contexts

i	**ʉ**	**e**	**a**	**o**	**u**
	/-k**ʉ**/	/-k**e**/	/-k**a**/		/-k**u**/
	[-kɨ]	[-ke]	[-ka]		[-ku]
	‘CLS:tree’	‘IMP’	‘EVID:REASON’		VBLZ
/b**i**/			/b**a**/	/b**o**/	
[bíí]			[báá]	[boo]	
‘rat’			‘food’	‘to squeeze’	
/s**i**/		/s**e**/	/s**a**/	/s**o**/	
[sii]		[sɛɛ]	[saa]	[soo]	
‘there’		river bank	‘to over flow’	‘to rest’	
	/t**ʉ**/		/t**a**/		/t**u**/
	[tʉʉ]		[taa]		[tuu]
	‘to put’		‘to cut’		‘to learn’
/-d**i**/		/-d**e**/	/-d**a**/	/-d**o**/	/-d**u**/
[-ɾi]		[-ɾe]	[-ɾa]	[-ɾo]	[-ɾu]
INTER		REF	PL:AN	‘NOM:ABSTR’	CLS:concave

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[32] The symbol v̰ in the phonetic spelling indicates a laryngealized vowel.

Table 2.6 Desano vowel contrasts in nasal contexts[33]

ĩ	**ʉ̃**	**ẽ**	**ã**	**õ**	**ũ**
/~b**i**d**i**/	/~b**u**d**u**/	/~b**e**d**e**/	/~b**a**d**a**/		/~b**u**d**u**/
[mĩɾĩ]	[mʉ̃ɾʉ̃]	[mẽɾẽ]	[mãɾã]		[mũɾũ]
‘to advance’	‘deceased’	‘to fall’	‘have not’		‘tobacco’
		/~pe/	/~pa/	/~po/	
		[pẽẽ]	[pãã]	[põõ]	
		‘two’	‘to open’	‘progenee’	
/~si/	/~sʉ/		/~sa/	/~so/	
[sĩĩ]	[sʉ̃ʉ̃]		[sãã]	[sõõ]	
‘to raise (hands)’	‘to cover’		‘to place’	‘there’	
	/~abʉ/	/~abe/	/~aba/	/~abo/	/~abu/
	[ãmʉ̃]	[ãmẽ]	[ãmã]	[ãmõ]	[ãmũ]
	‘to prepare’	‘to be small’	‘to arrange’	‘to deliver’	‘to fix’

A survey of around 1200 lexical items in my corpus shows that there are sequences of vowels that are not allowed in the language.

Table 2.7 shows constraints on vowel-vowel sequences. The empty slots indicate vowel combinations not found in the data. It is notable that all vowels can be followed by a vowel identical to it. This seems to be a vowel lengthening process in order to maintain the bimoraic structure of the root.

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[33] Nasalization is indicated by a tilde (~) preceding the nasal morpheme; this is a common convention in Tukanoan linguistics.

Table 2.7 Vowel combinations

	i	**u**	**e**	**a**	**o**	**u**
i	/di/ [dii] ‘meat	/tiʉ/ [tiʉ] ‘to squeeze’		/dia/ [dia] ‘river’	/~bidio/ [mĩɾĩõ] ‘Miriõ’	/diu/ [diu] ‘egg’
ʉ		/~bʉ/ [mʉ̃ʉ̃] ‘to lift’		/dʉa/ [dʉa] ‘to keep’		
e	/~yei/ [ɲẽĩ] ‘to be ugly’		/~be/ [mẽẽ] ‘to hold’	/~kea/ [kẽã] ‘to attack’	/~beo/ [mẽ^{h}ẽõ] ‘mom’	
a	/~wai/ [wãĩ] ‘uncle’	/aʉ/ [aʉ] ‘dad’		/ta/ [taa] ‘grass’		
o	/~boa/ [mõã] ‘salt’		/goe/ [goe] ‘to return’	/doa/ [doa] ‘to sit’	/go/ [goo] ‘latex’	/~bou/ [mõũ] ‘not have’
u	/bui/ [bui] ‘agouti’		/bue/ [bue] ‘to study’	/bua/ [bua] ‘to descend’		/bu/ [buu] ‘to be hard’

2.2.1.1 Vowel Alternations

In Desano, the main vowel alternations involve the lowering of phonemic /e/ and /o/ to [ɛ] and [ɔ] respectively, oral contexs; /o/ is also realized either as the phonemes [õ] or [ũ] in nasal contexts.

2.2.1.1.1 /e/ /o/ lowering into [ɛ] [ɔ]

In oral morphemes (i.e., morphemes not affected by nasalization, see Section 2.3.3 on nasality), the vowels /e/ and /o/ are usually lowered and then realized as [ɛ] and [ɔ] when they are in the final syllable of a disyllabic word, as illustrated in (1).

(1)	a.	/go.be/	[go'bɛ]	'hole'
	b.	/a.be/	[a'bɛ]	'sun/moon'
	c.	/de.ko/	[deʰ'kɔ]	'water'
	d.	/i.go/	[igɔ]	'3SG.F'

2.2.1.1.2 /o/ → [o] ~ [u]

The vowel /o/ when in final position of a nasal word is realized either as [o] or [u] as illustrated in (2).

(2)	a.	/~pigo/	[pĩŋõ] ~ [pĩŋũ]	'tail'
	b.	/~bedo/	[bẽɾõ] ~ [bẽɾũ]	'CLS:circle'

2.2.1.2 Vowel Lengthening and Devoicing due to Preaspiration

In Desano, voiceless plosives /p, t, k/ and the voiceless fricative /s/ are preaspirated when they occur morpheme-internally. However, it is also common that, in the same environment, the vowel preceding the voiceless segment is lengthened, and the second part of the vowel becomes voiceless - these are two different realizations the same process of preaspiration. Examples in (3a-c) illustrate the vowel lengthening and partial devoicing.[34]

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[34] This has also been observed in Tukano (cf. Ramirez 1997:28).

(3) a. /goso/ [goo̥so] ~ [goʰsɔ] ‘thigh’

b. /bupu/ [buu̥pu] ~ [buʰpu] ‘thunder’

c. /dika/ [dii̥ka] ~ [diʰka] ‘arm’

I treat this ‘pre-aspiration’ as a prosodic feature of the root (see Section 2.1.2.2 below). One aspect of this topic that deserves future investigation is the fact that vowel lengthening and devoicing occur even if the voiceless segment is not part of the root morpheme. However, that has been noticed to happen only when the voiceless segment is the voiceless velar /k/, as in the suffix *-ke* ‘IMP’. Note that in this case, preaspiration is not triggered, as showed by the forms marked with *. This is seen in (4).

(4) a. /~sa-ke/ [sãḁ̃ke] ~ *[sãʰke] ‘put.in-IMP’

b. /~pa-ke/ [pãḁ̃ke] ~ *[pãʰke] ‘open-IMP’

c. /wa-ke/ [waḁke] ~ *[waʰke] ‘go-IMP’

d. /oo-ke/ [óó̥ke] ~ *[óʰke] ‘give- IMP’

There are cases in which this vowel lengthening and devoicing do not happen, as illustrated in (5).

(5) a. /bia-ke/ [biake] ~ *[biaḁke] ‘close- IMP’

b. /~oba-ke/ [õmãke] ~ *[õmãḁ̃ke] ‘wrap- IMP’

The examples in (4) and (5) suggest that vowel lengthening and devoicing is triggered only when the suffix *-ke* is attached to a monosyllabic root. A hyphotesis to be investigated is that maybe the lengthening of the monosyllabic roots has to do with a rule that the root needs to be bimoraic (the preferred root structure, see Section 2.3.1.2), then once it is, the pre-aspiration effect takes place, as a two step process. Further data are necessary in order to verify whether this process occurs systematically in these environments.

2.2.1.3 Vowel Harmony

Both Kaye (1970) and Miller (1999) suggest that Desano has a vowel harmony system that has the harmonizing feature of height (high to low, low to high) and is restricted to five verbal suffixes: *-di* 'nom' becomes *-de*; *-bi* 'NEG' becomes *-be*; *-bu* 'POT' becomes *-bo*; *-ku* 'EVID:NVIS' becomes *-ko*; and *-yu* 'EVID:HSAY' becomes *-yo* (Miller 1999:18). Some examples of vowel harmony given by Miller (1999:19) are given in (6).[35]

(6)	a.	/wa-bu-gɨ/	'the one (male) about to go'
	b.	/wa-bo-go/	'the one (female) about to go'
	c.	/wa-bu-ri/	'being about to go'

It is evident in examples (6a) and (6c) that the root does not undergo harmony, and that harmony has a right to left directionality, originating in the last suffix. If we consider harmony as a process that affects all the vowels within a domain, i.e., the word (cf. Kenstowicz 1994: 347), the process found in Desano may not be considered canonical vowel harmony. Unless the domain is the suffix domain defined to exclude the root. A possibility would be to treat this process as an alternation between adjacent vowels (for example, like umlaut) which are restricted to a few suffixes. This is a topic for future investigation.

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[35] Miller's original phonemic representations and translated are preserved.

2.2.2 Consonants

The consonants /b, p, w, d, t, s, j, g, k/ occur word-initially and are contrastive, as we see in the examples in (7). Overall, the consonants are pronounced as indicated by their placement in the phonemic inventory given in the Table 2.2, except for the allophonic variation described in the next subsections.

(7)	a.	/p/	pa	[paa]	‘hit’
	b.	/b/	ba	[baa]	‘a type of basket’
	c.	/w/	wa	[waa]	‘go’
	d.	/t/	tudi	[tuɾi]	‘scold’
	e.	/d/	du	[duu]	‘stay’
	f.	/s/	suri	[suɾi]	‘nest’
	g.	/j/	yudi	[juɾi]	‘fall’
	h.	/g/	gubu-du	[gubuɾu]	‘foot-CLS:concave’
	i.	/k/	ku-du	[kuɾu]	‘knot-CLS:concave’

The consonants /b d g/ are slightly pre-nasalized word-internally after a nasal vowel as illustrated in (8).

(8)	a.	~ya-bʉ	[ɲã^{m}bʉ]	see-NON3.PERF	‘I saw’
	b.	~yapi-bu	[ɲã^{h}pĩ^{m}bu]	potato-CLS:basket	‘potato basket’
	c.	~boa-dʉa-gʉ	[mõã^{n}dʉagʉ]	build-DES-3SG:M	‘he wants to build’
	d.	~dikʉ-ge	[nĩ^{h}kʉ̃^{ŋ}gɛ]	land-LOC	‘in the land’
	e.	~uta-gʉ	[ũ^{h}tã^{ŋ}gʉ]	stone-CLS:mountain	‘mountain’

It should be noticed that in Table 2.2 I have put the glottal segments *ʔ* and *h* in parenthesis. This is because instead of treating them as full consonant segments, I analyze them as being the phonetic realization of what I propose to be a suprasegmental laryngealization that occurs in root morphemes. Thus, for now, let's assume that their status as full consonant segments is unclear. (See Section 2.2.2.2 below on the status *ʔ* and *h*).

I turn now to the discussion of the consonant segments. First, I discuss the voiced segments and their allophonic variations, the relation of /d/ to [ɾ] and their allophones, in Section 2.2.2.1. The status of the glottal stop is discussed in Section 2.2.2.2.

2.2.2.1 Allophonic Variation of Consonants

The allophonic variations discussed in this subsection are: the relation of the segments /d/ and [ɾ]; the dialectal variation of [ɾ] and [ɾ̢] as the phonetic realization of the intervocalic /d/; and the allophonic variation of the approximants /w/ and /y/.

2.2.2.1.1 The Relation of /d/ and /ɾ/

The segment /d/ is a voiced dental alveolar plosive [d]. It is in complementary distribution with [ɾ]. The data in (9) illustrates one of the distributional patterns of these segments: [d] occurs word-initially, and [ɾ] occurs root internally.

(9)	a.	doa	[doa]	'sit'
	b.	deko	[de^{h}ko]	'water'
	c.	dia	[dia]	'river'
	d.	dade	[daɾe]	'ipixuna fish'
	e.	kede	[keɾe]	'jacu bird'
	f.	pedu	[peɾu]	'caxiri drink'

Both [d] and [ɾ] occur word-internally in suffix-initial position, as illustrated in (10) for [d] and (11) for [ɾ]. However, this [d] ~ [ɾ] distribution can be explained as allophony if we consider the morphological criteria. Kaye (1965) claims that [d] occurs as the result of compounding and [ɾ] as the result of suffixation. He noted that many cases of suffixation are subject to nasal assimilation (i.e., if the root is nasal, the suffix will be realized as nasal). This is because suffixes are generally unmarked for nasality (see Section 2.3.3).

(10) a. wea-di-gʉ [weadigʉ] clay- CLS:meat-3SG:M ‘statue’

b. ~boa-dʉa-gʉ [mõãdʉagʉ] build-DES-3SG:M ‘(he) wants to build’

c. ~gʉya-doa-~bo [ŋʉ̃ɲãdoamõ] think-sit-3SG:F.IMPERF ‘(she) was thinking’

(11) a. ~duga-ku-di [nũŋãkuɾi] begin-PERM-INTER ‘(can I) begin?’

b. gʉa-de [gʉaɾe] 1PL:INCL-REF ‘to/for us’

c. gasi-du [gahsiɾu] bark-CLS:concave ‘canoe’

The word-internal instances of /d/ in (10) occur in a noun classifier (10a) and in verbal roots (10b, 10c).[36] The word-internal instances of [ɾ] in (11) occur with grammatical suffixes. The fact that /d/ is realized as [d] in (11a) but [ɾ] in (11c) can be explained by the grammaticalization of these classifiers. The former can occur as a root while the later cannot.

2.2.2.1.2 The [ɾ ~ ɽ] variation

The [ɾ ~ ɽ] variation is dialectal rather than a variation conditioned by other segments in a single dialect. The speakers of the *Dihputiro* dialect use the alveolar flap [ɾ] to represent the letter <*r*> in their orthography. The speakers of the *Boreká* dialect of Desano spoken in the Tiquié River use [ɽ] to represent with the letter <*l*>in their orthography (see Section 2.5 on orthography).

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[36] Classifiers can be full or reduced noun roots, depending on its level of grammaticalization (see Section 4.3.4 in Chapter 4).

2.2.2.1.3 Allophonic Variation of Approximants

The phoneme /w/ is voiced bilabial approximant [w]. It is frequently realized as a voiced labiodental approximant [ʋ] in word-initial (12a, 12b) and in morpheme-initial positions in intervocalic, oral environments (12c). In nasal environments, it is realized as [w̃] as in (12d).

(12)	a.	wai	[wai] ~ [ʋai]	‘fish’
	b.	wede	[wɛɾɛ] ~ [ʋɛɾɛ]	‘tell’
	c.	baya-wi	[bajawi] ~ [bajaʋi]	‘dance-house (house of dances)’
	d.	~wai	[w̃ãĩ] ~ [ʋ̃ãĩ]	‘name’

The phoneme /y/ is a voiced palatal approximant (high front glide) [j]. It occurs in word-initial and in word-internal (morpheme-initial) positions. Word-initially, /y/ is frequently realized as a voiced palatal-alveolar affricate [dʒ], as in (13a-c). In nasal environments, /y/ is realized as [ɲ], as in (13d and 13h). In morpheme internal position, /y/ is usually realized as [j], as in (13e, 13f).

(13)	a.	yʉ’ʉ	[dʒʉˀʉ]	I
	b.	ya’i	[dʒaˀi]	‘heron’
	c.	yuu	[dʒuʰu]	‘one’
	d.	~yabi	[ɲãmĩ]	‘night’
	e.	kaya	[kaja]	‘girau’

f.	baya	[baja]	'sing'
g.	-ya	[dʒaa]	'POSS'
h.	-~ya	[ɲãã]	'CLS:creek'

2.2.2.2 The Status of the Glottals [h] and [ʔ]

In this section, I describe the status of the glottal segments [h] and [ʔ] (these segments occur in root and bound morphemes in Desano). Roots can be monosyllabic, i.e., (C)V or disyllabic, i.e., (C)V.(C)V, as illustrated in Table 2.8 (A) plain roots and (B) laryngealized roots. Syllable structure in Desano is (C)V, except in environments where the laryngeals *ʔ* and *h* may appear in coda in the first syllable of roots. Vowel sequences are bisyllabic (V.V) (see Section 2.3.1 on syllable structure).

In previous descriptions of the phonology of the language, Kaye (1965, 1970) and Miller (1976, 1999) treated the glottal segments [h] and [ʔ] as full consonant segments. In the present analysis, I consider the distribution patterns of and the phonetic realization of these segments and argue from distribution facts that these segments are better treated as a suprasegmental laryngeal feature that is assigned to root morphemes in Desano.

In the Eastern Tukanoan literature, the glottal stop [ʔ] is referred to as as 'glottalization', and the glottal fricative [h], as 'aspiration'. I will retain this terminology to refer to these laryngeal features.[37]

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[37] These, however, are confusing to linguists not familiar with Tukanoan, since aspiration is a secondary manner of articulation of consonants (stops and sometimes affricates, very rarely fricatives) and glottalization is for ejective consonants primarily.

Table 2.8 Plain and laryngealized roots

(A) Plain roots		(B) Laryngealized roots	
a. V	*i* ‘do’,	a. CV.ʔV	*duˀu* ‘to release’, *duˀa* ‘to yank’
b. CV	*ba* ‘food’, *ga* ‘hawk’	b. V.ʔV	*oˀo* ‘to give’, *aˀʉ* ‘dad’
c. CV.CV	*kãrĩ* ‘to sleep’, *gobe* ‘hole’	c. CVʔ.CV	*gʉˀa* ‘stool’, *nõˀmẽ* ‘maiden’
d. CV.V	*wea* ‘clay’, *bua* ‘to go down’	d. Vʔ.CV	*ãˀrĩ* ‘to say’, *õˀmã* ‘to run’
e. V.CV	*ãrĩ* ‘to be’, *abe* ‘sun’	e. V.hV	*oʰo* ‘banana’, *eʰa* ‘to arrive’
f. V.V	*ãĩ* ‘to take’, *oa* ‘skunk’	f. CV.hV	*duʰu* ‘to leave’, *duʰa* ‘to stay’
		g. CVh.CV	*mũʰtã* ‘to break’, *deʰko* ‘water’
		h. Vh.CV	*ahsi* ‘be hot’, *ohte* ‘to plant’

2.2.2.2.1 The Glottal Fricative [h]

This segment presents an interesting issue in Desano phonology. Kaye (1965) does not include [h] in the consonant inventory. He notes that the distribution of [h] contradicts the generalization of the (C)V syllable structure. According to Kaye, the occurrence of [h] can be explained by a generative rule that applies to morphemes. Thus, this “rule provides for each sequence VV́ to be rewritten VhV́ (where VV is a sequence of any two identical vowels and ´ indicates [+accent])” (p. 47). Kaye (1970) includes [h] in the phonemic inventory. In both works Kaye treats the occurrence of [h] etween two vowels, and [h] before voiceless consonants as two different phenomena. The former is a result of an accent placement rule and the later a result of pre-aspiration rule. According to Miller (1999), the glottal fricative [h] is a full consonant, which only occurs intervocalically and is followed by “the echo vowel that precedes [it]” (p. 12).

I start by introducing the occurrence of the glottal fricative [h] that occurs before voiceless segments within the root. In the Eastern Tukanoan literature this has been called ‘preaspiration’. In root morphemes in Desano (as well as other ET languages in the Vaupés), there is a (pre-) aspiration that occurs systematically before voiceless segments /p, t, k, s/, and is analyzed as the phonetic coda of the preceding syllable in (C)VCV roots, as illustrated in (14a) and (14b).[38] This preaspiration does not occur before voiced consonants; thus, aspiration is disallowed in a structure like (14c).

(14) a. $V^hC_{[\text{-voice}]}V$ [aʰsi-ɾi] be.hot-NOM ‘hot’

b. $CV^hC_{[\text{-voice}]}V$ [weʰko] ‘parrot’

c. $*CV^hC_{[\text{+voice}]}V$

Figure 2.2 shows the sound wave and spectrograms for the words [aʰsiɾi] ‘hot’ and [weʰko] ‘parrot’. The vowel and the aspiration are highlighted together as my claim is that laryngeal feature ‘aspiration’ is realized after the leftmost (first) vowel of the root morpheme. This is not to say that aspiration is a property of the vowel, but rather, that preaspiration and the partial devoicing of the preceding vowel are ways of describing the same phenomena.

Note that the vowels in the initial V^h and CV^h syllables of V^hCV and CV^hCV roots (Figure 2.2) have about the same timing as the vowels in initial V and CV syllables of VCV and CVCV roots, illustrated in Figure 2.3 for the words [gobɛ] ‘hole’ and [yeba] ‘ground’.

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[38] Although this preaspiration is a characteristic of Eastern Tukanoan languages, it has been reported to occur in at least one Western Tukanoan language: Siona (see Wheeler 1987:89; and Wheeler and Wheeler 1962: 101).

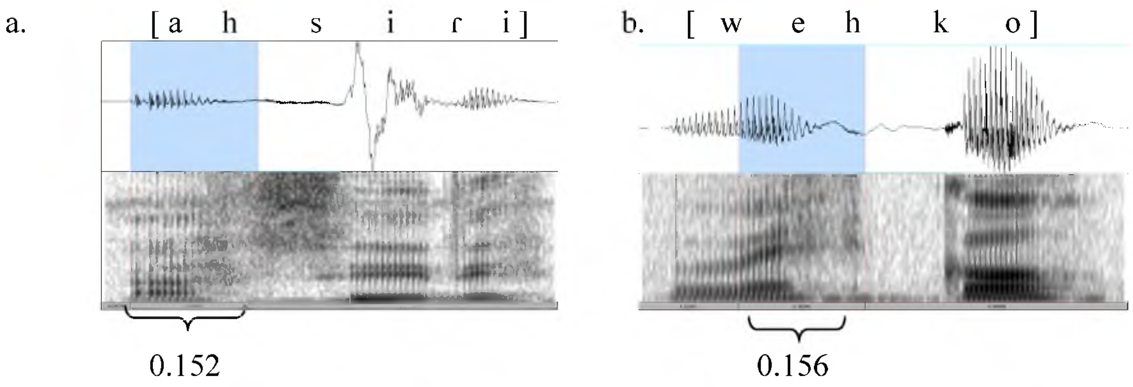

Figure 2.2 Spectrograms for the words [aʰsiɾi] ‘hot’ and [weʰko] ‘parrot’

Note that the timing of the leftmost vowels of CV.CV roots (Figure 2.3) is about the same as the leftmost vowels of VʰCV and CVʰC roots (Figure 2.2). For some speakers, this aspiration that occurs before voiceless segments is realized as a voiceless vowel. It should be kept in mind that [h] is in effect the same thing as a voiceless vowel and it is its role in the language that determines if we write it as a voiceless vowel or as [h] – that is, [h] can be given any vowel quality by just placing the articulators in position for the particular vowel while saying “h”; [h] is slightly broader transcription; voiceless vowel is narrower phonetic transcription.

Examples in (14a) and (14b) can also be realized as [aḁsiɾi] and [wee̥ko] respectively. Furthermore, preaspiration does not occur across morpheme boundaries. Thus, in that context, aspiration has a predictable realization: it occurs before voiceless consonants within the root morpheme.

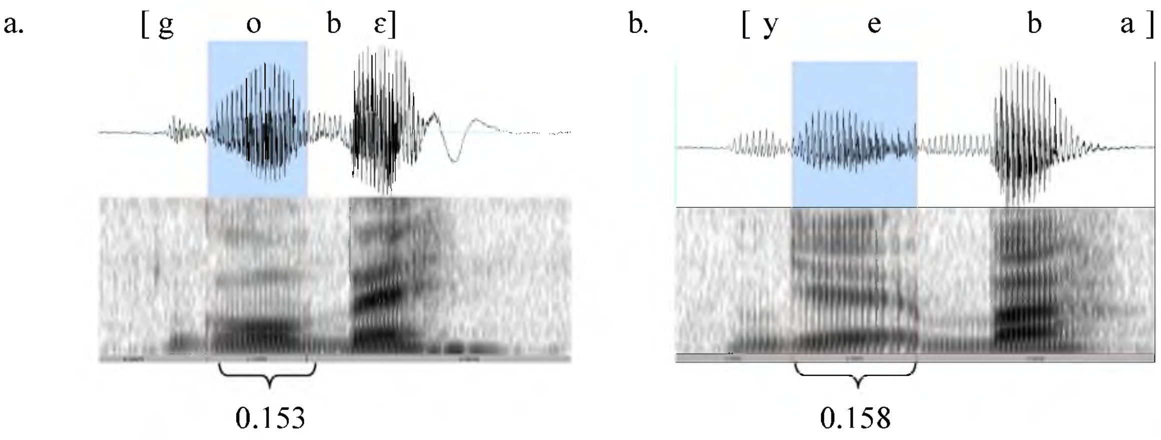

Figure 2.3 Spectrograms for the words [gobɛ] 'hole' and [yeba] 'ground'

Besides its predictable occurrence before voiceless consonants within the root morpheme, the glottal fricative *h* also occurs between vowels, as illustrated by the forms V.hV (Be) and CV.hV (Bf) above, and repeated below in (15A) and (15B) respectively.

(15)

A. VhV roots			**B. CVhV roots**		
a.	oho	'banana'	a.	weha	'paddle'
b.	uhu	'pacu fish'	b.	buha	'to cross'
c.	eha	'to arrive'	c.	behe	'to classify'

The forms in (15B), with the CVhV shape also have an alternative realization in which the glottal fricative is not realized; instead, a voiceless counterpart of the proceeding vowel is realized, as illustrated in (16). Note that this alternative realization of *h* as a voiceless vowel also occurs in CVCV roots as we saw in (3) and (4).

(16) a. [ɲãʰãɾĩke] ~ [ɲãḁ̃ɾike] 'enter-IMP'
b. [yʉʰʉgʉ] ~ [yʉʉ̥gʉ] 'one man'
c. [mẽʰẽõ] ~ [mẽẽ̥õ] 'mommy'

Note that in (16) the glottal fricative *h* occurs between two identical vowels. I argue that the second vowel is best understood as an echo of the first one (i.e., CV_1hV_1, where V_1 represents identical vowels). One convincing case is found in instances in which the glottal fricative occurs between two different vowels (i.e., CV_1hV_2, where V_1 and V_2 are different vowels), as illustrated in (17). In these cases, the glottal fricative may alternate with a voiceless vowel (as a reflex of the same phenomenon), making the voiceless vowel identical to the vowel it precedes (like examples in [16]). As illustrated in (17) below the three patterns are alternates of each other. The alternation pattern of voicelessness and aspiration are phonetically natural patterns (Ladefoged and Maddieson, 1996).

		CV_1hV_2	**$CV_1V_1V_2$**	**$CV_1hV_1V_2$**	
(17)	a.	[yuʰí]	[yuu̥i]	[yuʰui]	‘support used to hold baskets’
	b.	[mãʰĩ́]	[mãḁ̃ĩ]	[mãʰãĩ]	‘to turn around’
	c.	[mʉ̃ʰĩ́]	[mʉ̃ʉ̥̃ĩ]	[mʉ̃ʰʉ̃ĩ]	‘caranã leaf’
	d.	[gaʰí]	[gaḁi]	[gaʰai]	‘another’

It should be kept in mind that there are other ways to analyze the occurrence of [h]. An alternative analysis is to treat [h] as a full consonant segment (as it has been suggested by Miller 1999) and, thus, avoid the issue of supplying a rule that predicts its presence. A fuller treatment of status of the [h] in Desano is a topic of current investigation (Silva, *to appear*).

2.2.2.2.2 The Glottal Stop [ʔ]

The glottal stop that occurs in Desano has been described a property of the vowel and as a full consonant segment. Kaye (1965) describes the occurrence of the glottal stop within the root as a property of the preceding vowel in the root morpheme. According to Kaye, the glottal stop only occurs between two similar vowels, i.e. in (C)$V_1ʔV_1$ roots, where the second vowel is an echo of the first one. Kaye illustrated this with the examples reproduced here in (18).

echo vowel ↓ echo vowel ↓

(18) a. dʉ’ʉ [dʉˀʉ] ‘chipmunk’ b. ~ku’di [kũˀũnĩ] ‘to bite’

Thus, each plain vowel would have a glottalized counterpart (iˀ, ʉˀ, eˀ, aˀ, oˀ, uˀ) in the inventory. Kaye (1970) extends his previous analysis and characterizes glottalization as a property of the syllable; i.e., the vowel of the first syllable of a word is glottalized. He refers to ‘glottalized syllables’ which ‘may not be phonemic.’ Because of its restrictive distribution – only the first syllable of a word (or root morpheme) may be glottalized. Kaye treats glottalization as a contrastive feature of the vowel in sequences of two identical vowels $V_1\_V_1$ or a vowel before a consonant V_C. However, in both studies, Kaye does not account for root morphemes that have two different vowels $V_1\_V_2$ as is illustrated in (19); in fact, he does not present any data of this type in either of his works.

(19) a. bi’a [biˀa] ‘to close’

b. du’a [duˀa] ‘to yank’

c. gu’i [guˀi] ‘turtle’

The glottal *ʔ* has also been treated as a consonant segment in Desano as well as in most of the Eastern Tukanoan languages (cf. González de Pérez 2000). Miller (1999), on the basis of comparing minimal pairs of contrasting the glottal stop [ʔ] with the glottal fricative [h], as illustrated in (20), treats the two glottal sounds [ʔ] and [h] segments as full consonant phonemes.

(20) a. [o^{ʔ}o] ‘to give’
b. [o^{h}o] ‘banana’

Miller (1999) also mentions that the glottal stop can only occur in intervocalic position. Thus, when the glottal stop is followed by another consonant, an echo vowel occurs after the glottal stop, as illustrated in (20) with data from Miller (1999:12).

(20) a. /pʉdʉ/ [pʉ^{ʔ}ʉɾʉ] ‘after’
b. /oake/ [o^{ʔ}oake] ‘sweep’ (IMP)

Miller’s description of the glottal stop as a consonant segment does not account for the environmental restrictions on this segment. The glottal stop (or glottalization) only occurs in root-medial position, after the first vowel of the root. Furthermore, although segmental restrictions on coda position (coda constraints) are common (cf. Itô 1986; Blevins 1995). The glottal stop, in Desano, is the only segment that can close a syllable; there are no other syllable-final consonants that are restricted to the root-initial position syllable. Thus the glottal stop is both restricted to a single position, coda, and represents the only closed syllable type (CVʔ) in Desano.

Phonetically, the glottal stop and the glottal fricative (as seen in Figure 2.2) are unusual when compared to the other consonants in the language because they are the only segments that cause the shortening of the preceding vowel or create echo (split) vowels.

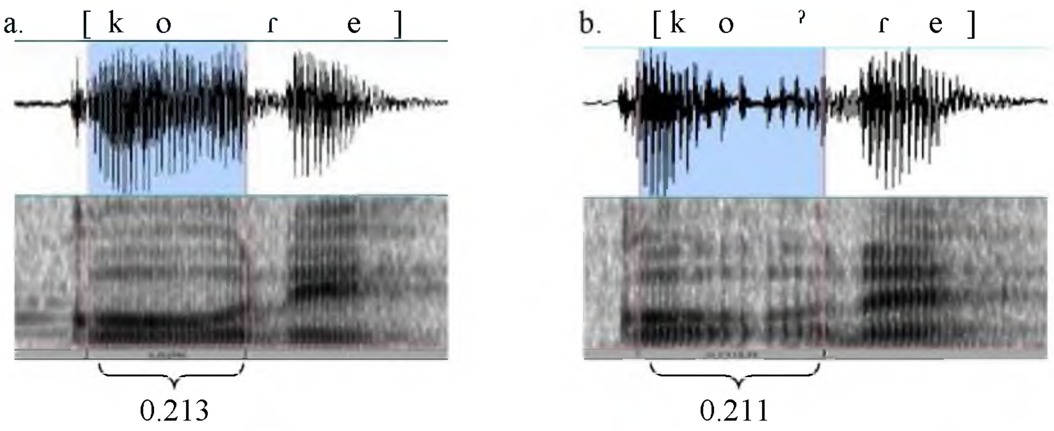

Figure 2.4 Spectrograms of [koɾe] ‘before’ and [koˀɾe] ‘to wait’

Figure 2.4 shows the sound waves and spectrograms of the root morphemes [koɾe] ‘before’ and [koˀɾe] ‘to wait’, respectively. Note that the timing of the first vowel in the CV sequence in (a) is as long as the sequence CVʔ in (b).

From this full set of phenomena, it may be argued that glottalization is better understood as a prosodic feature of the root morpheme, occurring on the first vowel, rather than a full consonant segment.

This analysis allows us to observe a relation that would otherwise be missed across two distinct processes. There are striking similarities regarding the occurrence of the glottals sounds [ʔ] and [h] in Desano. The laryngeal sounds [ʔ] and [h] show distributive patterns that are distinct from other consonants. First, they are the only segments that occur in coda position, and the only consonants-like sounds that appear in consonantal clusters. Importantly, note that these segments always appear after the first root vowel. Second, both segments may create a short echo vowel, so that words like *du’a* ‘to yank’ and *duha* ‘to stay’ can appear phonetically as [duˀua] and [duʰua], respectively. Third, these segments (usually [h]) may occur in suffixes as allophonic variation of the segments /s/, /d/, and /k/ in rapid speech, so *-ka* 'dubitative' and *-~da* 'plural animate' appears phonetically as [-ha] and [-hã] respectively. Last, the occurrence of [h] and [ʔ] causes the shortening of the proceeding vowel.

Phonetic evidence regarding the occurrence of these laryngeal sounds show that the phonetic realization of [h] and [ʔ] is better treated as single prosodic phenomena that occur after the first vowel within root morphemes. An alternative hypothesis is that laryngealization might be a suprasegmental feature that applies to root morphemes in the language.

There have been a few analyses proposing glottalization as a suprasegmental feature in Eastern Tukanoan languages. For example, Malone (1987) claims that glottalization in these languages developed from a suprasegmental in the proto-language. Ramirez (1997) analyzes the glottal stops in Tukano as the realization of a 'laryngealized' tone. These previous analyses have led Stenzel (2007) to treat glottalization as a suprasegmental feature in Wanano. Her analysis is similar to Ramirez's in that she postulates a third suprasegmental feature (besides nasalization and tone), called 'glottalization'.

For Desano, as mentioned above, Kaye (1970) notes that glottalization is a feature of the first syllable in the root and in (Kaye 1965) he groups the sounds [ʔ] and [h] together due to their occurrence. Although Kaye does not mention a 'suprasegmental feature,' his observations regarding these segments provide evidence for that hypothesis.[39]

An alternative hypothesis is that, roots are specified as [±laryngeal]. Thus, as illustrated in Table 2.8, plain roots in (A) are [-laryngeal] and laryngeal roots in (B) are [+laryngeal]. Then laryngealization is further marked by the features [+constricted glottis] and [+spread glottis], which are realized either as [ʔ] or [h] respectively. Thus, [+laryngeal] roots can surface with either *ʔ* or *h* after the first vowel of the root morpheme, as illustrated in (22). According to this analysis, [+laryngeal] roots have to be additionally specified in order to explain the two types of surface realization.

(22) a. /dua/ → [duʰa] 'to stay'
[+SPREAD GLOTTIS]
b. /dua/ → [duˀa] 'to yank'
[+CONSTRICTED GLOTTIS]

In this approach, the target for the laryngeal features is the mora. Thus, [+constricted glottis] or [+spread glottis] associates to the right edge of the first mora. This way, the feature will always be displayed in intermoraic position, as a glottal stop or a glottal fricative after the first vowel of the root morpheme.

2.2.3. Nasal Allophones of Consonants and Vowels

The nasalization process in Desano was first described by Kaye (1970, 1971). Voiceless segments /p/, t, k/ do not have nasal allophones. Silva (2008) shows that the differences found between the voiceless segments /p/, t, k/ in nasal versus oral

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[39] Cross-linguistically, laryngealization as a prosodic feature is also found in Mixtec. Macaulay and Salmons (1995) state that laryngealization in Mixtec is a feature of roots.

environments warrant treating these segments as though they undergo nasality. The fricative /s/ cannot (at least by definition) undergo nasality, because you have to close the velum to produce an [s]; thus it is treated here as having no nasal counterpart.

Table 2.9 shows the consonants and vowels and their nasal allophones. Minimal pair examples for oral/nasal consonants in word-initial position are given in (22) below. A description of nasalization process in Desano is presented in Section 2.2.2.5.

(23)									
	a.	[b] / [~b]	ba	[baa]	'to eat'	cf.	~ba	[mãã]	'path'
	b.	[d] / [~d]	doa	[doa]	'to sit'	cf.	~doa	[nõã]	'who'
	c.	[g] / [~g]	ga	[gaa]	'hawk'	cf.	~ga	[ŋãã]	'to continue'
	d.	[s] / [~s]	so	[soo]	'to rest'	cf.	~so	[sõõ]	'be red'
	e.	[w] / [~w]	wa	[waa]	'to go'	cf.	~wa	[w̃ãã]	'be.good'
	f.	[y] / [~y]	ya	[yaa]	'poss'	cf.	~ya	[ɲãã]	'to see'

Table 2.9 Nasal allophones of consonants and vowels

	Consonants						Vowels					
	LABIAL		CORONAL		VELAR		FRONT		BACK			
									[-ROUND]		[+ROUND]	
PLOSIVE	b	m	d	n	g	ŋ	i	ĩ	ʉ	ʉ̃	u	ũ
FLAP			[ɾ]	[ɾ̃]			e	ẽ			o	õ
APPROXIMANT	w	w̃			y	ɲ					a	ã

2.3 Suprasegmental Phonology

In this section I describe syllable types and structure, and the two major suprasegmental features of Desano: the mixed system of stress and tone, and nasalization and its mechanisms of spreading. The description of tone presented here is a tentative analysis that analyzes tone and stress as a mixed system.

2.3.1 Syllable Structure

Desano syllable structure is predominantly CV and V. The syllables in the languages are generally open, except that there are also occurrences of the syllable shapes (C)V^{h} and (C)$V^{ʔ}$, as shown in (24e, f, h, i).[40] The glottal stop and the glottal fricative are the only segments that can occur in coda position (as discussed in Section 2.2.2.2). It should be noticed that a vowel-initial syllable can only occur word-initially or after another vowel, but there are no VC.V syllables. This phenomenon follows mostly from the fact that there are no (C)VC syllables, except where the final C is glottal stop or a glottal fricative.

(24)	a.	bui	[bu.i]	‘agouti’
			CV. V	
	b.	~ʉbʉ	[ʉ̃.mʉ̃]	‘boy’
			V.CV	
	c.	~yega	[ɲẽ.ŋã]	‘knee’
			CV.CV	

---

[40] These syllable shapes are similar to the ones presented by Miller (1999:15). Kaye (1968:20) postulates the structure of Desano syllable as (C)V([ʔ] or [h]), where C is an *“optional consonant followed by the syllabic nucleus plus an optional choice of either glottalization or aspiration”*.

d.	do'e	[do.ˀe]	'traira fish'
		CV.CV	
e.	~ne'ka	[ɲẽˀ.kã]	'to be tired'
		CVʔ.CV	
f.	~a'di	[ãˀ.ɾi]	'to say'
		Vʔ.CV	
g.	eha	[e.ʰa]	'to arrive'
		V.hV	
h.	yʉkʉ	[yʉʰkʉ]	'tree'
		CVh.CV	
i.	uti	[uʰti]	'wasp'
		Vh.CV	

Any consonant (both oral ones and their nasal allophones) can occupy the onset position of word-initial syllables, with the exception of the glottal stop *ʔ* and glottal fricative *h*. Word-internally both the glottal stop *ʔ* and the glottal fricative *h* can occupy the onset slot, like the other consonants, as in (24d, 24g). All syllables must have a vowel nucleus, and sequences (C)V_1V_2 (where V_1 and V_2 are different vowels), as in (24a), are analyzed as two separate syllables (CV_1.V_2). Thus, these vowel sequences in Desano are generally considered to belong to separate syllables and are not diphthongs. The reason for this is because each vowel in a (C)V_1V_2 sequence has a separate energy burst; that is, there are two separate intensity pulses, as shown in the spectrograms for the words [ŋãĩ] 'parakeet' and [nõã] 'bone' in Figure 2.5.

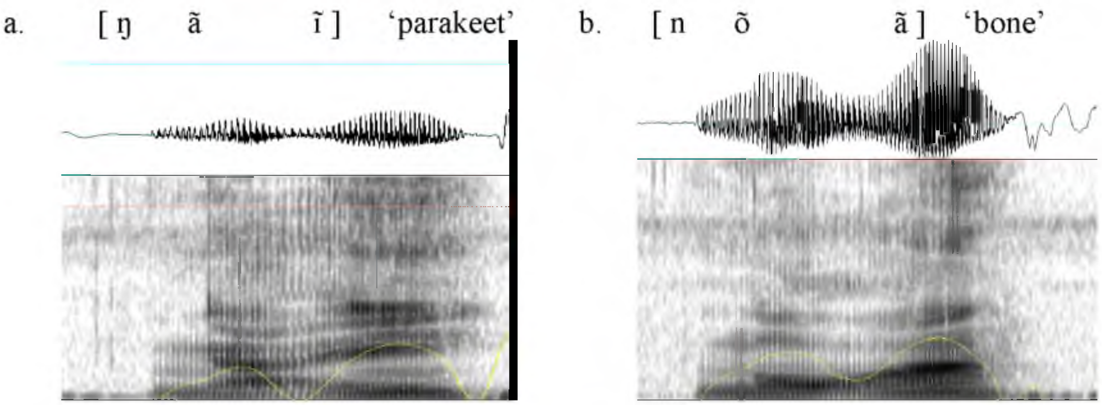


Figure 2.5 Spectrograms for (C)V_1V_2 sequences

Furthermore, when asked to say words with (C)V_1V_2 sequences slowly, speakers tend say these two vowels separately. Kaye (1965) also reports that “when speaking slowly, a speaker of Desano will cut sequences of the type CVVCV into sequences of the type CV V CV (where a space represents a pause, i.e., a syllable boundary)” (pp. 36-37).

While the vowels in (C)V_1V_2 sequences can be considered to belong to different syllables, the like vowels sequences, i.e. (C)V_1V_1 (where V1 and V1 are the same vowels), are considered as belonging to the same syllable. The examples in Figure 2.6 show the spectrograms for the words *ga* [gaa] ‘hawk’ and *ye* [yee] ‘jaguar’. There is only one energy burst with one intensity pulse.

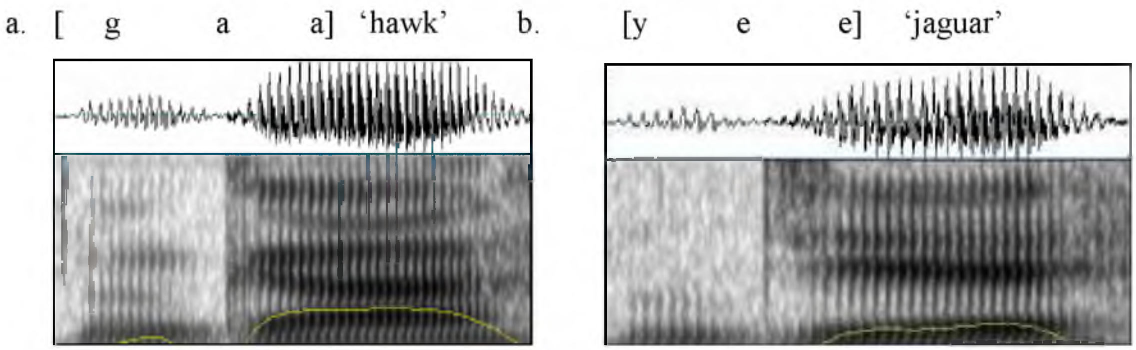


Figure 2.6 Spectrograms for (C)V_1V_1 sequences

2.3.1.1 Association Rules

The association rules used to establish the syllable structure of Desano are based on the procedures outlined by Dobrovolsky and Czaykowska-Higgins (2001), which reflect universal constraints on syllabification according to the following steps:

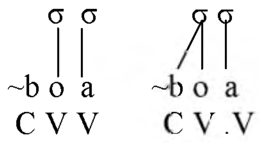
a) Nucleus formation: identify the vowel as the nucleus (N) of the syllable;

b) Onset formation: following the onset principle, associate any C with the nucleus to its right, forming the onset (O);

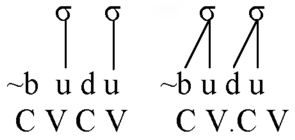
c) Coda (Cd) and Rhyme (R) formation: associate any remaining unassociated C (in Desano, it can only be either the glottal fricative *h* or the glottal stop *ʔ* with the nucleus to its left.

(25) ASSOCIATION RULES

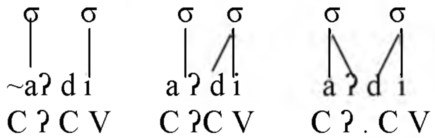
a. ~boa [mõã] 'salt'



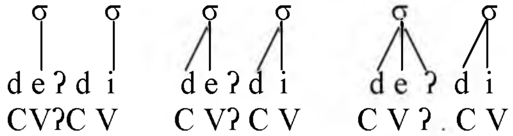
b. ~budu [mũɾũ] ‘tobacco’


σ σ σ σ
~b u d u ~b u d u
C V C V C V.C V

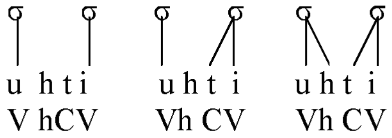
c. ~a’di [ãˀɾĩ] ‘to say’


σ σ σ σ σ σ
~aʔ d i a ʔ d i a ʔ d i
C ʔ C V C ʔC V C ʔ . C V

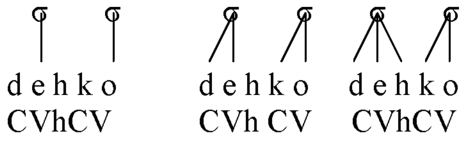
d. dedi [dɛˀdi] ‘to disappear’


σ σ σ σ σ σ
d e ʔ d i d e ʔ d i d e ʔ d i
CVʔC V C Vʔ C V C V ʔ . C V

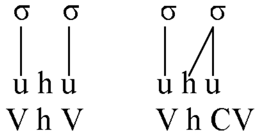
e. uti [uʰti] ‘wasp’


σ σ σ σ σ σ
u h t i u h t i u h t i
V hCV Vh CV Vh CV

f. deko [deʰko] ‘water’


σ σ σ σ σ σ
d e h k o d e h k o d e h k o
CVhCV CVh CV CVhCV

g. uu [uʰu] ‘pacu fish’

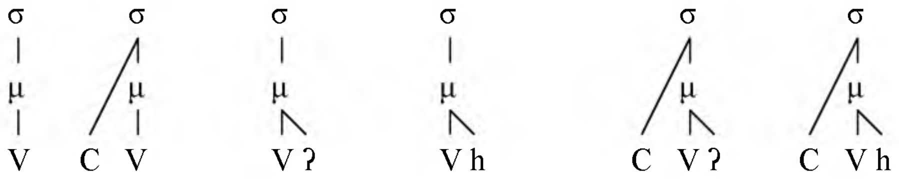

σ σ σ σ
u h u u h u
V h V V h CV

2.3.1.2. Syllable Quantity and Weight

In the previous section, we saw that syllables in Desano tend to be ‘codaless’. The exception being the (C)V.CV laryngealized roots, in which *ʔ* and *h* can fulfill the coda position in the first syllable. Because syllables in Desano have no coda, the rhyme is formed by a single vowel and the notions of mora and foot can be used to describe quantity and weight.

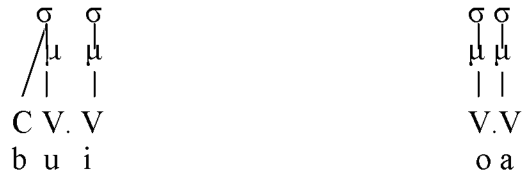
Each vowel (rhyme) is assigned to one single unit of quantity (mora). Onsets are extra-moraic, and, thus, are directly linked to the syllable (cf. Hayes 1995:53). The laryngeal sounds *ʔ* and *h* have no effect on weight, as these exceptional closed syllables do not bear stress. Therefore, they share the same mora with the preceding vowel. In (26) the various syllable shapes found in Desano are each associated with a mora.

(26) Syllable shapes and moraic association



Thus, root morphemes (plain roots and laryngealized roots as illustrated in Table 2.8) are bimoraic.[41] As mentioned in Section 2.2.1, plain root morphemes of the type (C)V_1V_2 are considered disyllabic, and thus have a bimoraic structure, as illustrated in (27).

(27) a. bui [bui] ‘agouti’ b. oa [oa] ‘skunk’



Many monosyllabic plain roots of (C)V shape are realized with a long vowel; however, in Desano, vowel duration is not phonemically distinctive. These monosyllabic plain roots are realized phonetically with long vowels and interpreted as having bimoraic structure, as illustrated in (28). The bimoraic structure accounts for the assignment of stress and tone. Generally stress and tone falls on the second mora of a bimoraic morpheme (stress and tone are discussed in section 2.3.2).

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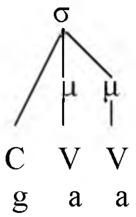
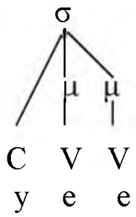
[41] Bimoraic structure has been analyzed for other Eastern Tukanoan languages, such as Tukano (Ramirez 1997:53-56), Barasana (Gomez-Imbert and Kenstowicz 2000:421), Tatuyo (Gomez-Imbert 2004), and Wanano (Stenzel 2004).

(28) a. ga [gaa] 'hawk'



b. ye [yee] 'jaguar'



Although the great majority of roots in Desano are bimoraic, there are a small number of monomoraic roots in the language. A small sample is shown in (29).[42]

(29)	a.	~bo	[mõ]	'piraiba fish'
	b.	~de	[nẽ]	'buriti fruit'
	c.	~bu	[mũ]	'umari fruit'

2.3.2 Stress and Tone in Desano: A 'Mixed Stress-Tone' System

In this section, I provide a preliminary analysis to account for a mixed stress-tone system (so-called 'pitch accent' systems) in Desano. This analysis follows Michael's (2011) approach to analyzing mixed stress-tone (MST) in two unrelated Amazonian languages, Iquito (Zaparoan) and Kakataibo (Panoan) spoken in Peru (cf. Michael 2010). I show that the Desano stress-tone system has a striking resemblance to these two other languages, which indicates that MST might be an areal characteristic.

Although there is a general consensus in the linguistic literature regarding the properties of tone systems and stress systems, the properties of an MST system as an independent system are still a matter of debate. According to Hulst and Smith (1988), ‘pitch-accent systems’ are in a continuum between ‘true tone languages’ (e.g., Chinese) and ‘stress accent languages’ (e.g., English). In pitch accent languages, prominence is marked by pitch shape; a given syllable in a word carries a tonal shape such as LH.[43] In a stress accent language prominence is marked by factors other than pitch, such as duration and vowel quality difference in the marked syllable. In tone language usually every syllable has a tonal shape, and the tones are contrastive.

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[42] These roots tend to be lengthened when they occur with no additional morphology, for example, [ga] may be realized as [gaa].

The typology for ‘tone languages’ and for ‘stress languages’ can be stated in this way: there is a continuum between a pure tone system and a stress system. Pitch accent systems fall in the middle. In a mixed system prominence is marked by both stress-like properties and pitch shape. Hyman (2007, 2009) suggests that instead of trying to classify languages with labels (“tone”, “pitch-accent”, “stress”) we should characterize languages by their individual properties (‘stress-like properties’ vs. ‘tone-like properties’). Thus, the analysis presented here takes into account the individual properties of the word-prosodic system of Desano, which is a language with stress-like and tone-like properties.

2.3.2.1 Evidence for a ‘Mixed Stress-Tone’ System

According to Michael (2010), a good indication that a language may have an MST system is if the prosodic systems of the language combine contrastive tone with regular stress. There is clear evidence of contrastive tone in Desano, as illustrated with the minimal pairs in (30)-(32).[44] The examples in (31) and (32) are multimophemic words. In (31) the final syllable *-yũ* (/-~*yu*/) is the specific class marker ‘CLS:palm’, showing a contrast between between LH-L in (31a) and LL-H in (31b). In (32) the final syllable *-mĩ* (/-~bi/) is the agreement marker ‘3SG:M’, showing a contrast between LL-H in (32a) and LH-L in (32b).

---

[43] L = Low tone, H - High tone.
[44] The acute accent on the vowel ‘v́’ indicates high tone; ‘ˈ’ indicates primary stress is assigned to the syllable that follows.

(30)	a.	(wã́.ˈĩ)	‘name’
	b.	(wã.ˈĩ́)	‘uncle’
(31)	a.	(mĩ.hĩ́.ˈyũ)	‘buriti palm tree’
	b.	(mĩ.hĩ.ˈyṹ)	‘wild palm tree’
(32)	a.	(ã.ɾĩ.ˈmĩ́)	‘he is’
	b.	(ã.ɾĩ́.ˈmĩ)	‘he says’

There is also evidence that pitch prominence is assigned to the mora that bears stress.[45] In Desano, stress falls on the last mora in a bimoraic root, as illustrated in (33).

(33)	a.	[yʉʰkʉ́]	‘bark’
	b.	[yʉˀʉ́]	‘I’
	c.	[wiˀí]	‘house’

The link between pitch and stress can be seen in words in which the prominent pitch moves in order to maintain the same metrical position in a word when extra morphology is added to the word, as illustrated in (34).

(34)	a.	yʉʰkʉ-gʉ́	‘tree’
	b.	yʉʰkʉ-gʉ-ɾé	‘to/for/at the tree’
	c.	yʉʰkʉ-dʉʰpʉ́	‘tree branch’
	d.	yʉˀ-ɾé	‘mine’

---

[45] It should be noticed that this is true even in nontonal languages such as English, where part of the traits that bundle with energy prominence of stress is also pitch (and length).

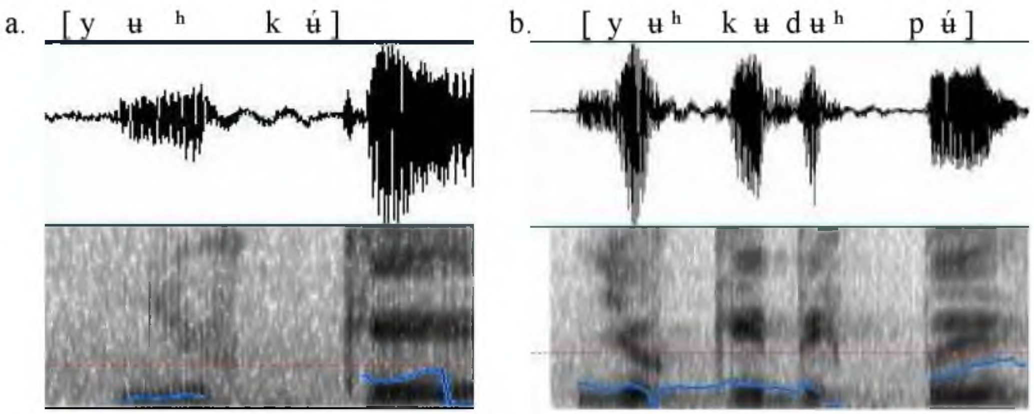

Figure 2.7 Prominent pitch movements

A sample illustration of prominent pitch movement in order to maintain metrical position is show in Figure 2.7 for the words *yʉhkʉ́* ‘bark’, and *yʉhkʉ́dʉhpʉ́* ‘tree branch’.

2.3.2.2 Acoustic Correlates of Stress in Desano

In the previous sections we saw that the great majority of root morphemes are bimoraic. In this section, I describe the assignment of stress in Desano considering acoustic evidence.

Generally, it can be difficult to characterize the acoustic correlate of stress (Lehiste 1970; Laddv1996; Beckman 1986; Hayes 1995). There are a number of phonetic measures that can be used to detect the differences between stressed and unstressed syllables (Gussenhoven 2004:14). In order to establish stress assignment, I consider the following based on Ladefoged (2001:231): (a) acoustic evidence, in the form of vowel lengthening in the stressed syllable compared with the shorter length of vowels in non-stressed syllables; (b) increase of loudness of the sound produced in the stressed syllable, and (c) the rise of (intonational) pitch.

The acoustic evidence considered here is lengthening of the vowel in the stressed syllable.[46] A systematic measurement of vowel length in a variety of words of different lengths (root morphemes and their inflected forms), showed a variation in rhythmic lengthening of the stressed vowel. A sample of the words measured is illustrated in Table 2.10, where vowel length is measured in stressed and non-stressed syllables. Stress is marked with ‘ˈ’ preceding the stressed syllable. Kaye (1970:20) claims that verb roots are accented on their final syllable. Figure 2.8 shows the spectrograms for the words *kuye* ‘eye’ and *kuyeɾi* ‘eyes’ and the points of measurement for vowel length in each word. Note that although there is no variation in intensity (shown by the wavy line), vowel length is considerably different.

Table 2.10 Vowel length in Desano words in seconds

WORD	GLOSS	VL1	VL2	VL3
kuˈye	eye	0.066s	0.097s	
kuˈyeɾi	eyes	0.103s	0.140s	0.060s
waʰˈka	skewer	0.046s	0.065s	
waʰˈkaɾi	skewers	0.041s	0.089s	0.040s

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[46] I used PRAAT © for creating spectrogram and measuring the vowels.

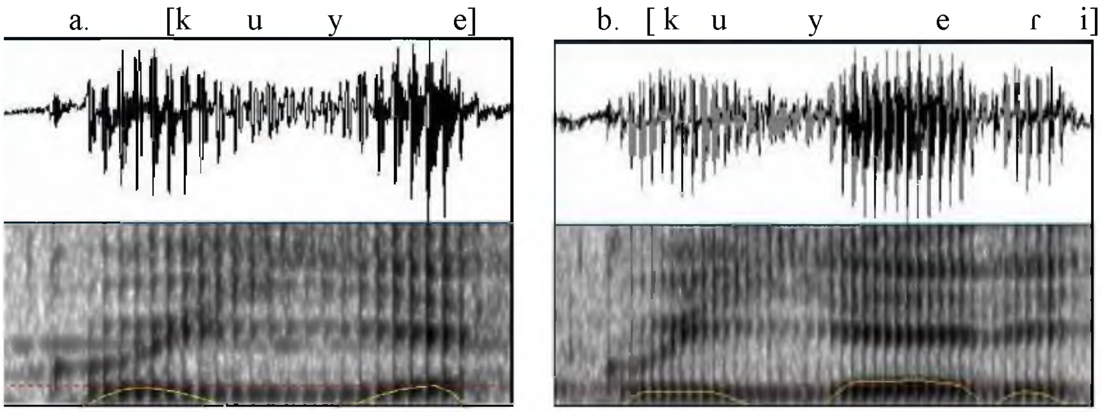

Figure 2.8 Vowel length in Desano words.

Throughout the Desano data, a regular pattern was observed: the vowel of the right-most syllable in the root is the longest vowel of the root morpheme, suggesting that primary stress falls on the second (rightmost) syllable in a disyllabic root.

Another evidence used to establish stress assignment in Desano was ‘speaker’s judgment’. Speaker judgment was elicited through a task with one of my main Desano consultants.[47] For this task, we first made a list of identical recorded words said by different speakers. These words were then transcribed and played back; then, the speaker was asked to underline the vowel in the ‘strongest’ part for each word. The speaker was first trained with disyllabic roots, and then was asked to underline the strongest part in inflected roots. The speaker’s judgment was consistent with the duration facts, indicating that one of the main acoustic correlate of stress in Desano is the lengthening of the vowel in the stressed syllable.

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[47] Frank Matos is a fluent Desano speaker from San Jose del Viña, in Colombia. I have given him basic linguistic training and he has become a research assistant in the Desano Language Documentation Project.

2.3.2.3 Stress in Desano

Stress placement in Desano generally follows a straightforward rule: stress falls on the syllable containing the last mora of a noun root morphemes. Since verb roots cannot occur in isolation (i.e., without additional morphology); they do not receive stress. Stress in assigned to verbs only after additional morphology is added to it creating a phonological word. Thus, stress consists of left-to-right exhaustive parsing, and although degenerate feet may be allowed, it is not very common. There is no closed syllable in the language. Even though there are some exceptional syllable structures, which have either [ʔ] or [h] in the coda position forming (C)Vʔ and (C)Vh shapes, these syllables are not stressed. This can be seen as evidence that stress is assigned before any suprasegmental feature (as mentioned in Section 2.2.2.2, glottalization as treated as a possible suprasegmental feature in the language). Thus, stress in Desano is assigned primarily on the basis of moraic position.

The words in (35-39) illustrate the basic iambic pattern. The left-most disyllabic forms correspond to the root morpheme, followed by additional morphology to their right.

(35)	a.	(o.ˈa)	‘skunk’
	b.	(bi.ˈi)	‘rat’
(36)	a.	(ku.ˈye)(ˌɾi)	‘eyes’
	b.	(yʉ.ˈkʉ)(ˌgʉ)	‘tree’

(37) a. (di.ˈta)(ɾu.ˌge) ‘to/from/at the lake’

b. (yʉ.ˈkʉ)(dʉ.ˌpʉ) ‘tree branch’

(39) a. (yʉ.ˈkʉ)(dʉ.ˌpʉ)ɾi ‘tree branches’

b. (õ.ˈmã)(bi.ˌɾa)ɾi ‘trick, game’

(40) a. (wa.ˈi)(ŋõˌã)(mẽˌɾã) ‘with the fishbone’

b. (ga.ˈki)(po.ˌa)(da.ˌɾi) ‘strands of monkey hair’

An indication that stress is assigned to the mora and not the syllable can be seen in words such as the ones in (41a-b), which demonstrate that these bimoraic roots form their own foot. When additional morphology is added to form a new phonological word, the language maintains its preferred bimoraic structure, with stress on the second mora, as illustrated in (42a-b).

It should be noticed that if we were to treat Desano feet as disyllabic, rather than bimoraic, the language would allow the unattested forms in (42c-d).

(41) a. (wi.ˈi) ‘house’

b. (mã.ˈã) ‘path’

(42) a. (wi.ˈɾe) ‘to/at the house’

b. (mã.ˈɾe) ‘to/at the path’

c. *(wi.ˈi)(ˌɾe)

d. *(bã.ˈã)(ˌɾe)

The stress assignment in Desano shows that a prosodic word has to contain at least one well-formed (i.e., bimoraic) foot. Having assigned the foot structure as right-headed, being assigned from left-to-right, we can assign prominence in the structure of the phonological word. In Desano, this prominence is set to the left, i.e., left-headed. The illustration in (43a-c) shows that these parameters allow us to generate the correct surface forms for the words *yʉʰˈkʉgʉ* ‘tree’ (43a), *diʰˈtaɾuge* ‘to/from/at the lake’ (43b), and *gaʰˈkipoadari* ‘strands of monkey hair’ (43c).

(43) a. (.   *)(.) word level (left-headed)[48]
(.   *)(*) foot level (right-headed)
(yʉ.ˈkʉ)(ˌgʉ) ‘tree’
b. (. *)(. .) word level (left-headed)
(. *)(. *) foot level (right-headed)
(di.ˈta)(ɾu.ˌge) ‘to/from/at the lake’
c. (. *)(. .)(. .) word level (left-headed)
(. *)(. *)(. *) foot level (right-headed)
(ga.ˈki)(po.ˌa)(da.ˌɾi) ‘strands of monkey hair’

Up to this point, I have used only nouns to illustrate stress assignment in Desano. This is because the great majority of noun roots can also function as independent words in this language. On the other hand, verb roots generally need additional morphology in order to be used as phonological words. Despite these differences, phonological words formed from verb roots are stressed following the same metrical parameters assigned for nouns.[49] This is illustrated in the examples in (44).

(44) a. oˀo-ke → (oˀ.ˈke) ‘give-IMP’
b. õˀmã-mã → (õˀ.ˈmã)(ˌmã) ‘they ran’
c. sua-mõ → (su.ˈa)(ˌmõ) ‘she sieves (it)’

---

[48] The asteristik ‘*’ marks all and only the segments that qualify to bear stress. The dot ‘.’ marks the segments that do not bear stress.

[49] Miller (1999:15) assigns stress to the level of the syllable and claims that stressed syllables have high pitch. She does not distinguish ‘stress’ from ‘tone’.

With the facts stated above, we arrive at an analysis of stress in Desano, summarized as follow: (a) primary stress is in the final mora within the root; (b) stress in the phonological word falls on the left-most foot.

2.3.2.4 Desano Tone

In this section I present a preliminary sketch of the tone system in Desano. Desano has both stress accent and tone. There are two tones, H and L. In general, every word carries an H tone, though there are exceptions.

The tonal minimal pairs in (45)-(48) evidence the existence of lexical tone.[50] These words result in four surface tone melodies: high (H), high-low (HL), low-high (LH) and low (L) in words with bimoraic structure.

(45) a. H-L [wã́ĩ] ‘name’

b. L-H [wãĩ́] ‘uncle’

(46) a. L-L [sʉa] ‘to like’

b. L-H [sʉá] ‘to sieve’

(47) a. H-H [táá] ‘grass’

b. L-H [taá] ‘to cut’

(48) a. L-H [duʰá] ‘to stay’

b. L-L [duʰa] ‘to return’

This is a tentative analysis and much needs to be said about the tone system in this language. A future investigation might show how lexical tone and metrical tone interact with each other in the language. Michael (2009) shows that in Iquito (Zaporan) lexical tone is insensitive to metrical structure (i.e., stress). Metrical tone is, then, assigned to the syllable that bears stress. This might be the case in Desano. Because details of tone in Desano are still under investigation and native speakers prefer orthographic representation which does not mark tone overtly, I do not mark tone in the phonetic transcription here (see notes on orthography in Section 2.5). Where no tone marking is indicated in the phonetic transcription, it is because the tone pattern isn't consistent, or its realization is not clear at the moment.

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[50] High (H) tone is marked with an acute accent over the vowel ‘v́’; Low (L) tone is unmarked.

2.3.3 Suprasegmental Nasalization

Table 2.11 shows a summary of the underlying segments and their respective nasal realization. It should be noted that voiceless stops do not have a nasal realization. The description of nasalization presented here accounts for the basic characteristics of the phenomena; however, it does not pretend to be exhaustive. Nasal harmony in Desano was described in Kaye (1970; 1971).

Nasal harmony in Desano is a suprasegmental feature of the morpheme. Morphemes are inherently marked as oral [-NASAL], nasal [+NASAL] or are unmarked for nasality [∅NASAL]. As noted in Section 2.1.3, all voiced segments have a nasal realization. Kaye (1971:37) states that "it is unclear whether the voiceless segments… have distinct oral and nasal realization." In an acoustic study comparing voiceless segments in nasal versus oral contexts, Silva (2008) argues that at least phonetically voiceless segments are affected by nasality, although it might not be realized in the surface form.

Table 2.11 Desano phonemes and nasal realization

Underlying phonemes														
p	t	k	s	b	d	g	w	j	i	ʉ	u	e	a	o
Voiceless consonants - no nasal realization				**m**	**n / ɾ̃**	**ŋ**	**w̃**	**ɲ**	**ĩ**	**ʉ̃**	**ũ**	**ẽ**	**ã**	**õ**
				Segments with nasal realization										

Some examples of suprasegmental nasalization occurring in root morphemes are given in (49).

		UNDERLINED FORM	SURFACE FORM	
		[+NASAL]	[+NASAL]	
(49)	a.	~dobe	nõmẽ	‘female’
	b.	~dʉkʉ	nʉ̃ʰkʉ̃	‘forest’
	c.	~sea	sẽˀã	‘piaba fish’
	d.	~pidu	pĩɾ̃ũ	‘snake’
	e.	~gabe	ŋãmẽ	‘to want’

2.3.3.1 Nasal Spreading

As mentioned earlier, nasalization is a property of the morpheme; however, the scope of spreading is the phonological word. Roots are specified as being either [+NASAL] or [-NASAL]. Suffixes are generally unspecified (unmarked) for nasality, although there are a number of suffixes that are specified as [+NASAL]. Unmarked [∅NASAL] morphemes can be realized either as [+NASAL] or [-NASAL], depending on the specification of the preceding morpheme. The examples in (50)-(54) show some of the morphemes that are unmarked for nasality and how they are realized depending on the [±NASAL] feature of the preceding morpheme: [-NASAL] (examples a) and [+NASAL] (examples b).

[∅NASAL] MORPHEMES

		[-NASAL]		**[+NASAL]**	
(50)	**-go**	a. wʉa-go	[wʉago]	b. ~kaɾi-go	[kãɾ̃ĩŋõ]
	3SG:F	be.tall-3SG:F		sleep-3SG:F	
		‘she is tall’		‘she is sleeping’	
(51)	**-gʉ**	a. wʉa-gʉ	[wʉagʉ]	b. ~kaɾi-gʉ	[kãɾ̃ĩŋʉ̃]
	3SG:M	be.tall-3SG:M		sleep-3SG:M	
		‘he is tall’		‘he is sleeping’	
(52)	**-de**	a. igo-de	[igoɾe]	b. ~igʉ-de	[ĩŋʉ̃ɾ̃ẽ]
		3SG:F-REF		3SG:M-REF	
		‘to/for/at her’		‘to/for/at him’	
(53)	**-do**	a. disi-do	[diʰsiɾo]	b. ~pigo-do	[pĩŋõɾ̃õ]
	PART	mouth-CLS:body.part		tail-CLS:body.part	
		‘a mouth’		‘a tail’	
(54)	**-di**	a. wi’i-di	[wiʔiɾi]	b. ~japi-di	[ɲãʰpĩɾ̃ĩ]
	PL:IN	house-PL:IN		sweet.potato-PL:IN	
		‘houses’		‘sweet potatoes’	

In the examples above, we see that the [±NASAL] feature of the root morpheme spreads to the unmarked morpheme. However, marked morphemes block nasal spreading. In examples (55)-(58) words are formed by sequences of [+NASAL] [-NASAL] [∅NASAL] morphemes. Oral morphemes block the nasal feature from spreading to the unmarked morpheme to the right.

+N **-N** **∅N**

(55) ~ʉba -be -go [ʉ̃mãbego] 'she isn't tall'

be.tall-NEG-3SG:F

(56) ~dikʉ -ge -de [nĩhkʉ̃geɾe] 'in/on/at (the) earth'

earth-LOC-REF

(57) ~pabʉ -goda-gʉ [pãmʉ̃goɾagʉ] 'he (is) transforming (creating)'

ferment-reach-3SG:M

(58) ~bʉkʉ -bidi -go [mʉ̃ʰkʉ̃biɾigo] 'she is not happy'

be.happy-NEG-3SG:F

Generally oral morphemes are not affected by nasalization even when they are surrounded by two [+NASAL] morphemes, as illustrated in (59)-(60).

+N **-N** **+N**

(59) ~ai -de -~da [ãĩdeɾã] 'they took (it)'

take-PERF-PL:AN

(60) ~bobe -bidi -~bi [mõmẽbiɾimĩ] '(he) doesn't work'

work-NEG-3SG:F.IMPERF

Nasalization generally spreads from left to right. Kaye (1970, 1971), Bivin (1986), and Miller (1999) claim that certain suffixes assimilate nasalization from the morpheme to their right. Both Kaye (1970, 1971) and Bivin (1986) suggest a set of rules to explain nasal assimilation from right to left. Miller (1999) claims that right-to-left nasal assimilation is ‘totally lexicalized’, since it is limited to only a few morphemes. Most of the examples used by these authors to illustrate right-to-left assimilation are words with a sequence [+N] [-N] [+N], as illustrated here in (61)-(62) with data from Miller (1999:14).[51]

(61) a. wẽ̆hẽ̆bĩrã̆ ‘the ones who don’t kill’
b. wẽ̆hẽ̆bigɨ ‘the one who doesn’t kill’

(62) a. wẽ̆hẽ̆yõ̆rã̆ ‘they killed (reported)’
b. wẽ̆hẽ̆yoro ‘you killed (reported)’

It is important to notice that the morphemes assimilating the nasal feature from the rightmost morpheme are between two [+NASAL] morphemes in the examples in (61a) and (62a). Furthermore, inherently oral morphemes that are realized as nasal in these environments have a monosyllabic shape. In (60) above, the ‘negative’ morpheme *-biri* is not affected by nasality even though it is between two [+NASAL] morphemes. Thus, considering that right-to-left nasal assimilation is restricted to a few suffixes, it is better treated as an idiosyncratic process affecting only a small number of [-nasal] suffixes (in [59], for example, *-de* ‘perfect aspect’ remains oral even though it is between two nasal morphemes).

In my corpus, this idiosyncratic left-to-right assimilation seems to be common to the evidential suffixes *-yu* ‘quotative/folklore’ and *-yo* ‘2nd hand/hearsay’, as illustrated in the examples (63) and (64). In (63a), the oral status of *-yu* is evident from the fact that it is not affected by nasality from the preceding morpheme, and it blocks nasality to spread to the unmarked morpheme. In (63b) *-yu* follows an oral morpheme, but it is realized as nasal; in this case, it assimilates nasality from the nasal morpheme in the right. However, in (63c) *-yu* remains oral, even though it has a similar environment as in (63b).

---

[51] I maintain the author’s original transcription and glosses.

+N **-N** **∅N**

(63) a. ~digi -yu -do [nĩŋĩyuɾo] '(they) stood up'

stand-EVID:QUOT/FOLK-NON3.IMPERF

-N **-N** **+N**

b. adi -yu -~bi [aɾiɲũmĩ] '(he) said'

say-EVID:QUOT/FOLK-3SG:M.IMPERF

-N **-N** **+N**

c. boka -yu -~da [boʰkayuɾã] 'they met'

meet-EVID:QUOT/FOLK-3PL:AN.PERF

The same idiosyncrasy can be seen with the suffix *-yo* in (64) below. It is an oral morpheme as shown in (64b), but assimilates the nasal feature from the nasal morpheme to its right (64c).

-N **-N**

(64) a. duya -yo [duyayo] '(it) lacked (something)'

lack-EVID:HSAY

+N **-N**

b. ~adi -yo [ãɾĩyo] '(it) was'

be-EVID:HSAY

-N **-N** **+N**

c. wa -yo -~da [waaɲõɾã] '(they) traveled'

go-EVID:HSAY-PL:AN.PERF

2.4 Morphophonemic Processes

There are two major morphophonemic processes that occur in Desano: vowel deletion and fusion, treated by Kaye (1970) as 'coalescence' and syllable/segment reduction. I present here a summary of these processes as discussed in Kaye (1970) and Miller (1999), presenting my own data.

2.4.1 Vowel Deletion and Fusion

In Desano, two types of phenomenon are found to occur in vowel-vowel sequences: deletion and fusion. Examples of deletion are seen with the following verb roots: *~aɾi* 'be', *~a'ɾi* 'say' and *aɾi* 'come'. When those verbs roots are followed by the 'perfective' aspect, -*a*, the high front vowel /i/ is deleted, and the verb roots have the surface forms [ãɾã] 'be', [ãˀɾã] 'say' and [aɾa] 'come', as illustrated in (65)-(67).

(65) ãɾãbʉ wekʉɾuge[52]

~adi-a-bʉ weku-du-ge

be-PERF-NON3.PERF balaio.basket-CLS:concave-LOC

'(It) is in the balaio basket.'

(66) yãmãpʉ ã'ɾãpʉ ĩgʉ̃ɾe

~yaba-pʉ ~adi-a-pʉ ~igʉ-de

deer-CONTR say-PERF-3SG.M.PERF 3SG:M-REF

'The deer said to him.'

---

[52] The first line of the four-line examples corresponds to the orthographic representations adopted by the Desanos.

(67) aɾa yʉ'ʉ

adi-a yʉʉ

come-PERF 1SG

'I came.'

Other verb roots that end with the high front vowel and are followed by the 'perfective' *-a* do not undergo this process, as shown in the examples (68)-(69).

(68) nõ'õ mʉ̃ˀʉ̃ koadukaɾu apiaɾi

~doo ~bʉʉ koa-duka-du api-a-di

where 2SG gourd-fruit-CLS:concave leave-PERF-INTER

'Where did you leave the gourd?

(69) kaɾiamĩ

kadi-a-~bi

sleep-PERF-3SG:M.IMPERF

'(He) slept.'

Fusion occurs in like vowel-vowel sequences across morphological boundaries. For example, when the 'perfective' suffix *-a* is preceded by a morpheme that also ends in /a/ these two vowels are fused (there is no lengthening of the fused vowel), as shown in (70). When the preceding vowel is other than /a/, the vowels are not fused, as shown in (71).

(70) waadʉaɾã

wa-dʉa-a-~da

go-DES-PERF-3PL.AN.PERF

'(They) wanted to go.'

(71) yʉ’ʉ mʉ̃’ʉ̃ɾẽ doɾebea ã’ɾĩyũmĩ

yʉʉ ~bʉ’ʉ-de dode-be-a ~a’di-~yu-~bi

1SG 2SG-REF command-NEG-PERF say-EVID:QUOT/FOLK-3SG:M.IMPERF

‘I don’t command you, he said.’

Vowel deletion and fusion present an issue that deserves more attention. Kaye (1970:180-186) treats these two processes as coalescence and suggests a set of derivational rules in order to explain the deletion and fusion of vowels.

2.4.2 Syllable Reduction

Syllable reduction in Desano is very common.[53] It generally involves morphemes that have a (C)VCV shape and are reduced to CV, where the first syllable is deleted. For example, the verb *api* [a^{h}pi] ‘to leave’ reduces to *-pi* when it is in a noninitial position. The process seems to This is illustrated in (72); note that in (72a), the verb has its full shape; whereas in (72b), its first syllable has been deleted.

(72) a. mʉ̃’ʉ̃ãɾẽ nĩkʉ̃ ahpiɾã

~bʉʉ-~a-de ~dikʉ api-~da

2SG- PL:AN-REF ground leave-AN:PL

‘(They) are leaving land to you.’

b. mãɾĩ põɾãɾẽ mãsʉ̃pi

~badi ~po-~da-de ~basʉ-api

1PL progenee- PL:AN-REF raise-leave

---

[53] According to Stenzel (p.c.), syllable reduction in serial verb constructions is quite common. In these contexts, the phonological reduction of the second vowel indicates that the verb function is also different in the morphological structure of the word.

'(That) we leave our children.'

Miller (1999:18) shows examples in which the reduction has to do with the loss of the intervocalic /g/. This is illustrated in (73).

(73) a. waaʉta

wa-gʉ-ta

go-3SG:M-EMPH

b. yãʉ̃ waa

~ya-gʉ-ka

see-3SG:M-EVID:reason

'He (will) see.'

In (74), besides the reduction of /g/, the initial consonant is also deleted. This reduced form is used as a term of endearment. In general, the form *pagʉ* [pagʉ] 'father' is ore commonly used. The form can be also reduced when bounded to a preceding morpheme, as shown in (74b), in which *pagʉ* is reduced to *-pʉ*.

(74) a. aʉ

pa-gʉ

genitor-3SG:M

'dad'

b. yʉ'pʉ

yʉʉ-pa-gʉ

1SG-genitor-3SG:M

'my father'

2.5 Notes on Orthography

The Desano orthography is currently in the process of being standardized. In this dissertation, I adopt the orthography that has been developed by the Desanos in the ‘Desano Language Workshops’. A summary of the Desano phonemes and their respective orthographic representation is shown in Table 2.12.

For the intervocalic /d/ which is realized as flap [ɾ], the Desanos have decided to use the actual ‘flap’ symbol ‘ɾ’. The Desano have also decided that the high mid unrounded vowel /ɨ/ be represented as ‘ʉ’ in order to ‘distinguish’ their orthography from that of Tukano.

The Desanos are currently in the processes of discussing and deciding on the best ways to represent nasalization, aspiration, glottalization, and tone. However, based on the most recent workshop, they have decided on the following:

- Nasalization is marked with a ‘~’ in all vowels of nasal morphemes (and words). For example *ĩgʉ̃* ‘he’ (not ĩgʉ/igʉ̃); *wãĩ* ‘uncle’ (not *wãi/waĩ*).
- Aspiration is marked with the grapheme *h* before the consonants *p, t, k, s*. For example *gahpi* ‘monkey’, *dehko* ‘water’, *ahsiri* ‘hot’. The consonant *h* will also be used in words such as *oho* ‘banana’ and *uhu* ‘pacu fish’.
- Glottalization is marked with a ’. For example, *wa’i* ‘fish’, *wi’i* ‘house’.
- Tone is not marked for now.

In the next chapters, I adopt the Desano orthography as listed here instead of the phonetic transcription.

Table 2.12 Desano phonemes and graphemes

	CONSONANTS									VOWELS					
phoneme	/p/	/t/	/k/	/b/	/d/	/g/	/s/	/w/	/j/	/i/	/ɨ/	/e/	/a/	/o/	/u/
oral grapheme	p	t	k	b	d	g	s	w	y	i	ʉ	e	a	o	u
nasal grapheme				*m*	*n*				*ñ*	*ĩ*	*ʉ̃*	*ẽ*	*ã*	*õ*	*ũ*

2.6 Summary

This chapter presented an overview of Desano phonology. I described the phonemic inventory of the language, which is comprised of 11 consonants, and 6 vowels, and their variants. I showed that the status of the glottal segments *ʔ* and *h* as full consonant segments is debatable.

In Section 2.3, I presented the suprasegmentals of Desano, starting with a description of the syllable structure. Stress and tone were treated as a mixed system creating an interaction of *lexical tone* and *metrical tone*. The other suprasegmental trait presented was nasalization. I provided a description of the system and its basic process of nasal spreading.

In Section 2.4 I described three morphophonemic processes: vowel deletion, vowel fusion, and syllable reduction. Finally, in Section 2.5, I provided some information on the Desano orthography which I adopt in the following chapters.

CHAPTER 3

PARTS-OF-SPEECH

3.1 Introduction

This chapter introduces the parts-of-speech in Desano. It presents analyses of the patterns related to word formation and its internal structure. It is intended as an introduction to the topics to be discussed in the chapters on nominal morphology (Chapter 4) and verbal morphology (Chapter 5). In this chapter, an account for the 'word' in Desano is given considering the distinction between phonological and grammatical word. However, the 'word' is defined according to the grammatical criteria.

In Desano, members of the parts-of-speech are divided into *open classes* versus *closed classes*. Members of the open classes are *nouns* and *verbs*. Like many Amazonian languages, Desano does not have a morphosyntactically distinct adjective class. In Desano, adjectival expressions (semantic adjectives) are derived from nouns and verbs. Adverbial notions are expressed in several ways in Desano. Temporal adverbial expressions are expressed by nouns referring to time. Manner and quality adverbial expressions are derived from nominalized verbal roots. Quality adverbial expressions are coded is through serial verb constructions. The closed classes consist of *personal pronouns* (and other pro-forms), *demonstratives* and *interrogatives*, *negators*, *discourse markers*, *adverbial conjunctions*, and a small set of *interjections*.

3.2 The 'Word' in Desano

The criteria used for characterizing the phonological word in Desano are based on the cross-linguistic framework presented in Dixon and Aikhenvald (2002). According to this typological framework, the 'word' can be defined according to phonological and grammatical criteria. These two kinds of criteria are discussed below with respect to the specific characteristics of the 'word' in Desano.

3.2.1 The Phonological Word

According to these criteria, a phonological word is defined as a unit not smaller than a syllable (in Desano, the word can be formed minimally of one syllable) that is characterized by (A) its segmental features; (B) its prosodic features; and (C) its phonological rules, to which I now turn.

(A) Segmental features. Every phonological word must have at least two moras (or morae), that is, they are bimoraic. Thus, if a word has the minimally monosyllabic structure (C)V, the vowel must be a long vowel, giving the shape (C)VV (vowel length is not contrastive in Desano), as illustrated in (1).

(1)	a.	ga	[gáá]	'hawk'
	b.	ta	[táá]	'grass'
	c.	oa	[oá]	'this'

With respect to phonotatics and segment restrictions in Desano, allows [ɾ] and [h] only in word-medial position. Words may not begin with these segments.[54]

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[54] Although in the practical orthography speakers tend to write *ho* 'banana', *hu* 'pacú fish', these words are pronounced as [oho] and [uhu] respectively.

(B) Prosodic features. An important characteristic of the phonological word is that it contains one primary stress (see Section 2.3.2.3). Another prosodic feature that characterizes the phonological word in the Desano is tone assignment – it has at least one H tone per phonological word (see Section 2.3.2.4).

(C) Phonological rules. The scope of nasalization spreading (nasal harmony, see Section 2.3.3) is the phonological word. This process does not extend beyond word boundaries. Besides the characteristics listed in (A, B, C), Desano speakers recognize a 'word' as the utterance that can be separated by a space in writing.

3.2.3 The Grammatical Word

According to the framework used for the identification of 'word' (cf. Dixon and Aikhenvald 2002:19), a grammatical word has as its core element one or more lexical roots to which morphological processes have applied, co-occur in a fixed order, and have a conventionalized coherence and meaning. Thus, grammatical word here means how words are defined in terms of their grammatical behavior.

The grammatical word in Desano has as its base element an independent root, although the language has many instances of root compounding that constitute a complex stem.[55] These complex stems, in turn, can take one or more suffixes. The morphemes that are suffixed to the root and/or stem occur in a fixed order.[56]

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[55] In Eastern Tukanoan languages, only noun roots can stand alone as words; verb roots always require some kind of accompanying inflectional morphology (Gomez-Imbert and Kenstowicz 2000:421).

[56] See Chapter 4 and Chapter 5 for the morphology of nominal and verbal structures, respectively.

3.3 Parts of Words: Roots and Formatives

Words in Desano may consist of more than one morpheme. These morphemes, in turn, can be classified in several ways. The most important distinction of morphemes in Desano is that between roots, clitics, and formatives. In Desano, roots are the base of both the phonological and grammatical words. In this sense, a root is "a base that cannot be analyzed any further into constituent morphemes" (Haspelmath, 2002:17). Formatives are considered here as 'the markers of inflectional information' (cf. Bickel and Nichols 2007:172).

Clitics are morphemes that do not meet the criteria for phonological word (cf. Aikhenvald 2002b). The most common clitic is the possessive morpheme *ya* which is phonologically dependent on other morphemes, as shown in (2). The most common occurrence of *ya* is as an enclitic (i.e., following the noun root), as in (2a), although it can also behave like an independent root and receive nominal morphology, as in (2b).

(2) a. nãhsẽã ya nĩhkʉ̃

~dase-a=ya ~dikʉ

Tukano-PL:AN=POSS land

'Tukano's land'

b. ĩgʉ̃ yago

~igʉ ya=go

3SG:M POSS=3SG:F

'his wife'

3.4 Parts of Speech: An Overview

Miller (1999:21) indentifies seven 'major parts of speech' for Desano: nouns, verbs, modifiers in noun phrases, adverbs, pronouns, interjections, and particles. Miller's characterization seems to rely mostly on semantic properties, rather than on grammatical ones, and she makes no distinction between open versus closed word classes. In the following discussion, I identify the parts of speech of Desano in a quite different way.

The parts of speech of Desano as presented here are based on grammatical criteria (i.e. morphological and syntactic criteria), not semantic criteria, although semantic evidence might be used to support the classification of a particular word in a given class. These grammatical criteria include the properties of a word's distribution, its syntactic functions, and its morphological and syntactic specifications.

I follow the theoretical assumption that the parts of speech in Desano consist of the classes of words (*open* or *closed*) found in the language.[57] The term 'word' used here, and in the remainder of the chapter, refers to the grammatical (not phonological) word. Thus ***open*** classes (also called 'major classes') include words that are members of large categories; they are unrestricted, as new words can be added to these classes. For example, nouns and verbs are generally characterized as open classes. On the other hand, ***closed*** classes (also called 'minor classes') include words that are members of small categories; they are restricted, as new words are generally not added to these classes. Personal pronouns, numbers, and determiners are characterized as closed classes.[58] To illustrate this in Desano, we find words from the open class of nouns that are loanwords productively introduced into the language. For example, *kãrĩñã* ‘chicken’, *tabua-mĩhĩ* (plank-CLS:flat) ‘bed’, *pĩsãñã* ‘cat’ are borrowed into the language from the Portuguese words *galinha* ‘chicken’, *tábua* ‘plank’ (note the classifier *-mĩhĩ* is Desano), and *bichano* ‘kitty’, respectively. While these examples are clear instances of loanwords being added into the open class of nouns in Desano, there are no clear instances of loanwords added to the closed classes.

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[57] This analysis is based on Schachter and Shopen's (2007) cross-linguistic characterization of part-of-speech systems.

[58] For lengthy discussions about the characterization of parts of speech, see Chapter 2 of Givón (2001); Chapter 7 of Lyons (1968), and Schachter and Shopen (2007).

3.4.1 Open Classes

Two major lexical classes are identified in Desano: noun and verb. These are characterized in relation to each other. Some nouns are derived from verb roots, and some verbs are derived from nouns. Adjectives and adverbs, which are open classes in many languages, are identified as closed lexical classes in Desano; ‘adjectival’ and ‘adverbial’ notions are expressed through nominal and verbal roots and bound morphology (and clitics).

Members of the closed classes are: adjectives, adverbs, personal pronouns, interrogatives, deictics, numerals, quantifiers, and interjections. In the following sections I characterize the members of the open classes: nouns and verbs. As mentioned, the notion of ‘word’ used in the discussion here is the grammatical word, not the phonological word.

3.4.1.1 Nouns

The prototypical members of this class are roots (or stems) that are heads of noun phrases, as in (3a), and are the arguments of a predicate – the subject and object of the clause as in (3b), or a locative argument, as in (3c). A noun in Desano may be recognized based on a number of formatives that are associated with nouns. Nouns might occur in its bare form (uninflected), as in (1) above.

(3) a. yaa wi'i

yaa **wii**

POSS house

'my house'

b. Guaho peɾu iɾiamõ

Guaho pedu idi-a-~bo

Guaho caxirí drink-PERF-3SG:F.IMPERF

'Guaho drank the caxirí.'

c. ĩgʉ̃ nʉ̃hkʉ̃ge ãɾĩmĩ

~igʉ **~dʉkʉ**-ge ~adi-~bi

3SG:M forest-LOC be-3SG:M.IMPERF

'He was in the forest.'

Nouns in Desano also inflected for number (4a), and noun classification, including classifier (4b) and gender (4c).[59] Nouns may also undergo regular compounding, i.e., a noun formed by two independent roots as illustrated in (4d).

(4) a. mãhã poaɾi

~baha poa-di

macaw hair-PL:IN

'macaw feathers'

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[59] See Chapter 4 for further discussion on nominal morphology.

b. yʉhkʉgʉ ta’abe ĩgʉ̃ɾẽ paabʉ

yʉkʉ-gʉ taa-be ~igʉ-de pa-a-bʉ

tree-CLS:trunk cut-CEL he-REF hit-PERF-NON3.PERF

‘(I) broke a piece of wood and hit him (the monkey).’

c. mãhĩgo bago imõ

~bahi-go ba-a-go i-~bo

child-3SG:F eat-PERF-3SG.F do-3SG:F.IMPERF

‘The girl ate.’

d. yʉhkʉbʉhka

yʉkʉ-bʉka

tree-fruit

‘fruit (of a tree)’

Nouns derived from verbs. Many nouns are derived from verb roots by applying nominal morphology, as illustrated in (5), where the nominalizer suffix *-di* is attached to the verb root to form a noun. Nominalization is discussed in Section 4.3.5, Chapter 4.

(5) gʉaɾe baɾi deyobea

gʉa-de **ba**-di deyo-be-a

1PL:INCL-REF eat-NOM appear-NEG-PERF

‘…there is not enough food for us.’

3.4.1.2 Verbs

The prototypical verb functions as the head of the predicate. Examples of Desano verbs as predicates of an intransitive and a transitive clause are given in (6) and (7), respectively.

(6) ĩgʉ̃ yuɾiamĩ

~igʉ **yudi**-a-~bi

3SG:M fall-PERF-3SG:M.IMPERF

‘He fell.’

(7) Kaɾu pĩɾũɾẽ weheapʉ

kaɾu ~pidu-de **wee**-a-pʉ

Carlos snake-REF:OBJ kill-PERF-3SG.M.PERF

‘Carlos killed the snake.’

Verbs are generally cross-referenced, with respect to the subject, for person, number, and gender. The grammatical categories associated with verbs are tense/aspect/modality (TAM), mood, and evidentiality. Verbs can be formed by a single root (simple), as illustrated in (6) and (7) above, or by verb root compounding as illustrated in examples (8) and (9).

(8) mãɾĩ weɾenĩɾã ia paɾe

~badi **wede-~adi**-~da i-a paɾe

1PL:EXCL tell-say-3PL:AN.PERF do-PERF then

‘Then, we are narrating…’

(9) taãĩdihaɾi eheomãhsũ inyũmã

ta-~ai-dii-a-di **eo-~basu** i-~yu-~ba cut-take-descend-PERF-PERF feed-tame do-EVID:QUOT/FOLK-3PL:AN.IMPERF

'(They) collected (the nests), and bred (the birds).'

Verbs derived from noun roots. Some verbs are derived from noun roots (by applying verbal morphology or functional derivation with no morphological marking), as shown in (10).

(10) imĩsõkãyãge ĩgʉ̃ dui wãĩkʉ gohanũgãdi

i-~biso-ka-ya-ge ~igʉ dui

DEM:PROX-squirrel-CLS:triangular-CLS:creek-LOC 3SG:M Luis

~wai-**kʉ** goa-~duga-di

name-VBLZ write-begin-PERF

'From squirrel creek, he, named Luis, began to write.'

3.4.1.3 Derived Categories: 'Adjectival' and 'Adverbial'

Desano does not have adjectives or adverbs as separate categories. Words coding adjectival expressions or adverbial expressions are derived from verbs and/or nouns, as described in the following subsections.

3.4.1.3.1 'Adjectival'

In the traditional typology of word classes, it has been claimed that while nouns and verbs are found in every language, not all languages have an adjective class (Dixon 1977, 1982). However, Dixon (2006) claims that a class of adjectives can be defined for all languages. In the current typological literature, it is often claimed that in South American languages, a class of adjectives is either lacking or it is a (very) small lexical class (cf. Campbell 2012b). Gildea (2012), for example, argues that languages of the Cariban family, in the Amazon, do not have a morphosyntactically distinct adjective class. In these languages, adjectival expressions (semantic adjectives) are derived from nouns and verbs.

To date, the prevailing view in the descriptions of Eastern Tukanoan languages (e.g., Gomez-Imbert 1982 for Tatuyo; Gomez-Imbert 1997 for Barasano; Ramirez 1997 for Tukano; Stenzel 2004 for Wanano) has been that there is no category of 'adjective', rather that these are qualities expressed by stative verbs and some nouns.

Most of the 'adjectival' notions in Desano are expressed by stative verbs and some nouns.[60] The present analysis is based on Schachter and Shopen's (2007) treatment of the topic. According to these authors, languages that lack an adjective class can be divided in two groups:[61]

(i) adjectival-noun languages, in which adjectival meanings are expressed primarily by nouns; and

(ii) adjectival-verb languages, in which adjectival meanings are expressed primarily by verbs.

Desano fits into group (ii), an adjective-verb language. In general, in Desano, adjectival expressions are derived from stative verbs (which I call descriptive verbs). As stated by Stenzel (2004:105), the evidence that adjectival expressions, in Wanano, are derived from verb roots is evidenced by the fact that these roots require a nominalizing morphology in order to derive nominal words (adjectivals). In Desano, this statement applies only if the noun being modified by the ‘adjectival expression’ is an inanimate noun, as in (11) and (12). When the noun being modified refers to an animate entity, the nominalizer suffix *-di* is not used. Instead, the noun class morphology for animates, is added directly to the descriptive verb root, as illustrated in (13) and (14).

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[60] That adjectives share properties with noun and verbs have been suggested as a characteristic of the Tukanoan language family (Barnes 1999:221; 2006:138).

[61] Schachter and Shopen (2007:16).

(11) yʉhkʉgʉ wʉaɾigʉ ãɾ̃ã
yʉkʉ-gʉ wʉa-di-gʉ ~adi-a
tree-CLS:trunk be.big-NOM:IN-CLS:trunk be-PERF
‘The tree is big.’

(12) yʉhkʉgʉ ãmẽɾ̃igʉgã ãɾ̃ã
yʉkʉ-gʉ ~abe-di-gʉ-~ga ~adi-a
tree-CLS:trunk be.short-NOM:IN-CLS:trunk-DIM be-PERF
‘The tree is (very) small.’

(13) ẽɾ̃ã dehko ãɾ̃ĩmĩ ẽɾ̃ã pagʉ wʉagʉ
~eda deko ~adi-~bi ~eda pa-gʉ wʉa-gʉ
3AN:PL half be-3SG:M.IMPERF 3PL:AN genitor-3SG:M be.big-3SG:M
‘Among them there was their big father.’

(14) ĩgʉ̃ yo’gʉ wãĩkʉdi ãɾ̃ĩmĩ ĩgʉ̃ yo’gʉ bʉgʉ
~igʉ yogʉ wãĩ-kʉ-di ~adi-~bi ~igʉ yogʉ bʉgʉ
3SG:M stutter name-VBLZ-PERF be-3SG:M.IMPERF 3SG:M stutter elder
‘He, the stutter, was called old stutter.’

Descriptive (stative) verbs do not need to be nominalized (through nominal morphology) in order to express function as an adjectival expression. These verbs roots can also receive verbal inflection and still have an adjectival meaning, as shown in Examples (15) - (17).

(15) mʉ̃'ʉ̃ pobeɾika
~bʉʉ pobe-bidi-ka
2SG be.fast-NEG-EVID:REAS
'You are not fast.'

(16) wãbʉ yãbʉ yʉ'ʉ ãɾĩyũmĩ
~wa-bʉ ~ya-bʉ yʉʉ
be.good-NON3.PERF see-NON3.PERF 1SG
~adi-~yu-~bi
say-EVID:QUOT/FOLK-3SG:M.IMPERF
'It was good, I saw it. He said.'

(17) mʉ̃'ã mãhsĩɾõ weɾebeoke
~bʉʉ-a ~basi-do wede-beo-ke
2SG-PL:AN know-NOM:ABSTR tell-be.quick-IMP
'Tell (us) quickly something known by you.'

3.4.1.3.2 'Adverbial'

Adverbial notions are expressed in several ways in Desano. Temporal adverbial expressions are expressed by nouns referring to time, for example *~kadu* 'yesterday', *dopa* 'today'. Temporal adverbial expressions derived from these time words can contain the nominalizer suffix *-do* and the suffix *-de*, which codes temporal adjuncts, as illustrated in (18). It can also take the diminutive suffix *-~ga*, to express intensity/proximity, as in (19) and (20). The suffix *-de* codes the derived adverbial as a temporal expression argument.

(18) ã dopaɾõɾẽ mʉ̃'ʉ̃ pãdeɾo paɾe

~a **dopa**-do-de ~bʉˀʉ ~pa-de-do paɾe

yes today-ADV-REF:TMP 2SG open-PERF-ADV then

'Yes, now you have opened one.'

(19) mãɾĩ yẽhkʉ̃sẽɾã peɾeɾã imã dopaɾogãɾẽ

~badi ~yekʉ-~se-~da pede-~da i-~ba

1PL grandfather-1PL:EXCL-PL:AN end-PL:AN do-3PL:AN

dopa-do-~ga-de

today-ADV-DIM-TMP

'Our grandparents are vanishing right now.'

(20) igo yãmĩgã wagokũmõ

igo ~gabi-~ga wa-go kudi-~bo

3SG:F night-DIM go-3SG:F walk-3SG:F.IMPERF

'She leaves tomorrow.'

Manner and quality adverbial expressions are generally derived from verb roots by the adverbializer suffix *-do*; however, they generally do not take nominal morphology, as shown in (21) and (22). The diminutive suffix *-~ga*, can occur in these constructions, and it expresses intensity, as illustrated in (23). Manner adverbial expressions do not take case markers.

(21) wãɾõ mõmẽʉ̃kã ãɾĩgʉ̃

~wa-do ~bobe-gʉ-ka ~adi-gʉ

be.good-ADV	work-3SG:M-EVID:reason	say-3SG:M

‘Saying he works well.’

(22) õ dahaɾo payogãɾipʉ dehkoyãɾĩ eheagʉ̃ yã

~o	**daha-do**	payo-~gadi-pʉ	deko-**~yadi**
DEIC:PROX	be.slow-ADV	fly-advance-3SG.M.PERF	half-almost
eha-~gʉ	~ya		
arrive-3SG:M	see		

‘Here, flying slowly, seeing (he) was arriving almost half of the way.’

(23) dia ãmẽɾõgã yuɾa nẽmõãdeɾo ãɾãbʉ

dia	~abe-do-~ga	yuda-~debo-a-de-do
river	be.small-ADV-DIM	raise-increase-PERF-PERF-NON3.IMPERF
~aɾi-a-bʉ		
be-PERF-NON3.PERF		

‘The water (level) went up a little bit.’

Another way that quality adverbial expressions are coded is through serial verb constructions, as illustrated in (24) and (25).

(24) mʉ̃’ʉ̃ɾeta bʉɾiyãduaɾimĩ

~bʉʉ-de-ta	bʉɾi-~ya-dua-di-~bi
2PL-REF-EMPH	be.hard-see-DES-PERF-3SG:M.IMPERF

‘He wanted very much to see you.’

(25) yʉ’ʉ yẽãɾĩka

yʉʉ	~ye-~adi-ka
1SG	be.bad-be-EVID:reason

'I am feeling unwell. (lit. I'm bad.)'

Other adverbial expressions are derived from nominal roots followed by the nominalizer suffix *-do*, and the 'manner' suffix *-pa*, as illustrated in (26). This example also shows a common adverbial expression formed by the particle *nẽ* 'nothing' followed by the noun *gora* 'pinpoint' and the temporal suffix *-de*, which occurs frequently in narratives in temporal expressions meaning 'in the beginning'.

(26) õpã nẽ gorare

~o-pa	~de	goda-de
DEIC:PROX-MANN	nothing	pinpoint-REF:TMP

'Thus, in the beginning… (lit. Like this, in the beginning…)'

3.4.2 Closed Classes

In Desano, the closed classes that can be identified are (a) personal pronouns and other pro-forms (reflexives and reciprocals), (b) demonstratives, (c) interrogatives, discussed in Chapter 4. Other members of the closed classes are: the negator *~de*, the discourse marker *baa*, the 'adverbial' conjuctions *pare* 'then' and *daha* 'again', and a small set of interjections.

The negator *~de* occurs as an unmarked object as in (27), or more commonly it can occur in adverbial expressions, as in (28).

(27) nẽ dʉariyũrã ĩgʉ̃rẽ

~de	dʉa-bidi-~yu-~da	~igʉ-de
nothing	keep-NEG-EVID:QUOT/FOLK-3PL.AN.PERF	3SG:M-REF:OBJ

'They didn't keep anything for him.'

(28) (…) nẽ õẽãɾipʉ

~de ~oe-a-bidi-pʉ

NEG be.tired-PERF-NEG-3SG.M.PERF

'(The tuiuiu bird flew) without tiring.'

The word *baa* occurs in discourse, at the end of the utterance, indicating that the statement said by the speaker implies mutual (or general) knowledge, as illustrated in (29).

(29) iɾisibuɾe yẽ'ẽmãɾãsã doutosã mãɾĩɾãmã baa

idi-sibu-de ~yeebʉ-~ɾa-~sa douto-~sa

DEM:PROX-time-REF so.and.so-PL:AN-ADD doctor-ADD

~baɾi-~aɾi-~ba baa

not.have-be-PL:AN mutual.knowledge

'At that time, doctor people didn't exist (here).'

There are two adverbial words that occur quite frequent in discourse. The words *paɾe* 'then' and *daha* 'again' are used in narrative as conjunctions to connect independent clauses. The adverbial conjunction *paɾe* can appear at the beginning or at the end of a sentence or between two clauses, as illustrated in (30).

(30) a. ãɾõge ãɾĩkã ãɾĩta ia yʉ'ʉ

~ado-ge ~adi-ka adi-ta

DEM:PROX-LOC be-EVID:reason be-EMPH

i-a yʉʉ

do-PERF 1SG

'I say we live here.'

b. gʉaya mã̆hkã̆pʉ eɾota duaka paɾe

gʉa=ya[62]	~baka-pʉ	edo-ta
1PL:EXCL=POSS	settlement-CONTR	DEIC:DIST-EMPH
dua-ka	pade	
stay-EVID:REASON	CONJ	

‘Then, our community is there.’

The adverbial conjunction *daha* is used in narratives functioning as marker of important events in a narrative. In (31), the speakers uses *daha* to indicate that the event that took place at the ‘tapir’s creek’ is relevant to the story.

(31) a. wehkuyage daha?

weku-ya-ge	daa
tapir-CLS:creek-LOC	again?

‘In the tapir’s creek again?’

b. wehkʉyageɾe daha

wekʉ-ya-ge-de	daa
tapir-CLS:creek-LOC-REF	again

‘Again, in the tapir’s creek.’

Finally, a small class of interjections and ideophones can be identified. The words in this class are distinct from the other classes in that they do not take any type of nominal morphology. Some examples are: *paa* “oh” (surprise), ahau “okay”, bee “oh” (admiration), agʉa “ouch”, ũhũ (cursing), ʉ̃mã “I don’t know”. Examples with interjections are illustrated in (32) and (33).

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[62] The iqual symbol ‘=’ indicates that the following morpheme is a clitic.

(32) pa yeta ãɾ̃kʉ̃mĩ

pa ye-ta ~adi-kʉ-~bi

INTERJ jaguar-EMPH be-DUB-3SG:M.IMPERF

‘Ah, it must be a jaguar.’

(33) ahau ãɾ̃ĩpʉ

aau ~adi-pʉ

INTERJ say-3SG.M.PERF

‘Okay, he said.’

3.5 Summary

In this chapter I have defined the notion of ‘word’ in Desano according to phonological and grammatical criteria. We saw that only two open classes of words can be identified in the language: nouns and verbs. Desano does not have adjectives nor adverbs. Adjectival and adverbial notions are derived from nominal and verbal roots. Other word classes derived from nominal and verbal roots are discussed in Chapter 4.

CHAPTER 4

NOMINAL MORPHOLOGY

4.1 Introduction

In this chapter, I discuss the structure of the noun and noun phrase in Desano. First, a summary of the structural characteristics of nouns is presented in section 4.2. The major types of nouns found in Desano (animate and inanimate) are described in section 4.3. Section 4.3 also describes other subcategories of these major two types and some processes of derivation. Then, the pronouns and other pro-forms are described in section 4.4, followed by a description of other lexical and grammatical morphemes in section 4.5. Finally, section 4.6 presents a description of the structure of noun phrases and types of modifiers. The chapter ends with a summary in section 4.7.

4.2 Structure of Noun Roots

The noun roots in Desano have the following characteristics:

i. they are bimoraic: /bii/ [biˀi] ‘rat’, /bui/ [buˀi] ‘agouti’;

ii. they are specified in the lexicon as nasal or oral: /~gapi/ [ŋã́ʰpĩ] ‘sweet potato’, /gapi/ [gaʰpi] ‘padú powder’; and

iii. they are lexically (underlyingly) specified for tone (each root requires at least one high tone): [mõã́] ‘salt’, [mmã́] ‘piraíba fish’.

Items in (i) and (ii) are also true for verbs. (iii) is true only for some verbs, since there are some verbal roots that are not specified for tone (see Chapter 2, Section 2.3.2.4). The great majority of the roots in Desano have a CVCV shape.

4.3 Types of Nouns

Nouns in Desano make a distinction between 'animate' and 'inanimate' entities.[63] Animate nouns are subdivided as human and non-human entities. Nouns with nonhuman referents are subdivided as 'individual', i.e., nouns that refer to one single entity (such as fish, monkey, snake); and 'collective' nouns, i.e., nouns that refer to a set of the same type of entity (such as stars, bees, mosquitoes). Singular animate nouns are either feminine or masculine. Plural animate nouns do not have a gender distinction. Inanimate nouns can be noncountable (mass nouns) or countable. Inanimate nouns take classifiers; these are suffixes that denote salient characteristics of the noun they are associated with. Miller listed more than 100 classifiers; most of them designate shape and physical attributes (Miller 1999:35-44). Figure 4.1 shows the hierarchy of nouns in Desano with its meajor features. It should be noted that the features in square brackets have positive and negative values to account for the classes of nouns found in the language. Under the feature [animate], the negative value refers to 'inanimate' nouns. The label 'inanimate' is kept in the chart to identify the node.

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[63] The 'animate/inanimate' distinction is found in other Easterm Tukanoan languages, for example Tatuyo (Gomez-Imbert 1982, 2007), Tukano (Ramirez, 1997:199) and Wanano (Stenzel 2004:119). This is the pattern in all Easterm Tukanoan languages (cf. Gomez-Imbert 1982, 1996, 2007; Barnes 1999, 2006).

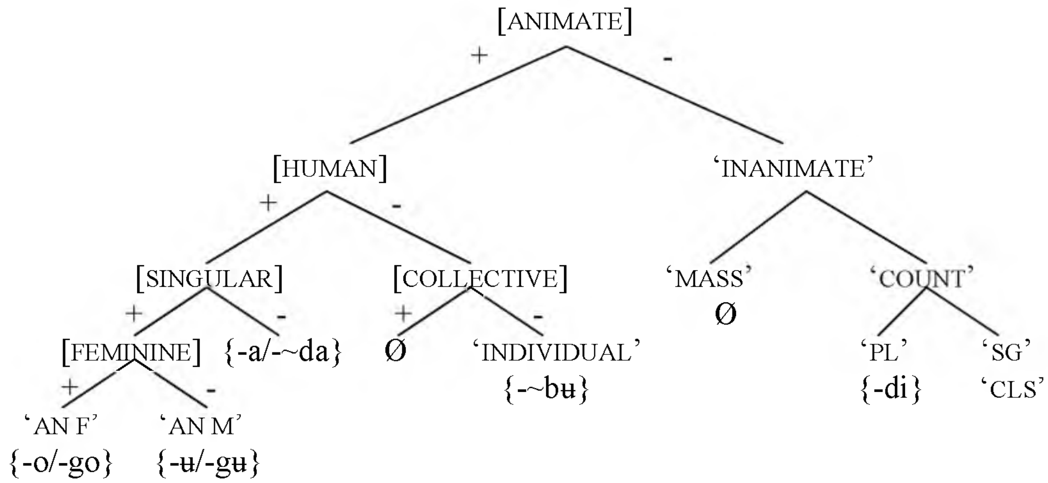
[ANIMATE]
+
-
[HUMAN]
+
-
'INANIMATE'
[SINGULAR]
+
-
[COLLECTIVE]
+
-
'MASS'
Ø
'COUNT'
[FEMININE]
+
-
{-a/-~da}
Ø
'INDIVIDUAL'
{-~bʉ}
'PL'
{-di}
'SG'
'CLS'
'AN F'
{-o/-go}
'AN M'
{-ʉ/-gʉ}

Figure 4.1 General class markers

4.3.1 Animate Nouns

Animate nouns have two subcategories: animate nouns with human referents, and nouns with nonhuman referents. These subcategories differ in their coding for gender and number. Nouns that refer to nonhumans have two subcategories: 'individual' and 'collective' nouns. Table 4.1 shows these subcategories of animate nouns.

Table 4.1 Subcategories of animate nouns

	CLASS		**NUMBER**	
	MASC	**FEM**	**SG**	**PL**
HUMAN	*-ʉ*	*-o*	*-gʉ* 'M'	
			-go 'F'	*-a/-~da*
NON-HUMAN	Individual		Ø	
	Collective		*-~bʉ*	

4.3.1.1 Nouns with human referents

Nouns with human referents are obligatorily marked for gender. The gender coding suffixes are *-ʉ/-gʉ* '3 SINGULAR MASCULINE' and *-o/-go* '3 SINGULAR FEMININE', which occur with nouns with human referents. These ending vowels can be analyzed as the result of fusion of the gender coding suffixes on the noun root. Thus, the nouns in (1) and (2) can be analyzed as being grammaticalized as inherently feminine (1) or inherently masculine (2).[64] These forms may have natural (inherent) gender, but it still looks very much like they bear the masculine or the feminine suffix, the final vowel.

(1)	INHERENTLY FEMININE		
	a.	yẽhk**õ**	'grandmother'
	b.	buɾ**o**	'old woman'
	c.	mẽ**õ**	'mom'
(2)	INHERENTLY MASCULINE		
	a.	yẽhk**ʉ̃**	'grandfather'
	b.	buɾ**ʉ**	'old man'
	c.	kʉ̃m**ʉ̃**	'faith healer'
	d.	ʉ̃m**ʉ̃**	'man'

However, there are some nouns that are masculine but end in vowels other than ***ʉ***, as illustrated in (3).

(3)	a.	kãmĩ	'younger brother'
	b.	wãĩ	'uncle'
	c.	yee	'shaman'

---

[64] This analysis of morpheme reduction and fusion follows that of Gomez-Imbert (1982:113) for Tatuyo and Stenzel (2004:129) for Wanano.

Some noun roots do not occur without the gender suffixes *-o/-go*, '3 SINGULAR FEMININE'; *-ʉ/-gʉ*, '3 SINGULAR MASCULINE', as in (4); or without number, *-a/-~da* 'PLURAL ANIMATE' as the examples in (5). It should be noticed that the gender markers in (4) also function to signal the singular of these nouns. An alternative analysis would be to consider '-g' the singular marker, and '-o/-ʉ' the feminine/masculine gender markers.

(4)	**ROOT**		**FEMININE**		**MASCULINE**	
	a. paa-	'progenitor'	pa**go**	'mother'	pa**gʉ**	'father'
	b. mãã-	'progeny	mã**gõ**	'daughter'	mã**gʉ̃**	'son'
	c. mãhĩ-	'child'	mãhĩ**go**	'girl'	mãhĩ**gʉ**	'boy'
	d. buu-	'elder'	bu**go**	'old woman'	bu**gʉ**	'old man'

(5)	**ROOT**		**PLURAL**	
	a. mãhĩ-	'child'	mãhĩ**ɾã**	'children'
	b. buu-	'elder'	mũ**ɾã**	'elders'

As shown in the examples above, animate nouns also bear marking for plural. It should be noted that the phoneme /d/ is represented by <ɾ> in the orthography. Plural nouns are marked with the plural suffix *-a* or *-ɾã* (/-~da/) as illustrated in (6). The plural morpheme /-a/ is a reduced form of /-~da/.[65]

(6)				
	a. yee	'shaman'	ye**a**	'shamans'
	b. ʉ̃mʉ̃	'man'	ʉ̃m**ã**	'men'
	c. kãmĩ	'young brother'	kãmĩ**ã**	'young brothers'

---

[65] According to Gomez-Imbert (1982:113) the plural suffixes /-a/ and /-~da/ are the same suffix. Stenzel (2004: 131) also treats them as the same in her analysis of Wanano. Thus, /-a/ is reduced from /-~da/.

Animate masculine nouns are marked for plural in this way. Most plural feminine nouns have this form of the plural followed by *nõmẽ* – the lexical root for ‘female’. This is illustrated in (7).

(7) mʉ̃ɾã ‘older men’ vs mʉ̃ɾã **nõmẽ** ‘older women’

Nouns referring to some kinship terms are also marked with *sãmã* ‘vagina’ followed by the plural suffix -*ɾã* /-~da/, as shown in (8). In (8b) the word *sãmã* has been reduced to *sã*.

(8) a. yẽhkʉ̃ ‘grandfather’ vs yẽhkʉ̃sãmãɾã ‘grandparents’

b. yẽhkõ ‘grandmother’ vs yẽhkõsã **nõmẽ** ‘grandmothers’

4.3.1.2 Nouns with nonhuman referents

As mentioned above, nouns with nonhuman referents can be subclassified as ‘individual’ and ‘collective’ nouns. Individual animate nouns refer to a single entity (for example ‘monkey’, ‘fish’, ‘deer’); whereas ‘collective’ nouns refer to a group of the same entity, usually beings that live and move together – these are usually insects, some animals, and other entities such as ‘stars’. Individual nouns with nonhuman referents can be further subclassified to distinguish nouns that refer to ‘higher level’ animates from those that refer to ‘lower level’ animates.[66] I describe each of these subsets in the following order: higher level individual animates; lower level individual animates; and collective animate.

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[66] The analysis distinguishing between ‘higher level individual’ animates and ‘lower level individual’ animates follows Stenzel’s (2004) analysis of Wanano.

4.3.1.2.1 Higher level individual animates

These nouns are similar to nouns with human referents in that they can be marked for gender in their singular form, where female is the marked feature, as shown in the examples in (9). Alternatively, these nouns could just be treated as exceptional members of the 'human' class. It may well be that cognitively, some of these are thought to have human attributes, be human: 'evil spirit' certainly so, 'jaguar' probably; 'dog' by metaphoric extension. Futhermore, because these nouns take the same endings as the human nouns, they can be considered to belong to that class.

		SINGULAR	**FEMININE SINGULAR**	**PLURAL**
(9)	a.	ye	ye-**go**	ye-**a**
		'jaguar'	jaguar-3SG:F	jaguar-PL.AN
			'female jaguar'	'jaguars'
	b.	diaye	diaye-**go**	diaye-**a**
		'dog'	dog-3SG:F	dog-PL.AN
			'female dog'	'dogs'
	c.	wãhtĩ	wãhtĩ-**gõ**	wãhtĩ-**a**
		'evil spirit'	evil.spirit-3SG:F	evil.spirit-PL.AN
			'female evil spirit'	'evil spirits'

It should be noticed that the bare unmarked singular form is inherently masculine. In general, Desano speakers talk about these animals and beings without making references to their gender. However, they point out that these nouns can be optionally signaled as female with the female gender marker *-go*. Another similarity that these nouns have with the nouns in the human animate category is that they also mark plural with *-a*. Like in the human animate nouns, the plural suffix also codes masculine gender. In order to express plural for females, the word *nõmẽ* ‘female’ follows the singular feminine noun, as illustrated in (10).

(10)	a.	yee-**go**	yee-**a nõmẽ**
		jaguar-3SG:F	jaguar-PL:AN female
		‘female jaguar’	‘female jaguars’
	b.	diaye-**go**	diaye-**a nõmẽ**
		dog-3SG:F	dog-PL:AN female
		‘female dog’	‘female dogs’

Not all nouns referring to animals are linguistically marked in a way similar to how human animate nouns are marked. Gomez-Imbert (1996:456) states that “some animals are closer to human beings than others, and this is reflected at the linguistic level.” The jaguar in the Desano myths, for example, is a deity that was created by the sun (Reichel-Dolmatoff 1971). For most of the Tukanoan groups, there is also a mythical association between the jaguar and the shaman (Jackson 1983: 197). Dogs are pets and hunting companions, and considered an important animal for the Desano people.[67]

4.3.1.2.2 Lower level individual animates

The members of the lower level individual animates category are most of the non-human animates (i.e. animals). Members of this category are not overtly marked for gender, i.e., they do not take gender markers. The plural form is marked with the suffix *-a*

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[67] Here I follow the analysis of Stenzel (2004) for Wanano. She notes that ‘Dogs … play an extremely important role in Wanano daily life both as pets and as hunting companions, making them the most important animal in Wanano communities and one with which humans develop a closer relationship’ (p. 134).

'plural animate', in common with human animates. Examples of the members of this class are given in (11).

		SINGULAR		**PLURAL**	
(11)	a.	pãmũ	'armadillo'	pãmũ**ã**	'armadillos'
	b.	yahi	'heron'	yahi**a**	'herons'
	c.	pĩɾũ	'snake'	pĩɾũ**ã**	'snakes'
	d.	keɾo	'firefly'	keɾo**a**	'fireflies'
	e.	gahki	'monkey'	gahki**a**	'monkeys'
	f.	bu'i	'agouti'	bu'i**a**	'agoutis'

However, when the nouns in (11) occur as Subject of a clause they trigger verb agreement (with 'masculine' being the default value), as shown in (12) and (13) below. In (12a) and (13a), the singular nouns *gahki* 'monkey' and *bu'i* 'agouti', respectively, require singular verbal agreement. In (12b) and (13b), these nouns are plural and require the plural verbal agreement.

(12) a. gahki mʉ̃htãgʉ̃gã ãɾãmĩ

gaki	~bʉta-**~gʉ**-~ga	~adi-a-**~bi**
monkey	be.small-**3SG:M**-DIM	be-PERF-**3SG:M.IMPERF**

'The monkey was very small.'

b. gahkia mʉ̃htãɾãgã ãɾĩɾã

gaki-**a**	~bʉta-~**da**-~ga	~adi-~**da**
monkey-**PL:AN**	be.small-**PL:AN**-DIM	be-**PL:AN.PERF**

'The monkeys are very small.'

(13) a. bu’i duɾiamĩ

bui dudi-a-~**bi**

agouti flee-PERF-**3SG:M.IMPERF**

‘The agouti fled.’

b. bu’ia duɾiamã

bu’i-**a** dudi-a-~**ba**

agouti-**PL:AN** flee-PERF-**3PL:AN.IMPERF**

‘The agoutis fled.’

It should also be noted that although these nouns are overtly unmarked for gender (genderless), they require verbal agreement in the third person masculine. This show that ‘masculine’ is the default gender for genderless nouns. These examples support Kaye’s (1971) claim that “masculine is the unmarked member of the gender category” (p. 92).

4.3.1.2.3 Collective animates

The members of this category refer to animate nouns that are collectives. They refer to animals that are typically encountered in a group (or seen as a group). These nouns are inherently plural, i.e., plural is the unmarked category. To refer to a single member of the collective, the singularizing suffix *-mʉ̃* /-~bʉ/ is used to individuate and refer to it, as illustrated in (14). It should be noticed that (14e) refers to a celestial entity and is a member of the animate class because its status as an animate being in the Desano mythology.

(14) a. mẽgã ‘maniuaras’ mẽgã**mʉ̃** ‘a maniuara’[68]
maniuaras-IND

b. ĩã ‘worms’ ĩã**mʉ̃** ‘a worm’
worms-IND

c. mõmẽ ‘bees’ nõmẽ**mʉ̃** ‘a bee’
bees-IND

d. uhti ‘wasps’ uhti**mʉ̃** ‘a wasp’
wasps-IND

e. nẽhkã ‘stars’ nẽhkã**mʉ̃** ‘a star’
stars-IND

In her analysis of Wanano, Stenzel (2004:138) suggests that animate nouns can be represented in a hierarchy according to the ways they are coded linguistically for gender and number. The hierarchy of animate nouns in Desano is shown on Table 4.2. Human animate nouns are higher in the hierarchy because they are coded for the largest number of features (gender and number), followed by higher level individual animates, which are optionally marked for feminine when singular (singular and plural forms are inherently masculine). The penultimate category in the hierarchy is the lower-level individual animates, which are not overtly marked for gender; singular is expressed by the bare root. The last (and lowest) category in the hierarchy is the collective animate nouns, which do not mark gender and whose roots are inherently plural.

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[68] ‘Maniuara’ is a type of edible ant.

Table 4.2 Hierarchy of animates

	HUMANS >	**HIGHER-LEVEL IND >**	**LOWER-LEVEL IND >**	**COLLECTIVES**
GENDER	obligatory	optionally marked for ‘feminine’	not possible	
SG	*-go/-gʉ*		bare root	*-~bʉ*
PL	*-a/-~da*			(inherently plural)

The present analysis is based on agreement classes as proposed in Corbertt (2007), in which noun classes can be distinguished syntactically according to the agreement they take. However, while Corbett treats noun classes and classifiers as different phenomena, I treat them as part of the same system of nominal classification – this is also the approach adopted by Gomez-Imbert (2007b) for the analysis of Tatuyo, also an Eastern Tukanoan language.[69]

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[69] My analysis follows Seifart’s (2005) approach to analyzing the nominal system for Miranã (Witotoan), later adopted by Gomez-Imbert (2007b) for the analysis of Tatuyo. Current studies in Tukanoan languages (and other Amazonian languages as well) also show that it might be the case that there is only one system of nominal classification. Stenzel (2004:125) describes Wanano as having both noun class morphology and noun classifiers within a single system.

4.3.2 Inanimate Nouns

Inanimate nouns are subdivided into countable (count) and non-countable (mass) nouns. Count nouns are further subdivided according to the way they mark number. Table 4.3 below shows the subcategories for inanimate nouns.

4.3.2.1 Mass Nouns

Mass nouns, or noncount nouns, are not marked for gender or number. The bare root of these nouns signals an entity that is not countable -- referring to mass substances such as liquid, powder, collection of units (i.e., vegetal species). Mass nouns differ from count nouns in that they are not morphologically marked for plural, as illustrated in (15).

(15) a. dehko ‘water’
b. mõã ‘salt’
c. yeba ‘ground’
d. poga ‘manioc flour’

One could speculate whether the final vowel *-o* in (15a) and *-a* in (15b-d) are gender marker and plural markers, respectively. The sentences in (16) show that that is not the case. These mass nouns do not require the verb to agree neither for masculine/feminine gender nor for singular/plural number, as shown in (16a) for *dehko* ‘water’ and (16b) for *poga* ‘manioc flour’. They both require nonthird person verbal agreement (see Section 5.5.7).

(16) a. dehko ahsiɾo ia

deko	asi-**do**	i-a
water	be.hot-**NON3.IMPERF**	do-PERF

‘The water is hot.’

b. poga weawadeɾo ãɾãbʉ

poga wea-wa-de-**do** ~adi-a-bʉ

manioc.flour wet-go-PERF-**NON3.IMPERF** be-PERF-**NON3.PERF**

‘The manioc flour was wet.’

There are many mass nouns that are derived from verb roots by adding the nominalizing suffix *-ɾi* /-di/.[70] Some of them are shown in (17).

(17) a. ba-**ɾi** ‘food’

eat-NOM:IN

b. ohte-**ɾi** ‘plantation’

plant-NOM:IN

c. bayi-**ɾi** ‘blessing’

bless-NOM:IN

4.3.2.2 Count Nouns

Inaninate count nouns can be divided according to how they inflect for number. Although most inanimate count nouns follow a regular pattern of inflecting for number, some are irregular. For example, some unsuffixed noun roots are inherently plural and others are inherently singular (or have general reference). Inanimate count nouns that are inherently singular are pluralized with the suffix *-ɾi* /-di/. Inherently plural nouns do not take the pluralizer suffix. Furthermore, count nouns that are inherently plural are singularized (or individualized) by means of specific class marker suffixes (classifiers) which are attached to the root.[71] Table 4.3 summarizes the characteristics of unsuffixed roots and the way they inflect for number.

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[70] In some Eastern Tukanoan languages, such as Wanano (cf. Stenzel 2004), this suffix generally occurs to derive animate nouns. In Desano, *-ɾi* /-di/ seems to function like it does in Tukano (cf. Ramirez 1997), more for deriving inanimates.

Table 4.3 Unsuffixed inanimate noun roots

Inanimate Nouns	**unsuffixed root**			**take plural suffix *-ri***	**take classifier (sg form)**
	inherently plural	**inherently singular**	**generic reference**		
gahsi ‘canoe’	✓				✓
weha ‘paddle’	✓				✓
yãhpĩ ‘sweet potato’		✓		✓	
wehka ‘skewer’		✓		✓	
oho ‘banana’			✓	✓	✓
mĩhĩ ‘açaí berry’			✓	✓	✓

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[71] Typologically, individualization is one of the main functions of nominal classification (cf. Craig 1992: 295; Croft 1994: 162).

It should be noted that, the inanimate nouns can be subgrouped in three subsets according to the unsuffixed noun roots. I discuss the characteristics of these subsets in the following sections.

4.3.2.2.1 Inherently plural count nouns

I treat the inherently plural forms as ‘irregular’ plurals. These nouns do not form a large group, when compared to the nouns that are pluralized with the regular plural suffix *-ɾi* /-di/.

Borrowed inanimate nouns form their plural with the regular plural suffix *-ɾi* /-di/, as illustrated in (18).

(18)	a.	sabadu	‘Saturday’	→	sabadu-**ri**	‘Saturdays’
	b.	proyetu	‘project’	→	proyetu-**ri**	‘projects’

As illustrated in (19a) below, the unsuffixed noun *gahsi* codes plural, whereas (19b), the specific class marker *-ɾu* /-du/ ‘round/oval/oblong’ has a singularizing function, individualizing the noun and making it as a singular noun.

(19) a. gahsi eheayoɾo

gasi ea-yo-do

canoe arrive-EVID:HSAY-NON3.PERF

‘The canoes arrived.’

b. gahsiɾu eheayoɾo

gasi-**du** ea-yo-do

canoe-CLS:round/oval/oblong arrive-EVID:HSAY-NON3.PERF

‘The canoe arrived.’

4.3.2.2.2 Inherently singular count nouns

Inherently singular nouns are much more common and they take the regular plural suffix *-ri* /-di/. Some examples are given in (20).

(20) a. wi'i /wii/ 'house' wi'i-**ri** /wii-di/ 'houses'

b. wahka /waka/ 'skewer' wahka-**ri** /waka-di/ 'skewers'

c. yãhpĩ /~yapi/ 'sweet potato' yãhpĩ-**rĩ** /~yapi-di/ 'sweet potatoes'

Many inanimate noun roots denoting body parts have the suffix *-ro* /-do/ in their singular form, as in the examples in (21). These roots are pluralized with the plural suffix *-ri*, in accordance with the plural for inanimate nouns, as shown in (21). The suffix *-ro*, attaching to nouns for body parts is also found in Tukano (Ramirez 1997) and Wanano (Stenzel 2004) and is analyzed, in those languages, as a 'partitive' suffix, which derives a part from a whole. However, for Desano, I analyze *-ro* as a classifier coding 'body parts', as illustrated in the examples in (21). The same suffix has been described by Miller (1999:42) as a classifier for 'certain body appendages'.

(21) a. gãmĩ-**rõ** /~gabi-do/ gãmĩ-**rĩ** /~gabi-di/

'ear-CLS:body.part' 'ears'

b. dihsi-**ro** /disi-do/ dihsi-**ri** /disi-di/

'mouth- CLS:body.part' 'mouths'

c. kui-**ro** /kui-do/ kui-**ri** /kui-di/

'eye- CLS:body.part' 'eyes'

d. ãhpĩ-**rõ** /~api-do/ ãhpĩ-**rĩ** /~api-di/

'nipple-CLS:body.part' 'nipples'

e. pĩgõ-**ɾõ** /~pigo-do/ pĩgõ-**ɾĩ** /~pigo-di/

‘tail- CLS:body.part’ ‘tails’

It should be noted that the suffix *-ɾo* is attached to inanimate nouns and functions as a ‘singularizer’, two characteristics of specific class markers (classifiers). Thus, the term ‘CLASSIFIER: body part’ is used for the morpheme *-ɾo* that occurs on body parts nouns in Desano. The term PARTITIVE has a more generally accepted meaning for a very different function (it refers to partially but not wholly affected nouns, for example as a case affix for not fully affected objects of transitive verbs).

It is important to notice that not all inanimate nouns denoting body parts are singularized by the specific class marker *-ɾo*. The body parts listed in (22), for example, do not take *-ɾo*. Instead, they are singularized by specific class markers coding ‘shape’, which are affixed to the noun root.

(22) a. dihpu-**ɾu** /dipu-du/ ‘head’

head-CLS:round/oval/oblong

b. ĩgĩ-**ɾũ** /~igi-du/ ‘nose’

nose-CLS:round/oval/oblong

c. pʉɾʉ-**pʉ** /pʉdʉ-pʉ/ ‘back’

back-CLS:body

d. wʉ̃yʉ̃-**gʉ** /~wʉjʉ-gʉ/ ‘neck’

neck-CLS:cylindrical

Comparing the examples in (21) with the examples in (22), we notice that some nouns referring to body parts can take different classifiers for different circumstances (or contexts). I hypothesize that body part nouns in (22) might just be the ones where specific noun class markers coding ‘shape’ overshadowed the *-ro* ‘body part’ one, due to shape saliency. Use of shape classifiers is generally used with nouns which have a ‘salient shape’. This is the case with exceptional animate nouns that receive shape classifiers, such as *bugu-bu* ‘anteater-CLS:concave’.

Some nouns referring to body parts can also have other specific class marked (usually coding ‘shape’) suffixed to them. For example, there is a local bird called *pĩgõsẽ* (from *pĩgõ* ‘tail’ and *-se* ‘CLS:Y.shape’) whose main characteristic is its ‘Y shape’ tail (some speakers refers to this bird’s tail as ‘scissors tail’).

4.3.2.2.3 Unsuffixed roots with generic reference

Unsuffixed inanimate roots can also have generic reference, as in (23a). These nouns can be individualized (or singularized) by the specific class marker they may take, as in (23b-e).

(23) a. /~bii/ [mĩ^{h}ĩ] <mĩhĩ> ‘açaí fruit’ (generic)

b. /~bii-**du**/ [mĩ^{h}ĩɾũ] <mĩhĩrũ> ‘an açaí fruit’
açaí.fruit-CLS:round/oval/oblong

c. /~bii-~**to**/ [mĩ^{h}ĩtõ] <mĩhĩtõ> ‘a bunch of açaí fruit’
açaí.fruit-CLS:bunch

d. /~bii-~**yu**/ [mĩ^{h}ĩɲũ] <mĩhĩñũ> ‘açaí fruit tree’
açaí.fruit-CLS:palm.of

e. /~bii-**~du**/ [mĩ^{h}ĩnũ] <mĩhĩnũ> ‘açaí fruit season’
açaí.fruit-CLS:day

The specific class markers (classifiers) in Desano can be divided into three subsets according to their shape and function (lexical versus grammatical):[72]

i. CV suffixes that are attached to different types of noun roots.

ii. CV suffixes that can be analyzed as reductions of full noun roots.

iii. CV(C)V noun roots that can generally stand as free morphemes.

The list below gives a sample of inanimate specific class markers. This is not an exhaustive list of all classifiers found in Desano. It shows the most commonly recurring class markers in the corpus.

4.3.2.2.4 A sample of specific noun markers

/-**gʉ**/ <*gʉ*> *cylindrical/trunklike*. This specific noun marker is used to classify most trees. It is used to refer to living trees (i.e., trees that are still standing), as in (24a-b).[73] This classifier is generally used for wooden objects with cylindrical shape. Other nouns that this classifier appears with are those designating things that stand vertically (post, fence), including the noun for statue, as in (24d). This is also the classifier used for 'neck', illustrated in (24e), which could be explained by a metonymic relation as it is in vertical position as a trunk.

(24) a. /yʉkʉ-**gʉ**/ [yʉ^{h}kʉgʉ] <yʉhkʉgʉ> 'a tree'

trunk-CLS:cylindrical/trunklike

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[72] This analysis is based on Stenzel's (2004) and Gomez-Imbert's (2007b) analyses of the classifier systems of Wanano and Tatuyo, respectively.

[73] According to one of my main consultants, if a tree is fallen on the ground (dead), one refers to it as *yʉhkʉ* 'trunk'. Stenzel (p.c.) notes that, in Wanano, the 'vertical' position more than the actual shape (or maybe the combination) is really the salient feature of nouns marked with -gʉ.

b. /wʉa-di-**gʉ**/ [wʉaɾigʉ] <wʉaɾigʉ> ‘a big tree’
be.big-NOM:IN-CLS:cylindrical/trunklike

c. /pea-**gʉ**/ [peagʉ] <peagʉ> ‘rifle’
log-CLS:cylindrical/trunklike

d. /wea-di-**gʉ**/ [weadigʉ] <weadigʉ> ‘statue’
clay-CLS:meat-CLS:cylindrical

e. /~wʉyʉ-**gʉ**/ [wʉ̃ɲʉ̃gʉ] <wʉ̃yʉ̃gʉ> ‘neck’
neck-CLS:cylindrical/trunklike

/**-du/** <***ru***> *round/oval/oblong*. This specific class marker is used with concrete nouns designating objects that have round/oval/oblong shapes. There are many different entities that are classified with this class marker: vessels (canoe, baskets, and gourds); rounded/oval fruits (pineapple, buriti fruit [*Mauritia flexuosa*], açaí fruit, etc.) and their seeds; it is also the class marker used to classify other items such as ‘eggs’, ‘lake’, ‘sand’, ‘(round) fruits’. Examples of nouns classified by *-ɾu* is shown in (25).

(25) a. /gasi-**du**/ [gaʰsiɾu] <gahsiɾu> ‘a canoe’
canoe-CLS:round/oval/oblong

b. /weku-**du**/ [weʰkuɾu] <wehkuɾu> ‘a balaio basket’[74]
balaio.basket- CLS:round/oval/oblong

c. /~seɾa-**du**/ [sẽ̆ɾã̆ɾũ] <sẽ̆ɾã̆ɾũ> ‘a pineapple’
pineapple- CLS:round/oval/oblong

d. /~de-**du**/ [nẽ̆ẽ̆ɾũ] <yẽ̆ɾũ> ‘a buriti fruit’
buriti.fruit- CLS:oval/oblong

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[74] A ‘balaio’ basket is a specific type of basket used to carry manioc. Other general baskets are classified with *-bu* ‘concave/convex’.

e. /dita-**du**/ [diʰtaɾu] <dihtaɾu> ‘a lake’
lake- CLS:round/oval/oblong

f. /diu-**du**/ [diuɾu] <diuɾu> ‘an egg’
egg- CLS:round/oval/oblong

/-**bu**/ <***bu***> *concave/convex*. This specific class marker is used with concrete entities denoting concave/convex and wavy shapes. These include some natural entities such as rapids and animals with some shape saliency such as anteater, mutum bird, jacamim bird. Although class markers are generally used for inanimate nouns, animals which have a salient shape usually take a shape classifier.[75] Another noun in this class is ‘basket’, except for the ‘balaio’ basket which is classified with the class marker *-ɾu* ‘oval/oblong’. Examples of nouns classified with *-bu* are shown in (26).

(26) a. /~uta-**bu**/ [ũʰtãmũ] <ũhtãmũ> ‘a rapid’
stone-CLS:concave/convex

b. /pui-**bu**/ [puibu] <puibu> ‘a basket’
basket-CLS:concave/convex

c. /kada-**bu**/ [kaɾabu] <kaɾabu> ‘a mutum bird’
mutum.bird-CLS:concave/convex

d. /~mo-di-**bu**/ [mõʰõdibu] <mõhõdibu> ‘an anteater’
hand-meat-CLS:concave/convex

Besides the shape class markers presented above, there are also other types of class markers that describe specific characteristics or configurations of the nouns they are attached to. These are the following.

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[75] In this aspect, Desano is similar to Kubeo (also an Eastern Tukanoan language) and Arawakan languages in the region in which animate nouns receive a classifier.

/-~yu/ *<**yu**> palm tree*. This specific class marker is used to designate trees that have palm-like leaves. The class marker is attached to the noun root designating the fruit that grows on the palm tree in order to make the noun corresponding to the tree itself. This is shown in (27).

(27) a. /~de-~**yu**/ [nẽẽɲũ] <nẽyũ> 'buriti palm tree'
buriti.fruit-CLS:palm.tree

b. /oo-~**yu**/ [oʰoɲũ] <ohoyũ> 'banana palm tree'
anana-CLS:palm.tree

c. i-~**yu**/ [mĩʰĩɲũ] <mĩhĩyũ> 'açaí fruit palm tree'
çaí.fruit-CLS:palm.tree

/-~to/ *<**tõ**> palm*. This specific class marker is used with all noun roots for kinds of fruits that grow on palm trees. It is also used with the noun for 'hand' (it should be noticed that all the examples in 28 have in common the 'hand-like' shape). Examples in (28) show the use of this class marker.

(28) a. /oo-~**to**/ [oʰotõ] <ohotõ> 'palm of banana'
banana-CLS:palm

b. /~bii-~**to**/ [mĩʰĩtõ] <mĩhĩtõ> 'palm of açaí fruit'
açaí.fruit-CLS:palm

c. /~boo-~**to**/ [mõʰõtõ] <mõhõtõ> 'a hand'
hand-CLS:palm

/-da/ <**da**> *thread.* This specific class marker is used with nouns that refer to rope-like objects (hair, fishing line, or other fibrous material). It is also used with the noun root ‘tail’ to derive the noun ‘rainbow’. Examples of nouns with this class marker are shown in (29).

(29) a. /poa-**da**-di/ [poadaɾi] <poadaɾi> ‘hairs’
hair-CLS:thread-PL.IN

b. /~pigo-**da**/ [pĩŋʉ̃da] <pĩgõda> ‘a rainbow’
tail-CLS:thread

/-~**dʉ**/ <***dʉ***> *day/season*. This specific class marker is used with nouns to refer to time (day or season). In (30a), for example, the expression ‘a good day’ is derived from a nominalized verbal root *~waa* ‘be good’ and the noun classifier for day *-~dʉ*. In (30b), the noun root *~ʉɾi* ‘pupunha fruit’ is used to derive the noun for ‘pupunha season’.

(30) a. /~waa-di-~**dʉ**/ [wãɾĩnʉ̃] <wãɾĩnʉ̃> ‘a good day’
be.good-NOM:IN-CLS:day/season

b. /~ʉdi-~**dʉ**/ [ʉ̃ɾĩnʉ̃] <ʉ̃ɾĩnʉ̃> ‘season of pupunha fruit’
pupunha.fruit-CLS:day/season

/-**tode**/ <***tore***> *hollow*. This specific class marker is used with nouns that have a hollow configuration. Some examples are given in (31).

(31) a. /pa-**tode**/ [paatoɾe] <patoɾe> ‘belly’
belly-CLS:hollow

b. /yʉkʉ-**tode**/ [yʉʰkʉtoɾe] <yʉhkʉtoɾe> ‘hollow tree’[76]
trunk-CLS:hollow

/-~**ye**/ <***yẽ***> *tangled*. This specific class marker is used with nouns denoting things that are ‘tangled’, when referring to concrete nouns, as in (32a); it can also refer to abstract nouns, referring to an 'amount of things'. In (32b), for example, the classifier -~*ye* is used with the demonstrative to derive 'this (story)' at the end of a narrative containing several plots.

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[76] *yuhkʉtore* refers to a dead tree, i.e., a tree fallen on the ground. To refer to a hollow tree that is still standing, *yuhkʉgʉtore* is used.

(32) a. /~bʉdʉ-~**ye**/ [mʉ̃ɾʉ̃ɲẽ] <mʉ̃ɾʉ̃yẽ> 'tobacco'
tobacco-CLS:tangled
b. /i-**~ye**/ [iɲẽ] <iyẽ> '(all of) this'
DEM:PROX-CLS:tangled

The following noun class markers can be analyzed as phonologically reduced forms from full noun roots. They are not grammaticalized classifiers, as they can occur both as root morphemes and as (classifier) suffixes.

/-**ya**/ <*ya*> *creek*. This specific class marker is a reduced form of the noun *yaa* 'creek'. As noun, *ya* /ya/ is realized as [yaa], with a two mora structure which is reduced to one mora when used as a class marker, being realized as /-ya/.[77] The status of *yaa* as a noun can be seen in example (33a), in which it occurs as a root noun to which other suffixes are attached. As a class marker, -*ya* is used with noun roots to derive creek names, as illustrated in (33b-c). This class marker can also be attached to nominalized descriptive verbal roots, as shown in (33d).

(33) a. /**ya**-ge/ [yage] <yage> 'in the creek'
creek-LOC
b. /~diba-**ya**/ [nĩmãɲã] <nĩmãyã> 'poison creek'
poison-CLS:creek

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[77] See Section 2.3.1.2 on syllable shape and quantity, in Chapter 2.

c. /wekʉ-**ya**/ [weʰkʉya] <wehkʉya> ‘tapir creek’

tapir-CLS:creek

d. /gʉya-di-**ya**/ [gʉyaɾiya] <gʉyaɾiya> ‘dangerous creek’

be.dangerous-NOM:IN-CLS:creek

/-**kʉ**/ <***kʉ***> *tree*. This specific class marker is a reduced form of the full noun root *yʉhkʉ* ‘tree’, from which the first syllable is deleted, as shown in (34a). This class marker seems to be in the process of being grammaticalized. Instances in which the full noun root is used are also common, as in (34b).

(34) a. /~bʉdʉ-**kʉ**/ [mʉ̃ɾʉ̃kʉ] <mʉ̃ɾʉ̃kʉ> ‘a tobacco plant’

tobacco-CLS:tree

b. /~bʉdʉ-**yʉkʉ**/ [mʉ̃ɾʉ̃yʉʰkʉ] <mʉ̃ɾʉ̃yʉhkʉ> ‘a tobacco plant’

tobacco- CLS:tree

/-**wi**/ <***wi***> *house*. This specific class marker is a reduced form of the full noun root *wi’i* ‘house’. Although this reduced form is used with some noun roots, as in (35a), the full noun root also appears frequently attached to other nouns creating a compound, as in (35b).

(35) a. /baya-**wi**/ [bayawi] <bayawi> ‘a house of dance’

dance-CLS:house

b. /abe-**wii**/ [abewiˀi] <abewi’i> ‘house of the sun’

sun-house

4.3.3 Compound Nouns

Compounding is a productive way to form new words. Compounds can be formed from two noun roots as shown in the examples in (36). It should be noticed that the semantic head of the compounds is the leftmost root.

(36) a. /~saya-di-bedo/ [sãɲãɾibeɾo] <sãyãɾibeɾo> ‘a ring’
dress-NOM:IN-CLS:circle

b. /~baa-poa/ [mãʰãpoa] <mãhãpoa> ‘monkey’s hair’
monkey-hair

c. /~yapi-pui/ [ɲãʰpĩ́puí] <yãhpĩpui> ‘a sweet potato basket’
sweet.potato-basket

d. /abe-wii/ [abéwiˀí] <abewi’i> ‘the sun’s house’
sun-house

4.3.4 Class Markers and the Grammaticalization Continuum

The specific class markers (classifiers) fall in a continuum somewhere between lexical items and grammatical morphemes.[78] This continuum between lexical and grammatical for classifiers was proposed by Grinevald (2002). This grammaticalization continuum shows that some lexical items (full nouns) can go through a process of becoming full grammatical items (noun-class suffixes). Table 4.4 gives a sample of nouns and noun-class markers according to the grammaticalization continuum.

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[78] This analysis is consistent with Stenzel’s (2004) analysis of Wanano and Gomez-Imbert’s (2007b) analysis of Tatuyo.

Table 4.4 Grammaticalization continuum of class markers

LEXICAL → GRAMMATICAL

ROOTS			REDUCED ROOTS			SUFFIXES	
/yʉkʉ/	[yʉ^{h}kʉ]	*tree*	/-kʉ/	[-kʉ]	*tree*	/-gʉ/ [-gʉ]	CLS:cylindrical
/wii/	[wiˀi]	*house*	/-wi/	[-wi]	*creek*	/-~to/ [-tõ]	CLS:palm
/~ya/	[yã̃ã]	*creek*	/-ya/	[-ya]	*house*	/-du/ [-du]	CLS:oval/oblong
						/-~dʉ/ [-nʉ̃]	CLS:day/season
						/-bu/ [-bu]	CLS:concave/convex

4.3.5 Derived Nouns

Verbal roots can be nominalized when the nominalizing suffix for inanimate nouns, *-ɾi* /-di/ for general inanimate nouns and *-ɾo* /-do/ for (inanimate) abstract nouns, are attached to them. This seems to be a productive process of derivation. Examples in (37) illustrate nouns derived with the nominalizer *-ɾi* /-di/. Nouns derived with the nominalizer *-ɾo* /-do/ are shown in (38). Discussions of derived animate and inanimate nouns are presented in the following subsections.

(37) a. /ba-**di**/ [baɾi] <baɾi> 'food'
eat-NOM:IN

b. /wede-**di**/ [weɾeɾi] <weɾeɾi> 'language'
tell-NOM:IN

c. /bue-**di**/ [bueɾi] <bueɾi> ‘study’
study-NOM:IN

d. /bayi-**di**/ [bayiɾi] <bayiɾi> ‘blessing’
bless-NOM:IN

(38) a. /~baa-do/ [mãʰãɾõ] <mãhãɾõ> ‘enough’
many-NOM:ABSTR

b. /pede-do-de/ [peɾeɾoɾe] <peɾeɾoɾe> ‘at/in/on the end’
end-NOM:ABSTR-REF

c. /~wa-do/ [wãɾõ] <wãɾõ> ‘good’
be.good-NOM:ABSTR

d. /pepi-do/ [pepiɾo] <pepiɾo> ‘thought/feeling’
think-NOM:ABSTR

4.3.5.1 Derived Animate Nouns

Table 4.5 summarizes the process of nominalization of verb roots resulting in animate nouns.

Table 4.5 Nominalization resulting in animate nouns

	Noun classification morphology
Verb Root +	General class nouns (for animates) **-gʉ/-go/-~da** (Masculine/Feminine/Plural)

Animate nouns derived from verbal roots do not require the nominalizer morphemes /-di/ ‘inanimate concrete’ nor /-do/ inanimate abstract’ to be attached to the verb root. Verb roots suffix general class morphology for animate nouns directly and these suffixes reveal that the form has been nominalized.

This is illustrated in (39) where the animate nouns are derived from the verb *bue* ‘to study’. Example in (39a) gives the masculine form; the feminine form is given in (39b), and the plural form is given in (39c).

(39) a. /bue-**gʉ**/ [buegʉ] <buegʉ> ‘male student’
study-3SG:M

b. /bue-**go**/ [buego] <buego> ‘female student’
study-3SG:F

c. /bue-~**da**/ [bueɾã] <bueɾã> ‘students’
study-PL:AN

Examples in (40) show additional animate nouns derived from verbal roots.

(40) a. /guya-**gʉ**/ [guyagʉ] <guyagʉ> ‘dangerous male’
be.dangerous-3SG:M

b. /guya-**go**/ [guyago] <guyago> ‘dangerous female’
be.dangerous-3SG:F

c. /guya-~**da**/ [guyaɾã] <guyaɾã> ‘dangerous ones’
be.dangerous-PL:AN

d. /kede wede-**gʉ**/ [keɾe weɾegʉ] <keɾe weɾegʉ> ‘story teller (male)’
story tell-3SG:M

e. /kede wede-**go**/ [keɾe weɾego] <keɾe weɾego> ‘story teller (female)’
story tell-3SG:F

In the examples above, the noun-class markers, when attached to verb roots, appear to function as suffixes for ‘agentive nominalization’, where agents are typically animate entities.

4.3.5.2 Derived Inanimate Nouns

As mentioned above, and illustrated in (37) and (38), inanimate nouns derived from verb roots require the nominalizers suffixes /-di/**,** for inanimate nouns, or /-do/ for inanimate abstract nouns, attached to the verb root. In order to derive concrete inanimate nouns, specific class markers are attached to the stem formed by Root + either /-di/ or /-do/. It should be noted that the nominalizer /-do/ is not followed by the specific class markers (classifier) nor by the plural suffix for inanimates /-di/. This process is summarized in Table 4.6.

Table 4.6 Derived inanimate nouns

	nominalizer	**noun classification morphology**
Verb Root +	**-di** + ‘inanimate:concrete’	specific class markers (singular inanimates) or **-di** (plural inanimate)
	-do ‘inanimate:abstract’	

In the examples in (41) below, the derived inanimate nouns have specific class markers (classifiers) that individualize the noun (making it more specific).

(41) a. /guya-**di**-ya/ [guyaɾiya] <guyaɾiya> ‘dangerous creek’
be.dangerous-NOM:IN-CLS:creek

b. /~saya-**di**-bedo/ [sãɲãɾĩbeɾo] <sãyãɾibeɾo> ‘ring’
wear-NOM:IN-CLS:circle

c. /wee-**di**-du/ [weʰeɾiɾu] <weheɾiɾu> ‘fishing hook’
kill-NOM:IN-CLS:concave

Verb roots that have a descriptive sense can be used to derive animate nouns (42a), inanimate specific nouns (42b), and inanimate generic nouns (42c).

(42) a. ĩgʉ̃ guyagʉ ãɾĩmĩ
~igʉ **guya-gʉ** ~adi-~bi
3SG:M **be.dangerous-3SG:M** be-3SG:M.IMPERF
‘He is dangerous.’

b. dia guyaɾiya ãɾã
dia **guya-di-ya** ~adi-a
river **be.dangerous-NOM:IN-CLS:creek** be-PERF
‘The river is dangerous.’

c. ĩgʉ̃ guyaɾi ãɾĩmĩ
~igʉ **guya-di** ~adi-~bi
3SG:M **be.dangerous-NOM:IN** be-3SG:M.IMPERF
‘He is in danger.’

4.3.5.3 Nouns Derived from Particles

Some animate and inanimate nouns are derived from particles. This is illustrated in (43) below, with the particles coding deixis and anaphora. Although most of these nouns are used with a head they modify, i.e., a noun they refer to, they can also be used independently, that is, having a pronominal function (this is discussed further in section 4.4.1). The particle *iɾi* 'DEM:PROX' is also given as *i* by different speakers.

(43)	a.	**i/idi**	**idi**-~ye DEM:PROX-topic	[ĩɲẽẽ]	'this topic'
			i-bu DEM:PROX-CLS:basket	[ibu]	'this basket'
			idi-gʉ DEM:PROX-CLS:trunk	[iɾigʉ]	'this tree'
			i-ɾo DEM:PROX-INAN	[iɾo]	'this thing' (inanimate)
			i-di DEM:PROX-PL:IN	[iɾi]	'these ones' (inanimate)
			idi-sibu DEM:PROX-CLS:time	[iɾisibu]	'this time'
			idi-pʉ DEM:PROX-CONTR	[iɾipʉ]	'this other'
			idi-ta DEM:PROX-EMPH	[iɾita]	'this' (emphatic)

b.	**si**	**si**-pʉ	[sipʉ]	‘that place’
		DEM:DIST-CONTR		
		si-go	[sigo]	‘that woman’
		DEM:DIST-3SG:F		
		si-bu	[sibu]	‘that basket’
		DEM:DIST-CLS:basket		
c.	~**o**	~**o**-ta	[õta]	‘here’ (emphatic)
		DEIC:PROX-EMPH		
		~**o**-ge	[õᵑge]	‘to/around here’
		DEIC:PROX-LOC		
		~**o**-pʉ-ge	[õpʉ̃ge]	‘to/around here (not there)’
		DEIC:PROX-CONTR-LOC		
		~**o**-~bʉʉ	[õmʉ̃ʰʉ̃]	‘from here’
		DEIC:PROX-CLS:origin		
		~**o**-a	[õã]	‘these here’ (animate)
		DEIC:PROX-PL:AN		
d.	~**so**	~**so**-a	[sõã́]	‘those there’ (animate)
		DEIC:DIST-PL:AN		
		~**so**-ge	[sõᵑgé]	‘to/around there’
		DEIC:DIST-LOC		
e.	**gai**	**gai**-~da	[gaʰiɾã]	‘others’ (animate)
		other-PL:AN		
		gai-gʉ	[gaʰigʉ]	‘(an)other one’ (masculine)

other-3SG:M		
gai-go	[gaʰigó]	‘(an)other one’ (feminine)
other-3SG:F		
gai-dʉ	[gaʰidʉ]	‘(an)other day’
other-CLS:day		
gai-pʉ	[gaʰipʉ]	‘(an)other’
other-CONTR		
gai-bu	[gaʰibu]	‘(an)other basket’
other-CLS:basket		

4.3.6 Negative Nominals

Negative nominals are formed with *~de* [nẽẽ] preceding the noun. In this position, it has the meaning ‘none of X’ or ‘no X’, as illustrated in (44a-c). The negative particle *~de* can also occur before a verb, in this position, it can mean ‘nothing’, ‘nobody’, or ‘never’, as illustrated in (44 d-e). Verb negation is discussed in Chapter 5.

(44) a. mãɾĩɾẽ nẽõ mãɾã

~badi-de **~de**-~o ~bada

1PL:INCL-REF NEG-DEIC:PROX have:exist

‘There wasn’t anything of this for us.’ (lit. none of this existed for us)

b. mãɾĩ mõɾã nẽ baɾi

~badi ~bo-~da **~de** ba-di

1PL:INCL not.have-PL:AN.PERF NEG eat-NOM:IN

‘We don’t have food.’

c. mãɾĩ mõɾã nẽ ʉ̃ɾĩ

~badi	bo-~da	**~de**	~ʉdi
1PL:INCL	not.have-PL:AN.PERF	NEG	pupunha.fruit

‘We don’t have pupunha fruit’

d. nẽ bohkasõmẽ mãɾĩ iɾiɾe

~de	boka-~sobe	~badi	idi-de
NEG	find-will.not	1PL:INCL	DEM:PROX-REF

‘We will never find this.’

e. nẽ dʉabiɾiyũɾã ĩgʉ̃ɾẽ

~de	dʉa-bidi-~yu-~da	~igʉ-de
NEG	keep-NEG-EVID:QUOT/FOLK-PL:AN.PERF	3SG:M-REF

‘(They) didn’t leave anything for him.’

4.4 Pronouns and Other Proforms

In Desano it is possible to identify five proforms. They can be distinguished as personal pronouns, reflexive pronouns, reciprocal pronouns, demonstrative pronouns, and interrogative pronouns. They are discussed separately in the following subsections.

4.4.1 Personal Pronouns

In general, pronouns are dependent upon something else for their semantic value. In Desano, the personal pronouns are free morphemes. They distinguish three persons (first, second, and third) and two numbers (singular and plural). In the third person singular, gender (masculine and feminine) is distinguished. The first person plural has an inclusive/exclusive distinction. The personal pronouns are shown in Table 4.7.

Some sentences illustrating the uses of the first person pronouns are given in (45) and (46). The sentence in (45a) was uttered by a male person; thus, the first person triggers third person singular agreement on the verb, marked by the suffix -*gʉ*. The same sentence said by a female is shown in (45b); the verb now triggers agreement with ‘third person singular feminine, marked by the suffix -*go*. The first person plural contrasts inclusive (including the addressee) versus exclusive (not including the addressee), as illustrated in (46a) and (46b) respectively. In (46a), the speaker describes an event in which both the speaker and the hearers are involved (i.e. they all ‘know’). In (46b), the speaker is telling about an event that includes him and others, but not the hearer.

Table 4.7 Desano personal pronouns

	SINGULAR		PLURAL	
	MASC	FEM		
1st person	yʉʉ <yʉ’ʉ>		~badi <mãrĩ> *inclusive*	gʉa <gʉa> *exclusive*
2nd person	~bʉʉ <mʉ̃’ʉ̃>		~bʉa <mʉ̃’ã>	
3rd person	~igʉ <ĩgʉ̃>	igo <igo>	~ida <ĩrã> or <ẽrã>	

(45) a. yʉ’ʉ wĩɾãʉ̃ ãɾã

yʉʉ ~wida-gʉ ~adi-a

1SG desano-3SG:M be-PERF

‘I am Desano (male).’

b. yʉ’ʉ wĩɾãgo ãɾã

yʉʉ ~wida-go ~adi-a

1SG desano-3SG:F be-PERF

‘I am Desano (female).’

(46) a. mãɾĩ mãhsĩka

~badi ~basi-ka

1PL:INCL know-EVID:REAS

‘We know.’

b. gʉa eɾoɾe

gʉa edo-de

1PL:EXCL there-REF

‘We (are) there (we live there).’

The second person plural *mʉ̃’ã* /~bʉa/ can be analyzed as a composite formed by *mʉ̃’ʉ̃* /~bʉʉ/ ‘2nd person singular’ and the marker for ‘plural animate’ *-a*.

4.4.1.1 Anaphoric Uses of Pronouns

The third person pronouns can have an anaphoric function. These pronouns can be analyzed as being derived from the ‘demonstrative proximal’ particle *i* + the class marker referring to an antecedent noun or to something identified in the context – like saying ‘this’ or ‘that’ when pointing at an object, ‘this is mine’ (pointing at a knife): *-~gʉ* (for masculine or general animate singular), *-go* (feminine singular), *-~da* (animate plural) and *-di/-do* (inanimate).[79] The sentences in the following examples illustrate the anaphoric function. Example (47) is a sentence from a narrative in which the speaker is talking about a male character in a traditional tale, after introduced the character, the speaker refers to this character by using the anaphoric pronoun *~igʉ* ‘he’.

(47) ĩgʉ̃ ehoyũmĩ

i-~gʉ eo-i-~yu-~bi

DEM:PROX-3SG:M arrive-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He arrived.’

In another narrative, the speaker first introduces his daughter by her name (Guahó), but later in the discourse he uses the pronoun *igo* ‘she’ anaphorically to refer to this daughter previously mentioned in the beginning of the narrative. This is illustrated in (48).

(48) igo mõ’mẽ pihimõ

i-go ~bobe-pii-~bo

DEM:PROX-3SG:F work-release-3SG:F

‘She left work.’

In (49), the anaphoric pronoun *ĩrã* ‘they’ refer to animate entities – a group of children previously mentioned in a traditional story. Thus, *ĩrã* is used to refer to animate entities.

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[79] The anaphoric particle root *i* may be derived historically from the form *ti* ‘anaphoric’ found in other Eastern Tukanoan language (cf. Ramirez 1997:320 for Tukano, and Stenzel 2004:161 for Wanano). But in these languages, *ti* is not a ‘proximate demonstrative’.

(49) ĩɾã ba badoakuɾiyũɾã

i-~da ba ba-doa-kudi-~yu-~da

DEM:PROX-PL:AN food eat-sit-walk-EVID:QUOT/FOLK-PL:AN.PERF

‘They sit and ate the food.’

Besides being used with noun-class suffixes for animate nouns to form personal pronouns, the anaphoric particle *i* is also used to form anaphoric pronouns that refer to inanimate nouns, as shown in (50).

(50) a. õɾẽ i nĩhkʉ̃mʉ̃hʉ̃

~o-de i ~dikʉ-~bʉʉ

DEIC:PROX-REF DEM:PROX earth-CLS:origin

‘here in this earth’

b. iyaɾe

i-ya-de

DEM:PROX-CLS:creek-REF

‘in this creek’

4.4.2 Reflexive and Reciprocal Expressions

Desano does not have reflexive pronouns. Reflexive expressions are coded by the reflexive interpreted noun *basʉ*, as illustrated in (51).

(51) yʉ’ʉ bahsʉ yãã

yʉʉ **basʉ** ~ya-a

1SG REFLEXIVE see-PERF

‘I see myself.’

In many cases, *basʉ* has an emphatic function, as shown in (52a-b)

(52) a. ẽɾã basʉ gãmẽ kẽãpanʉ̃ɾʉ̃kã

~eda	**basʉ**	~gabe	~kea-pa-~dʉdʉ-ka
3PL:AN	REFLEXIVE	RECIPROCAL	attack-hit-spank-EVID:REAS

‘They fought and beat themselves.’[80]

b. mʉ̃’ʉ̃ bahsʉta yãke ãɾĩyũmĩ paɾe

~bʉʉ	**basʉ**-ta	~ya-ke	~adi-~yu-~bi
2SG	REFLEXIVE-EMPH	see-IMP	say-EVID:QUOT/FOLK-3SG:M.IMPERF

‘“See for yourself,” he said’.

The nominal *~gabe* [ŋãmẽ] RECIPROCAL is used in constructions expressing mutual actions; it codes co-reference with a co-occurring nominal. It has the meaning of ‘each other’ or ‘one another’ in English, as shown in the examples in (53).

(53) a. yuhunʉ̃ ẽɾã gãmẽ bohkayuɾã gihkuɾi ye mẽɾã

yuu-~dʉ	~eda	**~gabe**	boka-~yu-~da
one-CLS:day	3PL:AN	RECIPROCAL	meet-EVID:QUOT/FOLK-PL:AN.PERF
gikudi	ye-~beda		
tortoise	jaguar-COM/INSTR		

‘One day, the tortoise and the jaguar met each other.’

b. ĩɾã gãmẽ mĩmĩãmã

~eda	**~gabe**	~bibi-a-~ba
3PL:AN	RECIPROCAL	kiss-PERF-3PL:AN.IMPERF

---

[80] In many languages reciprocals are just a kind of reflexive construction; here that seems to be the case, though the reciprocal *~gabe* also occurs.

‘They kissed each other.’

c. ĩɾã gãmẽ kẽãmã

~eda **~gabe** ~kea-~ba

3PL:AN RECIPROCAL attack-3PL:AN.IMPERF

‘They fought each other.’

4.4.3 Demonstrative Pronouns

In Desano, the demostrative pronouns make a distinction between ‘proximal’ and ‘distal’, as illustrated by the examples in (54) and (55), respectively. The particle *iɾi* ‘DEM:PROX’ is also realized as *i* by different speakers.

(54) **i/idi** a. **idi**-~ye [ĩɲẽẽ] ‘this topic’

DEM:PROX-topic

b. **i**-bu [ibu] ‘this basket’

DEM:PROX-CLS:basket

c. **idi**-gʉ [iɾigʉ] ‘this tree’

DEM:PROX-CLS:trunk

d. **i**-do [iɾo] ‘this thing (inanimate)’

DEM:PROX-IN

e. **i**-ɾi [iɾi] ‘these ones (inanimate)’

DEM:PROX-PL:IN

f. **idi**-sibu [iɾisibu] ‘this time’

DEM:PROX-time

g. **idi**-pʉ [iɾipʉ] ‘this other’
DEM:PROX-CONTR

h. **idi**-ta [iɾita] ‘this (emphatic)’
DEM:PROX-EMPH

(55) **si** a. **si**-pʉ [sipʉ] ‘that other’
DEM:DIST-CONTR

b. **si**-go [sigo] ‘that woman’
DEM:DIST-3SG:F

c. **si**-bu [sibu] ‘that basket’
DEM:DIST-CLS:basket

In Desano, the demonstrative and the third person personal pronouns are not distinguished from one another. In Section 4.4.1.1, we saw that the third person personal pronouns *ĩgʉ̃* ‘third person singular masculine’, *igo* ‘third person singular feminine’, and *ĩɾã/ẽɾã* ‘third person plural animate’ are derived from the demonstrative proximal suffix *i* + the class marker referring to the antecedent noun: *-gʉ̃* /-~gʉ/ ‘third person singular masculine’, *-go* /-go/ ‘third person singular feminine’ and *-ɾã* /-~da/ ‘plural animate’. Demonstrative pronouns and personal pronouns that overlap are found in many languages (cf. Schachter and Shopen 2007:27).

The fact that the forms in (54) can function as pronominal forms is illustrated in lines of examples (56) and (57). The inherent properties of the nouns for ‘pigeon’ (singular, animate) and ‘girls’ (plural, animate) in (56) are coded in (57) with the demonstrative *i* ‘this’, by the suffix *-gʉ* ‘singular, masculine’ referring to the pigeon, and by the demonstrative *i* ‘this’, and by the suffix *-~ɾa* ‘plural, animate’ referring to the girls.

(56) yuhunʉ̃ buha yãpʉ nõmẽ nẽõ mãhsãɾã kuɾiɾa

yuu-~dʉ bua ~ya-pʉ **i**-~da ~dobe

one-CLS:day pigeon see-3SG.M.PERF **DEM:PROX**-PL:AN female

~de-o ~basa-~da kudi-~da

be.young-3SG:F people-PL:AN walk-PL:AN.PERF

wa-~yu-~da

go-EVID:QUOT/FOLK-PL:AN.PERF

'One day, the pigeon saw young girls going on a walk.'

(57) ĩgʉ̃pʉ buhapʉ yãpeyapʉ ẽɾãɾẽ

~igʉ-pʉ bua-pʉ ~ya-peya-pʉ

3SG:M-CONTR pigeon-CONTR see-be.on.top-3SG:M.PERF

i-~da-de

DEM:PROX-PL:AN-REF

'He observed them from above.'

The example in (58) illustrates the demonstrative forms for inanimate nouns. The specific class marker (classifier) *-gʉ* 'trunk', of the noun *yʉhkʉgʉ* 'tree' in (58a), is coded on the first demonstrative form in line (58b).

(58) a. (…) ãɾĩyʉ̃ɾõ yʉhkʉgʉ

~adi-~yu-do yʉkʉ-**gʉ**

be-EVID:QUOT/FOLK-NON3.IMPERF tree-CLS:trunk

'(by the shore of a lake) there was a tree.'

b. iɾigʉ beaɾã iñĩɾã iɾoge doaɾã weɾeñĩyʉ̃ɾã

idi-gʉ bea-~da i-di-~da

DEM:PROX-CLS:trunk land-PL:AN.PERF do-PERF-PL:AN.PERF

i-do-ge doa-~da wede-~adi-~yu-~da

DEM:PROX-place-LOC sit-PL:AN.PERF tell-say-EVID:QUOT/FOLK-PL:AN.PERF

‘(They) landed on this tree, sit and talked (there).’

Another demonstrative is formed by the nominal *gahi* ‘other’ is used to refer to a new entity (or another of the same type), as illustrated in (59)-(61).

(59) gahinʉ̃ aɾiyũmĩ daha te mʉ̃ɾãɾõta

gai-~dʉ adi-yu-~bi daa te

other-CLS:day come-EVID:QUOT/FOLK-3SG:M.IMPERF again till

~bʉda-do-ta

place-NOM:ABSTR-EMPH

‘Again, he came another day, at the same place.’

(60) gahigʉ aɾikumĩ daha

gai-gʉ adi-ku-~bi daa

other-3SG:M come-ADVERS-3SG:M.IMPERF again

‘Another one will come again.’

(61) gahibupʉɾe ahpiabʉ yʉ’ʉ

gai-bu-pʉ-de api-a-bʉ yʉʉ

other-CLS:basket-CONTR-REF leave-PERF-NON3.PERF 1SG

‘I put (it) in the other basket.’

Table 4.8 Interrogative proforms in Desano

Pro-form **gloss**	
who	*nõã*
what	*yẽ'ẽ*
where	*nõ'õ*
which	*di'i* (also *nĩ'ĩ*)

4.4.4 Interrogative Pro-Forms

Interrogative pro-forms are a set of nominal words that can occur as independent words. The five interrogative pro-forms that can be identified in Desano are listed in Table 4.8.

The pro-form *nõã* 'who' can occur as independent root, as in (62), or it can appear with nominal morphology. In questions involving actions that imply direction, for example, the suffix *-pʉ* 'contrastive' is attached to the proform, as illustrated in (63) and (64).

(62) nõã ẽɾãɾẽ siʉbiɾagʉ ãɾĩkuɾi?

~doa	i-~da-de	siʉ-bida-gʉ	~adi-ku-di
who	DEM:PROX-PL:AN-REF	call-play-3SG:M	be-PREDIC-INTER

'Who will be the captain of our team?'

(63) nõãpʉ sipʉmãsẽge taɾibuhua mʉ̃tãɾõkuɾi? ãɾĩyũɾã ẽɾã

~doa-pʉ	si-pʉ	~base-ge
who-CONTR	DEM:DIST-CONTR	shore-LOC

tadi-buha-~bʉta-do-ku-di ~adi-~yu-~da ~ida

pass-across-go.ahead-PERF-PREDIC-INTER say-EVID:QUOT/FOLK-PL:AN 3PL:AN

'"Who will cross to the shore first?" They said.'

(64) nõãpʉ̃ buɾiõmã?

~doa-pʉ budi-~oba

who-CONTR be.hard-run

'Who runs faster?'

The pro-form *yẽ'ẽ*, when used as an independent word, codes a meaning similar to the pro-form 'what' in English, as illustrated in (65). However, the pro-form *yẽ'ẽ* can also occur with the word *nõhõ* 'uncertainty' suffixed to it, deriving a new pro-form expressing doubt, as illustrated in (66). In the narrative, the question in (65) is uttered when the speaker infers that nothing else is missing; whereas (66) infers that something is missing, but the speaker is not sure what is missing.

(65) yẽ'ẽ duyaɾiɾo ã'ɾĩyũmĩ?

~yee duya-di-do ~adi-~yu-~bi

what lack-NOM:IN-NON3.PERF say-EVID:QUOT/FOLK-3SG:M.IMPERF

'"What is missing?" he said.' (lit. what is missed)

(66) yẽ'ẽnõhõ duyaɾiɾo ãɾĩyũmĩ?

~yee-~doo duya-di-do

what-uncertainty lack-INTER-NON3.PERF

~adi-~yu-~bi

say-EVID:QUOT/FOLK-3SG:M.IMPERF

'"What is missing?" he said.'

This ‘uncertainty’ meaning is also expressed in examples (65) and (66).

(67) nẽ’ẽnõhõ mãɾĩɾẽ igo o’aɾi?

~dee-~doo Maria-~de igo oo-a-di

what-uncertainty Maria-REF 3SG:F give-PERF-INTER

‘What did she give to Maria?’

(68) nẽ’ẽnõhõɾẽ weɾenĩaɾi?

~dee-~doo-de wede-~adi-a-di

what-uncertainty-REF tell-say-PERF-INTER

‘What did (they) talk about?’

The pro-form *yẽ’ẽ* can also derive other pro-forms with the demonstrative function to refer to a person (or people) whom the speaker does not know or cannot identify.[81] These forms are illustrated in (69)-(71).

(69) ĩ yẽ’ẽmʉ̃ ãɾĩmĩ padeɾe Peduɾu Baron

~i **~yeebʉ** ~adi-~bi pade-de peduɾu baɾon

DEM:PROX:AN so.and.so be-3SG:M.IMPERF priest-REF Pedro Baron

‘Was this one (so-and-so) Priest Pedro Baron?’

(70) sĩ yẽ’ẽmʉ̃ oagʉ ĩgʉ̃ yãhãmĩ

~si **~yeebʉ** oagʉ i-~gʉ

DEM:DIST so-and-so ethnic.group DEIC:PROX-3SG:M

~yaa-~bi

join-3SG:M.IMPERF

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[81] The Desano forms *yẽ’ẽmʉ̃* and *yẽ’ẽmãɾã have* been translated into Portuguese as *fulano* ‘so-and-so masculine’ and *fulanos* ‘so-and-so plural’, respectively. For now, I do not know the appropriate gloss for the suffixes -*mʉ̃* and *mãɾã* that is attached to *yẽ’ẽ*.

‘That indigenous person (so-and-so) joined (the mission).’

(71) sõã yẽ’ẽmãdã ãdãmã

~so-a **~ye’ebʉ**-~da ~adi-a-~ba

DEIC:DIST-PL:AN so-and-so-3PL:AN.PERF be-PERF-3PL:AN.IMPERF

‘Those ones were (Tukano).’

The pro-form *di’i* ‘which’ can also occur as an independent word as illustrated in (72). It can also take nominal morphology, in this case, usually the same classifier of the head noun, as illustrated in (73) and (74). In most of its occurrences, the pro-form *di’i* is realized as oral, however, instances where it is realized as nasal is also found as in (75), albeit not so common.

(72) di’i kuɾumãhãɾã ãɾĩɾĩ õã nãhsẽãpʉ

dii kudu-~baa-~da ~adi-di ~o-a

which knot-location-PL:AN be-INTER DEIC:PROX-PL:AN

~dase-a-pʉ

Tukano-PL:AN-CONTR

‘Which clan are these Tukano from?’

(73) di’iɾu gahsiɾu eheayoɾi?

dii-du gasi-du ee-a-yo-di

which-CLS:round bark-CLS:round arrive-PERF-EVID:HSAY-INTER

‘Which canoe arrived?’

(74) di’ibu puibu mʉ̃’ʉ̃ ahpiaɾi?

dii-bu pui-bu ~bʉʉ api-a-di

which-CLS:concave basket-CLS:concave 2SG leave-PERF-INTER

‘In which basket did you leave (it)?’

(75) nĩ’ĩ diaye mʉ̃’ɾẽ kũɾĩãɾĩ

~dii diaye ~bʉʉ-de ~kudi-a-di

which dog 2SG-REF bite-PERF-INTER

‘Which dog did bite you?’

The pro-form *nõ’õ* ‘where’ can occur independently, as in (76) or, more commonly, with nominal morphology indicating origin (77) or location (78).

(76) nõ’õ mʉ̃’ʉ̃ koaduhkaɾu ahpiaɾi

~doo ~bʉʉ koa-duka-du api-a-di

where 2SG gourd-fruit-CLS:concave leave-PERF-INTER

‘Where did you put the bowl?’

(77) nõmʉ̃hʉ̃ ãɾãɾĩ ĩgʉ̃

~doo-~bʉʉ ~adi-a-di ~igʉ

where-CLS:origin be-PERF-INTER 3SG:M

‘Where is he from?’

(78) nõ’õge ãɾãɾi mʉ̃’ʉ̃ã waĩ

~doo-ge ~adi-a-di ~bʉʉ-~a ~wai

where-LOC be-PERF-INTER 2SG-PL:AN uncle

‘Whereabouts are you (living), uncle?’

4.5 Other Nominal Morphemes

In the discussion of the nominal morphology so far, I have presented a description of root types and nominalization of verbal roots, together with their core lexical and grammatical morphemes marking noun class (gender and classifiers) and number. In this section, I present other lexical and grammatical morphemes that can occur with a noun.

In the previous sections, we saw that a noun can be formed by an independent noun root (simple noun) or by an independent root plus a dependent noun root (complex noun), other nouns are derived from verbs roots and particles (derived nouns). Dependent noun roots are roots that cannot occur as independent roots; a complex noun is a noun formed by an independent root plus a dependent root (plus the nominal suffixes). Table 4.9 shows the order in which morphemes can be suffixed to the nominal root.

As shown in nominal morphology template in Table 4.9, there are eight morphemes that can occur (suffixed) with nominal roots. It should be noted that verb roots can be nominalized by the nominative suffixes *-di* <-ɾi> and <-ɾo>. Morphemes coding class and number were discussed in previous sections. These morphemes are represented in the first slot in the nominal template. In the following subsections, the nominal morphemes in slots 2-7 are described, followed by the description of the 'referential' *-de* <-ɾe>, which can occur in any position after root/steam+position 1 morphemes.

Table 4.9 Nominal morphology

Nominal Root		1	2	3	4	5	6	7
Verb Root	NOM:CONCR	CLASS/NUM	AUG	CONTR	LOC	COM/INST	REF	ADD
	-di	**-ʉ/-gʉ** M	**-do**	**-pʉ**	**-ge**	**-~beda**	**-ta**	**-kʉ**
	NON:ABSTR	**-o/-go** F	DIM			SOL		**-~sa**
	-do	**-a/-~da** PL:AN	**-~ga**			**-~pe**		
Particle		**-di** PL:IN						
		-~bʉ IND	OBJECT					
Noun$_{indep}$+(Noun$_{dep}$)		CLS	**-de**					

4.5.1 The Diminutive

The diminutive is expressed by the suffix -~*ga*. In general it is used with both animate and inanimate nouns, as illustrated in (79).

(79) a. ~bibi-**~ga** <mĩmĩgã> ‘little hummingbird’

hummingbird-DIM

b. ~kabi-**~ga** <kãmĩgã> ‘little brothers’

brother-DIM

c. gaki-**~ga** <gahkigã> ‘little monkeys’

monkey-DIM

d. wii-~**ga** <wi’igã> ‘little house’

house-DIM

The diminutive suffix follows the plural markers (80a-b) and the class markers (80c-d).

(80) a. pee-~da-~**ga** <perãgã> ‘little two (animate entities)’

two-PL:AN-DIM

b. wi’i-di-~**ga** <wi’igã> ‘little houses’

house-INPL:AN-DIM

c. ~baa-gʉ-~**ga** <mãgʉ̃gã> ‘little son’

progeny-3SG:M-DIM

d. dipʉ-dʉ-~**ga** <dihpʉrʉgã> ‘little head’

head-CLS:concave-DIM

The suffix -~*ga* is also used to indicate even greater precision: ‘closer than close’, when referring to location, and ‘more recent’, when referring to time. These are illustrated in (81a-d). This ‘greater precision’ meaning is also expressed when the suffix -~*ga* is attached to adjectival expressions, as in (81e).

(81) a. doka-~**ga** <dohkagã> ‘(right/exactly) under’
under-DIM

b. podo-~**ga** <poɾogã> ‘(very) close’
close-DIM

c. ~edo-~**ga** <ẽɾõgã> ‘there’ (distal)
DEIC:DIST-DIM

d. ~kadʉ-~**ga** <kãɾʉ̃gã> ‘(very) recent’
recent-DIM

e. ~abe-do-~**ga** <ãmẽɾõgã> ‘a little’
be.little-NOM:ABSTR-DIM

The diminutive suffix is also used with pronouns (82a-b), with demonstratives (82c), and with numerals (82d). When used with pronouns (82a-b) and demonstratives (82c) the diminutive can also function for endearment. In (82d), with the numeral ‘one’, the diminutive gives the meaning ‘by oneself’.

(82) a. ~igʉ-~**ga** <ĩgʉ̃ŋã> ‘little him’
3SG:M-DIM

b. yʉʉ-~**ga** <yʉ’ʉgã> ‘little me’
1SG-DIM

c. ~i-~**ga** <ĩgã> ‘little this’
DEM:PROX-DIM

d. yuu-go-~**ga** <yuhugogã> ‘little her (by herself)’
one-3SG:F-DIM

The diminutive suffix *-~ga* is also used in some words that refer to time as in (83). In these words, the diminutive suffix seems to have lost its transparency as a grammatical morpheme and has become lexicalized.

(83) a. ~gabi-~**ga** <gãmĩgã> ‘tomorrow’
night-DIM

b. dopa-~**ga** <dopagã> ‘today’
today-DIM

4.5.2 The Augmentative

The augmentative is coded by the morpheme *-do*, as shown in the examples in (84), which generally occur to refer to non-feminine nouns.

(84) a. americano-gʉ-**do** <ãmẽɾikãnũgʉɾo> ‘big American (male)’
American-3SG:M-AUG

b. pea-~basa-gʉ-**do** <peamãhsãgʉ̃ɾo> ‘big white (male)’
fire-person-3SG:M-AUG

c. ~ye-yu-gʉ-**do** <yẽyũgʉɾo> ‘big buriti palm tree’
buriti-CLS:palm-CLS:trunk-AUG

Although the augmentative suffix is *-do*, most of the expressions indicating size are expressed with the verbal morpheme *wʉa-* ‘be big’ with animate and inanimate nouns, as illustrated in (85). It should be noticed that, in the case of inanimate nouns, the verb is nominalized (85c-d).

(85) a. ~ʉbʉ **wʉa**-gʉ <ʉ̃mʉ̃ wʉagʉ> ‘big lad’

lad be.big-3SG:M

b. ~dobe-o **wʉa**-go <nõmẽõ wʉago> ‘big woman’

female-3SG:F be.big-3SG:F

c. **wʉa**-di-ye <wʉaɾiye> ‘big fruit kernel’

be.big-NOM:IN-CLS:seed

d. **wʉa**-di-wi <wʉaɾiwi> ‘big house’

be.big-NOM:IN-CLS:house

The suffix *-do* <-ɾo> can co-occur with the nominalized verb *wʉa-* ‘be big’, in this case, the augmentative suffix functions as an intensifier, as illustrated in (86).

(86) a. wʉa-di-~yu-gʉ-**do** <wʉaɾiyũgʉɾo> ‘a very big palm tree’

be.big-NOM:IN-CLS:palm.tree-CLS:trunk-AUG

b. wʉa-di-wi-gʉ-**do** <wʉaɾiwigʉɾo> ‘a very big house’

be.big-NOM:IN-CLS:house- CLS:trunk -AUG

4.5.3 The Locative: *-ge*

The locative morpheme *-ge* codes location, as in (87)-(89) and direction, as in (90)-(91). The locative marker *-ge* in Desano does not have cognates in other Eastern Tukanoan language. For example, the locative marker in Wanano is *-pʉ* (cf. Stenzel 2004:170); Tukano also has a suffix *-pʉ* which can mark location, although Ramirez prefers to call it a 'focalizer' (cf. Ramirez 1997:218).[82] It should be noticed that in these examples, the locative marker occurs with a noun and with nominalized verbs.

(87) ʉ̃htãmʉ̃geɾe wabita gʉya ãɾĩka

~ʉta-bu-**ge**-de	wa-bidi-ta	gʉya-~adi-ka
stone-CLS:concave-LOC-REF	go-NEG-EMPH	be.dangerous-be-EVID:REAS

'Do not go by the rapids, it's dangerous.'

(88) igo baɾisoɾaɾoge doamõ

igo	ba-di-soda-do-**ge**	doa-~bo
3SG:F	eat-NOM:IN-cook-NOM:ABSTR-LOC	sit-3SG:F

'She is sitting in the kitchen.'

(89) pagʉ poɾoge wãgãyʉ̃mĩ

pa-gʉ	podo-**ge**	~waga-~yu-~bi
progenitor-3SG:M	near-LOC	wake.up-EVID:QUOT/FOLK-3SG:M.IMPERF

'(He) woke up near (his) father.'

(90) aɾia yʉ'ʉ abewi'ige

adi-a	yʉʉ	abe-wii-**ge**
come-PERF	1SG	sun-house-LOC

'I came from the house of the sun.'

(91) i yebageɾe aɾibʉkʉ

i	yeba-**ge**-de	adi-bʉ-kʉ
DEIC:PROX	ground-LOC-REF	come-NON3.PERF-ADVER

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[82] Tariana (Arawakan) has the locative marker *-se* (Aikhenvald 2003:148), with similar function of *-ge* in Desano (Aikhenvald 2002:103).

‘(For me) to come to this land.’

The locative *-ge* can also occur on adverbial expressions, as in (92)-(93) and particles, as in (94).

(92) i ʉ̃mʉ̃ge pʉ̃ɾĩ ãɾĩyʉ̃ nẽgeɾe

i ~ʉbʉ-**ge** ~pʉdi-~adi-~yu ~de-**ge**-de

DEIC:PROX universe-LOC be.dirt-be-EVID:QUOT/FOLK nothing-LOC-REF

‘In the beginning, this universe was impure.’

(93) tãtus ciglos pʉɾʉgeɾe aɾiyʉ̃mĩ ĩgʉ̃[83]

tãtus ciglos pʉdʉ-**ge**-de adi-yu-~bi

many centuries after-**LOC**-REF come-EVID:QUOT/FOLK-3SG:M.IMPERF

~igʉ

3SG:M

‘After many centuries, he came.’

(94) eɾoɾe eɾotamẽɾã mãɾĩ ãɾĩbʉ eɾoge õã paia bueɾa sibuge

edo-de edo-ta-~beda ~badi ~adi-bʉ

DEIC:DIST-REF there-EMPH-COM/INST 1PL:INCL be-NON3.PERF

eɾo-ge ~o-a pai-a bue-da

DEIC:DIST-LOC DEIC:PROX-PL:AN priest-PL:AN teach-IMPERF

sibu-**ge**

while-**LOC**

‘(We) lived there during the time in which these priests (were) teaching.’

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[83] The expression ‘tãtus ciglos’ is a borrowing from Spanish.’

4.5.4 The Contrastive: *-pʉ*

The contrastive morpheme *-pʉ* is used to mark ‘contrast’ between arguments in adjacent sentences. The Desano contrastive morpheme *-pʉ* yields a meaning similar to that described by Stenzel (2004:175) for the contrastive morpheme *-se’e* in Wanano: *but/however X, the other X*, or *X, though/on the other hand.* In (95) and (96), for example, the morpheme *-pʉ* marks not only the contrast between the two Subjects, but also a contrast in location, also shown in examples (97) and (98).

(95) mʉ̃’ʉ̃ã ipʉ mõ’mẽke

~bʉʉ-a i-**pʉ** ~bobe-ke

2SG-PL:AN DEIC:PROX-CONTR work-IMP

‘You work (over) here.’

(96) gʉapʉ wehkapʉ mõ’mẽɾãka

gʉa-**pʉ** weka-**pʉ** ~bobe-~da-ka

1PL.EXCL-CONTR above-CONTR work-EXRT-EVID:REAS

‘We work up there (upstream).’

(97) ĩgʉ̃ wahaɾã i yebapʉsãɾẽ bahaɾã ãɾĩkãyũmã

~igʉ waha-~da i yeba-**pʉ**-~sa-de

3SG:M enemy-PL:AN DEIC:PROX ground-CONTR-ADD-REF

baa-~da ~adi-ka-~yu-~ba

many-PL:AN be-EXIST-EVID:QUOT/FOLK-3PL:AN.IMPERF

‘There were many enemies of him in this (other) land too.’

(98) gʉa gahipʉ waamʉ̃ɾã ãɾĩbiɾika

gʉa gai-**pʉ** wa-~bʉdi ~adi-bidi-ka

1PL.EXCL other-CONTR go-climb be-NEG-EVID:REAS

‘We will not move to another place.’

The contrast morpheme is frequently used with deictic expressions and with postpositions indicating location as in (99) and (100).

(99) deyoɾ̃ãsã sipʉ dohkapʉ

deyo-~da-~sa si-**pʉ** doka-**pʉ**

hunt-EXRT-ADD DEIC:DIST-CONTR below-CONTR

‘(You) will also hunt down there.’

(100) weadigʉ wi’i pʉɾupʉ nĩgĩkumĩ

wea-di-gʉ wii pʉdu-**pʉ**

clay-CLS:meat-CLS:tubular house after-CONTR

~digi-ku-~bi

stand.up-EVID:NVIS-3SG:M.IMPERF

‘The statue is standing behind the house.’

The examples in (101) are excerpts from an explanation, by the speaker, that some Desano people went to live down the (Papurí) river; (101b) is a question from one of the speakers listening to the story, asking if this place down the river referred to the places previously mentioned in the narrative, hence the contrastive function of *-pʉ***.**

(101) a. buadeɾ̃ã ãɾ̃ĩmã paɾe

bua-de-~da ~adi-~ba pade

go.down-PERF-PL:AN.PERF be-3PL:ANIM.IMPERF then

‘They went down (the river), then.’

b. iɾipʉɾe paɾe

idi-**pʉ**-de   pade

DEIC:PROX-CONTR-REF   then

‘To these (other) places then?’

This contrastive function can also be seen in the examples in (102). It should be noticed that in (102a) the locative *-ge*, referring to a specific location, is used; whereas (102b) refers to a different location.

(102) a. wehkʉyageɾe daha

wekʉ-ya-**ge**-de   daa

tapir-CLS:creek-LOC-REF   again

‘(He left our brothers-in-law) in the Tapir creek again.’

b. sipʉ m̃asege

si-**pʉ**   ~ba-se-ge

DEM:DIST-CONTR   river-CLS:bank-LOC

‘There, on the other side of the river.’

Other examples of the occurrence of the contrastive morpheme *-pu* are illustrated in examples (103)-(104).

(103) sibupʉɾe koaɾu ahpiabu yʉ’ʉ

si-bu-**pʉ**-de   koa-du

DEM:DIST-CLS:basket-CONTR-REF:OBJ   gourd-CLS:concave

api-a-bʉ   yʉʉ

leave-PERF-NON3.PERF   1SG

‘I put the gourd in that (other) one.’

(104) yʉ’ʉ peamãhsã wãĩpʉɾe severianu wãĩkʉa

yʉʉ	pea-~basa	~wai-**pʉ**-de
1SG	firewood-people	name-CONTR-REF
severiano	~wai-kʉ-a	
severiano	name-VBLZ-PERF	

‘For the white people, I’m called Severiano.’

(105) ĩgʉ̃ abeya mʉ̃ɾʉ̃kʉpʉɾe yẽãyũmĩ

~igʉ	abe=ya	~bʉɾʉ-kʉ-**pʉ**-de
3SG:M	sun=POSS	tobacco-CLS:tree-CONTR-REF:OBJ
~yea-~yu-~bi		
hold-EVID:QUOT/FOLK-3SG:M.IMPERF		

‘He took the tobacco plant of the sun.’

(106) õã nãhsẽãpʉ

~o-a	~dase-a-**pʉ**
DEM-PL:AN	tukano-PL:AN-CONTR

‘These Tukano people.’

4.5.5 The Comitative/Instrumental Case

The case marker *~beda* <-mẽɾã> is used to code two different relationships between nouns. One is a comitative (accompaniment) relationship between two nouns, as illustrated in (107) and (108).

(107) gahi mũɾũyʉhkʉmẽɾã aɾiyũmĩ

gai	~budu-yʉkʉ-**~beda**	adi-~yu-~bi

another tobacco-tree-COM/INST come-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He came with another tobacco plant.’

(108) ĩgʉ̃ yegʉmẽrã keogãrĩgʉ̃ iyʉ̃mĩ

~igʉ yee-gʉ-~**beda** keo-~gadi-~gʉ

3SG:M jaguar-CLS:trunk-COM/INST measure-advance-3SG:M

i-~yu-~bi

do-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He came measuring with his sacred cane.’

4.5.6 Solitary: -~*pe*

The ‘solitary’ morpheme -~*pe* <-pẽ> which, in my corpus is attached to particles, codes the meaning *only X*. I call it a ‘solitary’ suffix in order to remain consistent with the terminology used in the Tukanoan literature. Examples of the use of the solitary marker -~*pe* is shown in (109).[84]

(109) a. ipẽtã yʉ’ʉ mãhsĩã

i-~**pe**-ta yʉʉ ~basi-a

DEIC:PROX-SOL-REF 1SG know-PERF

‘I know only this.’

b. ipẽ ãrĩka

i-~**pe** ~adi-ka

DEIC:PROX-SOL be-EVID:REASON

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[84]. The morpheme -~*pe* has a meaning similar to the solitary morpheme *di’ta* in Wanano. However, in Wanano, the solitary morpheme occurs with other types of noun roots, not only with particles (cf. Stenzel 2004:177).

‘This is all.’

c. ipẽta ãɾ̃ika yʉ’ʉ weɾenĩduaɾo

i-~**pe**-ta	~adi-ka	yʉʉ	wede-~adi-dua-do
DEIC:PROX-SOL	be-EVID:REASON	1SG	tell-say-DES-NON3.IMPERF

‘I want to narrate this only.’

4.5.7 Emphatic: *-ta*

The morpheme *-ta* is described in Miller (1999:163) as a ‘limiter’ glossed as ‘exactly, precisely, just’. This morpheme can also occur in verbal constructions. It is possible to identify a cognate in other Eastern Tukanoan languages. In Tukano, for example, the same morpheme is described by Ramirez (1997: 222) as a ‘specifier’ having the same glosses as the ones presented by Miller for Desano. In Wanano, *-ta* is described as a ‘referential’ morpheme whose function is ‘emphasize cross-reference to a previously-mentioned or focal noun;’ thus, *-ta* has a meaning analogous to *that very X* or *that same X* (Stenzel 2004:173).

The examples in (110) illustrate the occurrence of the referential *-ta* in sentences excerpted from the same dialogue between two Desanos. In (110a), the morpheme *-ta* is used to emphasize an event that has been previously mentioned in the dialogue, something that could be literally translated as ‘I tell you this same thing (again)’, a construction commonly found in traditional narratives.[85] In (110b) the *-ta* indicates the exact location to which they had traveled. In that location, the speaker built a house, and when asked if the house was his, the speaker replies with (110c), with the morpheme *-ta* emphasizing that the house was indeed his. Finally, (110d) is talking about a relative who is studying to be a priest and is in his last year in the missionary school; the referential *-ta* emphasizes that there is only a little time left for his relative to complete his studies and become a priest.

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[85] A Desano consultant told me that one of the reasons that this construction is commonly used in narratives is ‘because it helps to identify the important parts to be remembered.’

(110) a. mʉ̃’ʉ̃ɾe iɾiɾeta ãɾĩɾã yʉ’ʉ

~bʉʉ-de	idi-de-**ta**	~adi-da	yʉʉ
you-REF	DEIC:PROX-REF-EMPH	say-NON3.IMPERF	1SG

‘I tell you this.’

b. mʉ̃ɾĩɾabu tee oabuta

~bʉdi-da-bu	tee	oa-bu-**ta**
climb-PERF-NON3.PERF	until	skunk-CLS:concave-EMPH

‘We went to the Skunk rapids.’

c. yʉ’ʉya wi’ita ãɾĩmʉ̃ɾĩbʉ

yʉʉ	ya	wii-**ta**	~adi-bʉ
1SG	POSS	house-EMPH	be-NON3.PERF

‘It was (used to be) my house.’

d. amẽɾõta dʉyakaɾo

~abe-do-**ta**	dʉya-ka-do
be.small-NOM:ABSTR-EMPH	lack-EVID:REAS-NOM3.IMPERF

‘Not taking long (to complete)’

The emphatic function of *-ta* can also be attached directly to a noun root, as in (111) or to a nominal particle, as in (112).

(111) ĩgʉ̃ pĩɾʉ̃ta, ĩgʉ̃ gahsiɾu ĩgĩɾũ ãɾĩkãɾo iya

~igʉ	~pidʉ-**ta**	gasi-~du	~igi-~du
3SG:M	snake-EMPH	bark-CLS:concave	prow-CLS:concave
~adi-~ka-do			
be-EVID:REASON-NON3.IMPERF			

‘The snake itself was the prow of the canoe.’

(112) ĩta mʉ̃tãyũmĩ

~i-**ta**	~bʉta-~yu-~bi
DEM:PROX:AN-EMPH	be.in.front.of-EVID:QUOT/FOLK-3SG:M.IMPERF

‘This (itself) was in the front.’

4.5.8 The Additives: -*kʉ* and -~*sa*

There are two ‘additive’ morphemes that occur with nominals. The first is -*kʉ*, which I gloss as ‘and’. I call this morpheme ‘CONJUNCTION’. It functions as a conjunction used to coordinate two or more nouns, as illustrated in (113) and (114).

(113) ĩgʉ̃ nõmẽkʉ põɾãkʉ pãɾãmẽɾãkʉ wagã ikʉ̃ mʉ̃’ʉ̃ɾẽ ehatuabiɾiboka ãɾĩyũmĩ

~igʉ	~dobe-**kʉ**	~po-~da-**kʉ**	~pa-~da-~beda-**kʉ**
3SG:M	female-CONJ	progenee-PL:AN-CONJ	grandchild-PL:AN-COM/INST-CONJ
wa-~ga	i-~kʉ	~bʉʉ-de	ea-tua-bidi-bo-ka
go-DIM	do-ADVER	2SG-REF	arrive-lean-NEG-DUB-EVID:REAS
~adi-~yu-~bi			
say-EVID:QUOT/FOLK-3SG:M.IMPERF			

'"When he has a wife, children and grandchildren, it will be difficult for you to live," he said.'

(114) mãɾ̃ĩ põɾ̃ãkʉ̃ ãɾ̃ã o mãɾ̃ĩ pãɾ̃ãmẽɾ̃ãkʉɾ̃ãge

~badi	~po-~da-**kʉ**	~adi-a	~o	~badi
1PL.INCL	progenee-PL:AN-CONJ	be-PERF	or	1PL:INCL

~pa-~da-~beda-kʉ-da-ge

grandchild-PL:AN- COM/INST-CONJ-ADVER-LOC

'We, who are parents or (some of us) who have grandchildren (…)'

The additive -~*sa* codes a meaning similar to the English adverbs 'also/too', as in examples (115)-(117). I call this morpheme 'ADDITIVE'.

(115) pebʉ kuɾibʉ yʉ'ʉsã

pe-bʉ	kudi-bʉ	yʉʉ-~**sa**
hear-NON3.PERF	walk-NON3.PERF	1SG-ADD

'I also walked (and) heard (this story).'

(116) eɾota wãĩsã ãɾ̃ĩmʉ̃ɾ̃ĩdeɾã ãɾ̃ĩmã

edo-ta	~wai-~**sa**	~adi-~bʉdi-de-~da	~adi-~ba
DEIC:DIST-EMPH	uncle-ADD	be-grow-PERF-PL:AN.PERF	be-3PL:AN.IMPERF

'There, my uncles also lived.'

(117) ĩpʉ̃sã ĩgʉ̃ mʉ̃ɾ̃ʉ̃yẽmẽɾ̃ã ãɾ̃ĩyʉ̃mĩ

~i-pʉ-~**sa**	~igʉ	~bʉdʉ-~ye-~beda
DEM:PROX:AN-CONTR-ADD	3SG:M	tobacco-CLS:tangled-COM/INST

~adi-~yu-~bi

be-EVID:QUOT/FOLK-3SG:M.IMPERF

'"This other (person) was also with his cigar," he said.'

4.5.9 Referential: *-de*

The morpheme *-de* <-re> in Desano has multiple functions. It is has been described by Miller as a 'specific object maker' which functions to mark "specific, referential patients of transitive verbs, experiencers, and spatial-temporal expressions (1999:57)." Ramirez (1997:224) claims that the basic functions of the morpheme *-de*, in Tukano, are syntactic and semantic. Syntactically, *-de* marks nonsubject arguments. Semantically, it marks the (most) *definite* or *referential* of the nonsubject arguments. I call *-de* a 'referential' marker, in order to account for its multiple functions: as 'object marker' (nonsubject argument), and as a marker of spatial-temporal expressions. Note on Table 4.9 that *-de* can occur after any of the morphemes in the slots 2-8. The object marker *-de* and the spatial-temporal morpheme *-de* are discussed in separately; however, I treat them as being the same morpheme.

4.5.9.1 The Object Marker: *-de*

Some nouns that function as objects of transitive and ditransitive verbs are marked by the suffix *-de*.

The Subject has no overt marking. In (118)-(120), *-de* marks the object of transitive verbs.

(118) ĩgʉ̃ yegʉre bohkayʉ̃mĩ

~igʉ	yee-gʉ-**de**	boka-~yu-~bi
3SG:M	jaguar-CLS:trunk-REF	find-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He found the sacred cane.’[86]

(119) wãã̆bʉ ã̆ɾĩyũmã ĩgʉ̃ɾẽ weɾeɾã

~wa-bʉ	~adi-~yu-~ba
be.good-PERF-NON3.PERF	say-EVID:QUOT/FOLK-3PL:AN.IMPERF
~igʉ-**de**	wede-~da
3SG:M-REF	tell-3PL:AN.PERF

‘“It was good,” they told him.’

(120) ẽɾã mã̆hsʉ̃duaɾã ĩyũɾã ẽɾã̆ɾẽ

~eɾa	~basʉ-dua-~da	i-~yu-~da
3PL:AN	tame-want-PL:AN.PERF	do-EVID:QUOT/FOLK-PL:AN.PERF
~eda-**de**		
3PL:AN-REF		

‘They want to raise them.’

With ditransitives, only the indirect object is marked, as shown in (121).

(121) ĩgʉ̃ tĩgõɾẽ wa’i o’gʉ imĩ

~igʉ	~tigo-**de**	wai	oo-gʉ	i-~bi
3SG:M	sister-REF	fish	give-3SG:M	do-3SG:M.IMPERF

‘He is giving fish to his sister.’

Deictic expressions also receive the referential marker *-re* when they are coded as complement (object) of a verb (construction) coding motion, as in (119) and (120).

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[86] The word *yee* ‘jaguar/shaman’ as a mythical entity can receive the classifier *-gʉ* ‘CLS:trunk’ to refer to another mythical entity, the sacred cane.

(119) ĩgʉ̃ eɾoɾe yãmãhãnʉ̃gãyʉ̃mĩ

~igʉ edo-**de** ~ya-~baa-~dʉga-~yu-~bi

3SG:M DEIC:DIST-OBJ see-stop-stand.up-EVID:QUOT/FOLK-3SG:M.IMPERF

‘There, he looked (around), stopped and stood up.’

(120) mʉ̃’ʉ̃ãsã õgeɾe mãhkãgeɾe mãhãɾĩke

~bʉʉ-a-~sa ~o-ge-**de**

2SG-PL:AN-ADD DEIC:PROX-LOC-REF

~baka-ge-**de** ~ba-adi-ke

settlement-LOC-OBJ stop-come-IMP

‘You too, come here, to the settlement.’

The referential *-ɾe* is also used to code complements as ‘experiencers’ of the idea expressed by the verb, as in (121) and (122).

(121) i yʉ’ʉɾe duyaɾo ãɾĩyʉ̃mĩ

i yʉʉ-**de** duya-do ~adi-~yu-~bi

DEIC:PROX 1SG-REF lack-NON3.PERF say-EVID:QUOT/FOLK-3SG:M.IMPERF

‘“To me, this is missing,” he said.’

(122) mʉ̃’ʉ̃ pagʉ mʉ̃’ʉ̃ɾẽ doɾegʉ

~bʉʉ pa-gʉ ~bʉʉ-**de** dode-gʉ

2SG progenitor-3SG:M 2SG-REF command-3SG:M

‘Your father ordered you.’

4.5.9.2 The Spatial-Temporal: *-de*

The morpheme *-de* <-ɾe> can also function as a marker of spatial-temporal expressions. In this function, *-de* generally occurs after the 'locative' marker *-ge*, as shown in (123)-(125). The expression *tãtũs ciglos* in (125) is a borrowing from Spanish *tantos siglos* 'many centuries'.

(123) i ʉ̃mʉ̃ge pʉ̃ɾĩ ãɾĩɾo nẽgeɾe

i	~ʉbʉ-ge	~pʉɾi-~adi-do	~de-**ge-de**
DEM:PROX	universe-LOC	be.unclean-be-NON:ABSTR	nothing-LOC-REF

'This universe was impure in the beginning.'

(124) yʉ'ʉ ye yãɾõgeɾe

yʉʉ	ye	~ya-do-**ge-de**
1SG	shaman	see-NOM:ABSTR-LOC-REF

'My vision of/as shaman.'

(125) tãtus ciglos pʉɾʉgeɾe aɾiyũmĩ ĩgʉ̃

tãtus	ciglos	pʉdʉ-**ge-de**	adi-yu-~bi
many	centuries	after-LOC-REF	come-EVID:QUOT/FOLK-3SG:M.IMPERF

~igʉ
3SG:M

'After many centuries, he came.'

In (126) *-ɾe* occurs after the 'additive' marker *-~sa* (slot 8 in the nominal morphology template); and in (127) it is suffixed directly onto the nominal particle. In these examples, *-ɾe* also functions to mark a spatial reference. However, it should be noticed that in (128), despite occurring after the 'additive' suffix *-~sa*, the referential marker *-ɾe* functions as a marker of non-subject argument, which indicates that *-ɾe* has a flexible order.

(126) ĩgʉ̃ wahaɾã i yebapʉsãɾẽ bahaɾã ãɾĩkãyũmã

~igʉ	waaa-~da	i	yeba-pʉ-~sa-**de**
3SG:M	enmity-PL:AN	DEIC:PROX	ground-CONTR-ADD-REF

baaa-~da	~adi-ka-~yu-~ba
many-PL:AN	be-EXIST-EVID:QUOT/FOLK-3PL:AN.IMPERF

'"There were many enemies of him in this land too," they said.'

(127) õɾẽ ĩgʉ̃ wiɾinʉ̃gã yãyũmĩ

~o-**de**	~igʉ	widi-~dʉga-~ya-~yu-~bi
DEIC:PROX-REF	3SG:M	leave-to.stand.up-see-EVID:QUOT/FOLK-3SG:M.IMPERF

'(Around) here he got up, went outside, and saw.'

(128) gõãmʉ̃ɾẽ ĩgʉ̃ iɾiɾo dopãta ãɾĩa ĩgʉ̃sãɾẽ

~goa-~bʉ-**de**	~igʉ	i-di-do	~dopa-ta	~adi-a
bone-IND-REF	3SG:M	do-PERF-NON3.IMPERF	COMP-EMPH	be-PERF

igʉ-~sa-**de**
3SG:M-ADD-REF

'As it was done with God (Jesus), it was (done) with him too.'

4.6 Noun Phrase Structure

In this section, I present a description of the structure of noun phrases in Desano. The noun phrase in Desano is described following the typology proposed in Dryer (2007). It is possible to identify two types of noun phrases in Desano: (i) simple noun phrases, formed by pronouns or nouns plus simple modifiers (demonstratives, numerals, adjectives); (ii) complex noun phrases, formed by possessive or genitive modifiers and relative clauses.

In general, the order of constituients within a noun phrase is: modifier + head noun, which is generally the case in languages with a basic Object-Verb order (Givón 2001a:242; Song 2001).

4.6.1 Simple Noun Phrases and Their Parts

Simple noun phrases are considered to be common in languages, and they refer to noun phrases which are formed by either a single unmodified noun or a pronoun (cf. Dryer 2007). Desano does not have articles. The types of noun phrases illustrated in examples (129)-(131) are quite frequent in the language.

(129) bui duɾiamĩ

[bui]$_{\text{NP}}$ dudi-a-~bi

agouti flee-PERF-3SG:M.IMPERF

‘the/a agouti escaped.’

(130) yiaye pĩɾũɾẽ kuɾiamĩ

[yeaye]$_{\text{NP}}$ [~pidu-de]$_{\text{NP}}$ kudi-a-~bi

dog snake-REF bite-PERF-3SG:M.IMPERF

‘The/a dog bit the/a snake.’

(131) ĩŋʉ̃ kãɾĩmĩ

[~igʉ]$_{\text{NP}}$ ~kadi-~bi

3SG:M sleep-3SG:M.IMPERF

‘He sleeps.’

4.6.1.1 Demonstrative Modifiers

As nouns modifiers, demonstratives function to point out, or focus on the nouns they modify. In sections 4.3.5.3, 4.4.1, and 4.4.4, it was shown that some independent nouns, including pronominal forms, are derived from particles which have deictic and anaphoric functions. A demonstrative pronoun derived from one of these particles can occur by itself as a noun phrase, as in (132)-(134). In these examples, the demonstratives are used anaphorically to refer to a noun that has already been introduced. In (132), *ĩta* refers to a male person, previously mentioned in the text; whereas in (133), *iɾipẽta* refers to the text itself. In (134), the demonstrative *iɾi* is overtly marked with the specific class marker *-gʉ* ‘CLS:tree’ functioning as anaphoric link to the referent noun *yʉhkʉgʉ* ‘tree’, previously introduced in the narrative.

(132) ĩta mʉ̃tãyũmĩ

~i-ta ~bʉta-~yu-~bi

DEM:PROX:AN-EMPH be.ahead-EVID:QUOT/FOLK-3SG:M.IMPERF

‘This (one) was going ahead.’

(133) iɾipẽta

idi-~pe-ta

DEM:PROX:IN-SOL-EMPH

‘This (is) all.’

(134) iɾigʉ beaɾã inĩɾã iɾoge doaɾã weɾenĩyũɾã

idi-gʉ bea-~da i-di-~da

DEM:PROX-CLS:trunk land-PL:AN.PERF do-PERF-PL:AN.PERF

ido-ge doa-~da wede-~adi-~yu-~da

DEM:PROX-LOC sit-PL:AN.PERF tell-say-EVID:QUOT/FOLK-PL:AN.PERF

‘(They) landed on this tree, sit and talked.’

As modifiers, demonstratives co-occur with the head nouns, as shown in (135)-(137). Although in these examples the demonstratives are not overtly marked with the noun class features (gender/classifier) of the referent noun, they are still agree with the head noun in animacy.

(135) ĩpʉ̃sã ĩgʉ̃ mʉ̃r̃ʉ̃yẽmẽr̃ã

~i-pʉ-~sa ~igʉ ~bʉdʉ-~ye-~beda

DEM:PROX:AN-CONTR-ADD 3SG:M tobacco-CLS:tangled-COM/INSTR

‘This other (one) too with his tobacco.’

(136) ĩ gãmũmẽr̃ã

~i ~gabu-~beda

DEM:PROX:AN brother-COM/INSTR

‘(with) this brother…’

(137) ĩ yebamãhsʉ̃ i nĩhkʉ̃mʉ̃hʉ̃ ãr̃ĩyũmĩ ĩgʉ̃

~i yeba-~basʉ i ~dikʉ-~bʉʉ

DEM:PROX:AN ground-person DEM:PROX:IN earth-origin

~adi-~yu-~bi ~igʉ

be-EVID:QUOT/FOLK-3SG:M.IMPERF 3SG:M

‘This *Person of the Ground* was from this planet.’

The demonstrative *gahi* ‘other’ can occur by itself in the noun phrase, as shown in (138), or it can co-occur with the head noun, as shown in (139). It should be noted that when *gahi* occurs by itself in the noun phrase, it is overtly marked with the class marker of its referent. In (168) the referent noun is a masculine animate noun, anaphorically marked by the ‘third person singular masculine’ class marker *-gʉ*. In (139), *gahi* does not have an overt marker.

(138) gahigʉ aɾikumĩ daha
gai-gʉ adi-ku-~bi daa
other-3SG:M come-ADVERS-3SG:M.IMPERF again
‘Another one will come again.’

(139) gahi mãhkãge kuɾigãgʉ̃ ikumĩ
gai ~baka-ge kudi-~ga-gʉ i-ku-mĩ
other settlement-LOC walk-path-3SG:M do-FUT-3SG.M
‘He will walk to the other community.’

4.6.1.2 Quantifier Modifiers

The quantifier expressions that can occur as modifiers in the noun phrase are number and quantity expressions. These quantifiers can also occur by themselves as the head of a noun phrase.

4.6.1.2.1 Number

These quantifiers generally preceed the nouns they modify. There are three simple numeral noun roots that can be identified in Desano, they are: *yuhu* ‘one’, *pe* ‘two’, and *ʉɾe* ‘three’. Numeral noun roots are overtly marked for the noun class feature of the head noun only if the head noun is animate, as shown in (140a-b), (141a-b) and (142a-b). If the head noun is inanimate, the numeral modifier is not overtly marked for the class marker feature of the head noun, as shown in (140c-d), (141c-d) and (142c-d).

(140) a. yuhugʉ mãhsʉ̃

yuu-gʉ ~basʉ

one-3SG:M person

‘one (male) person’

b. yuhugo nõmẽõ

yuu-go ~dobe-o

one-3SG:F female-3SG:F

‘one woman’

c. yuhu gahsiɾu

yuu gasi-du

one canoe-CLS:concave

d. yuhu gãhpĩbu

yuu ~gapi-bu

one sweet.potato-CLS:basket

‘one basket of sweet potatoes’

(141) a. peɾã kãɾãyã

pe-~da ~kaɾaya

two-PL:AN chicken

‘two chickens’

b. peɾã nõmẽã

pe-~da ~dobe-a

two-PL:AN female- PL:AN

‘two women’

c. pe wi’iɾi

pe wii-di

two house-PL:IN

‘two houses’

d. pe diuɾi

pe diu-di

two egg-PL:IN

‘two eggs’

(142) a. ʉɾeɾã nõmẽã

ʉde-~da ~dobe-a

three-PL:AN female-PL:AN

‘three woman’

b. ʉɾeɾã yea

ʉde-~da ye-a

three- PL:AN jaguar-PL:AN

‘three jaguars’

c. ʉɾe diuɾi

ʉde diu-di

three egg-PL:IN

‘three eggs’

Besides co-occuring with the noun they modify in the noun phrase, the numerals *yuhu* ‘one’, *pe* ‘two’ and *ʉɾe* ‘three’ can also occur by themselves as the head of the noun phrase, as shown in examples (143)-(145). In these cases, they have an anaphoric function, and thus are overtly marked with the noun class feature of the noun they refer to.

(143) a. yuhugʉ
yuu-gʉ
one-3SG.M
‘one/a man’

b. yuhuyẽta
yuu-~ye-ta
one-CLS:tangled-EMPH
‘one/an idea’

(144) a. peɾʉ̃
pe-~da-ʉ
two-PL:AN-M
‘two males’

b. peɾu
pe-~du
two-CLS:day
‘two days’

(145) a. ʉɾeɾʉ̃

ʉɾe-~da-ʉ

three-PL:AN-M

‘three people’

b. ʉɾenʉ̃

ʉde-~dʉ

three-CLS:day

‘three days’

The numbers ‘four’ and ‘five’ are derived from the complex structures show in (146) and (147), respectively.

(146) wahpikʉ

wapi-kʉ

pair-add

‘four’

(147) yuhu mõhõtõ

yuu ~boo-~to

one hand-CLS:palm

‘one hand’

As shown in Miller (1999:46), Desano employs a quintenary numeral system. As shown in (147), ‘five’ refers to one hand. Numbers higher than five are derived by the combination of a hand plus individual numbers, for example, ‘six’ is *yuhu mõhõtõkʉ yuhuru nĩãɾã* (lit. ‘one hand plus one other finger’). However, these more complex forms are rarely used, as speakers generally borrow the Portuguese or Spanish numbers.

In Desano, the numeral *yuhu* may have other semantic functions besides indicating quantity. One of the other functions seems to be for indefinite reference.[87] In these cases, the noun phrase introduces new participants in discourse in a construction of the type *one X*, as shown in (148).

(148) yʉ'ʉ yuhugota ãɾãbʉ

yʉʉ	yuu-go-ta	~adi-a-bʉ
1SG	one-3SG:F-EMPH	be-PERF-NON3.PERF

'I am one female (Desano).'

Another contruction codes the meanings 'by one self' or 'alone', as shown in the examples (149)-(150).

(149) kaɾu taɾisu puɾiamĩ yuhugʉta

kaɾu	tadi-su	pudi-a-~bi	yuu-gʉ-ta
Carlos	flute-CLS	blow-PERF-3SG.M.IMPERF	one-3SG:M-EMPH

'Carlos played flute by himself.'

(150) igo yuhugogã waapo

igo	yuu-go-~ga	wa-a-po
3SG:F	one-3SG:F-DIM	go-PERF-3SG:F.PERF

'She travelled alone.'

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[87] I follow the analysis proposed by Stenzel (2004:191) for the numeral *~kʉ* 'one' in Wanano, as this seems to be the same for *yuhu* 'one' in Desano.

4.6.1.2.2 Quantity

Indefinite quantities are expressed by quantifiers coding the meanings ‘many/a lot’, ‘a few’ and ‘all (of)’. The quantifier *baha* ‘many/a lot’ can occur either before or after the head noun, as illustrated in (151)-(152), respectively. It also should be noted in these examples that the quantifier word is overtly marked for number and animacy of its referent noun.

(151) bahaɾã ãɾĩkayũmã

baa-~da ~adi-ka-~yu-~ba

many-PL:AN be-have-EVID:QUOT/FOLK-3PL:AN.IMPERF

‘there were many (people)’

(152) wa’i bahaɾã

wai baa-~da

fish many-PL:AN

‘many fish’

The quantifier word coding the meaning ‘a few’ is a complex structure derived from *baha* ‘many’, which takes the negative marker -~*be*, shown in (153) and (154). It should be noticed that in (153), the head of the noun phrase is the pronoun *gʉa* ‘first person plural exclusive’; it precedes the modifier which is overtly marked for the features number and animacy of the referent noun. In (154), the quantifier refers to an inanimate noun, it is not overtly marked for noun class features, and it receives the diminutive morpheme -~*ga*, which, in this case, codes emphasis.

(153) gʉa bahamẽɾã

gʉa baa-~be-~da

1PL:EXCL many-NEG-PL:AN

‘a few of us’

(154) bahamẽgã

baa-~be-~ga

many-NEG-DIM

‘a few (things)’

The quantifier coding the meaning ‘all (of)’ is also a complex structure derived from the verbal root *peɾe*- ‘to finish/to end’. It should be noticed that in (155), *peɾe* codes the verbal meaning ‘to end/to finish’, but in (156), it forms complex construction with the verb *ãɾĩ* ‘be’, plus a nominalizer -*ɾi* to code the quantifier modifier ‘all of’.

(155) i ʉ̃mʉ̃ peɾebea

i ~ʉbʉ pede-be-a

DEM:PROX:IN universe end-NEG-PERF

‘This universe does not end.’

(156) ãɾĩpeɾeɾi semanãɾẽ

~adi-pede-di semanã-de

be-end-NOM:IN week-REF

‘all (of) the week’

Independent quantifier expressions coding ‘a lot of/a large amount of’ and ‘a small amount of/a little’ of are constructed with the descriptive verb roots *wʉa*- ‘be big’ and *ãmẽ*- ‘be small’, which are nominalized, as shown in (157) and (158).

(157) dehko wʉaɾo

deko wʉa-do

water be.big-NOM:ABSTR

‘a large amount of water’

(157) dia ãmẽɾõgã yuɾa nẽmõãdeɾo ãɾãbʉ

dia ~abe-do-~ga yuda-~debo-a-de-do

river be.small-NOM:ABSTR-DIM raise-increase-PERF-PERF-NON3.IMPERF

‘(The water in) the river has raised a little.’

4.6.1.3 Adjectival Modifiers

In Section 3.4.1.3.1 of Chapter 3, it was claimed that Desano does not have an adjective class with grammatical characteristics that make it distinct from the classes of nouns and verbs. Instead, in Desano, adjectival expressions are derived from stative verbs. In this section, I describe the uses of adjectivals in their attributive function (modifying a noun within the noun phrase) and their predicative function (occurrying as a predicate), and use the term ‘semantic adjective’ to characterize them.[88]

Examples (158)-(161) illustrate the attributive construction. Descriptive verbs used as semantic adjectives are nominalized in order to modify nouns, and they agree with the class marker feature (gender/classifier) of the head noun. For example, in (158) the specific class marker (classifier) *-gʉ* ‘trunk’ of the head noun is overtly marked in the nominalized modifier. In (159), there is gender agreement between the head noun and its modifier. However, in (160), there is overtly marked agreement between the modifier and the head noun. It should be noticed that in (158) and (159), the modifier follows the head noun, whereas in (159), the modifier precedes the noun. I hypothesize that when the modifier precedes the head noun, it is not overtly marked for the class marker feature of the head noun, as also shown in (161).

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[88] I follow Dryer (2007:168) who describes the term ‘semantic adjective’ as an expression to to refer to words that are adjective-like on the base of their meaning, regardless of their grammatical properties.

(158) yʉhkʉgʉ ãmẽdigʉgã ãɾã

[[yʉkʉ-gʉ]$_{N}$ [~abe-di-gʉ-~ga]$_{MOD}$]$_{NP}$ ~adi-a

tree-CLS:trunk be.small-NOM:IN-CLS:trunk-DIM be-PERF

'The tree is (very) small.'

(159) ẽɾã dehko ãɾĩmĩ ẽɾã pagʉ wʉagʉ

~eda deko ~adi-~bi [[~eda pa-gʉ]$_{N}$ [wʉa-gʉ]$_{MOD}$]$_{NP}$

3AN:PL half be-3SG:M.IMPERF 3PL:AN genitor-3SG:M be.big-3SG:M

'Among them there was their big father.'

(160) eɾosã wʉaɾi wi'i ãɾĩyõ

[edo-~sa] [[wʉa-di]$_{N.MOD}$[wii]$_{N}$]$_{NP}$ ~adi-yo

DEIC:DIST-ADD be.big-NOM:IN house be-EVID:HSAY

'There also there was a big house.'

(161) wʉaɾi dihtaɾuge tʉɾoge ãɾĩyũɾõ yʉhkʉgʉ

[[wʉa-di]$_{MOD}$ [dita-~du-ge tʉdo-ge]$_{N}$]$_{NP}$

be.big-NOM:IN lake-CLS:concave-LOC shore-LOC

~adi-~yu-do yʉkʉ-gʉ

be-EVID:QUOT/FOLK-NON3.PERF tree-CLS:trunk

'On the shore of a big lake, there was a tree.'

The equivalent of a semantic adjective in a predicative function is expressed by a non-nominalized descriptive verb, as illustrated in examples (162a)-(163a). In (162b) and

(163b), the semantic adjectives are in the attributive function, and thus trigger agreement to the noun they modify. (162a) is used to refer to the temperature in general (e.g. 'it's hot today', '(the soup) is hot'); (162b), in the attributive function, the semantic adjective has been nominalized and is overtly marked with the specific class marker *-~dʉ*. In (163a), as the descriptive verb receives the proper verbal morphology, it is the predicate of the sentence coding the 'adjectival' meaning, whereas in (163b) the semantic adjective is nominalized and shows gender agreement with the head of the noun phrase.

(162) a. ahsiãɾã

asi-~adi-a

be.hot-be-PERF

'(It) is hot.'

b. wãɾĩnʉ̃ ãɾã

[~wa-di-~dʉ]$_{\text{NP}}$ ~adi-a

be.good-NOM:IN-CLS:day be-PERF

'(It's a) nice day.'

(163) a. ĩgʉ̃ tuɾaduamĩ

[~igʉ]$_{\text{NP}}$ [tuda-dua-~bi]$_{\text{VP}}$

3SG:M be.strong-DES-3SG:M.IMPERF

'He wants to be strong.'

b. ĩgʉ̃ tuɾagʉ ãɾĩduamĩ

~igʉ tuda-gʉ ~adi-dua-~bi

3SG:M be.strong-3SG:M be-DES-3SG:M.IMPERF

'He wants to be strong.' (lit. 'He wants to be a strong one.')

The examples above show that, in Desano, semantic adjectives are grammatically verbs, having the same morphology (and syntax) of other verbs. Some modifiers are, in fact, relative clause contructions (see section 4.6.2.2).

Finally, an interesting typological characteristic of adjectives found in many indigenous language of South America, which is also present in Desano, is a set of these semantic adjectives which are structurally negative versions of a semantic adjective with the polar opposite meaning (cf. Campbell 2012).[89] Some examples in Desano are shown in (166)-(167).

(166) Mãɾĩ ʉ̃mãbego ãɾĩmõ

~baɾi ~ʉba-be-go ~adi-~bo

Maria be.tall-NEG-3SG:F be-3SG:F

‘Maria is short.’ (lit. ‘Maria is not tall.’)

(167) i tuɾabea

i tuda-be-a

DEM:PROX be.strong-NEG-PERF

‘This is soft.’

4.6.1.4 Locative Adverbial Modifiers

Locative adverbs expressed through locative demonstrative words (like ‘here’ and ‘there’ in English) can also function as modifiers of nouns in a noun phrase. This is shown in (168) and (169). It should be noticed that the locative demonstrative is overtly marked for for number and animacy agreeing with the head noun.

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[89] Campbell (2012: 295) provides examples of negative polar oppositive negatives for the languages Tiriyo and Taranoan (Cariban); Nivaclé (Matacoan), and; Chiriguano (Tupían, Tupí-Guaranían branch).

(168) sõã yẽmãɾã ãɾãmã

~so-a	~yeba-~da	~adi-a-~ba
DEIC:DIST-PL:AN	so.and.so-PL:AN	be-PERF-3PL:AN.IMPERF

‘Those there are (Tukano)’

(169) õã paia eha

[~o-a	pai-a]$_{\text{NP}}$	ea-a
DEIC:PROX-PL:AN	priest-PL:AN	arrive-PERF

‘Here the priests arrived.’

4.6.1.5 Interrogative Modifiers

In section 4.4.5 four interrogative nominals in Desano were identified: *nõã* ‘who’, *yẽ’ẽ* ‘what’, *nõ’õ* ‘where’ and *di’i* (also *nĩ’ĩ*) ‘which’. The pro-forms generally occur alone in the noun phrase, as discussed in section 4.4.5, and illustrated in (170)-(171), using the pro-form *nõã* ‘who’.

(170) nõãpʉ̃ buɾiõmã?

[~doa-pʉ]$_{\text{NP}}$	budi-~oba
who-CONTR	be.hard-run

‘Who runs faster?’ (lit. ‘who other than me runs faster?’

(171) nõãpʉ sipʉmãsẽge taɾibuhua mʉ̃tãɾõkuɾi?

[~doa-pʉ]$_{\text{NP}}$	si-pʉ	~base-ge
who-CONTR	DEIC:DIST-CONTR	shore-LOC

tadi-bua-~bʉta-do-ku-di

pass-across-go.ahead-PERF-ADVER-INTER

‘Who will cross to the shore (first)?’

The pro-form *yẽ’ẽ* ‘what’ also occurs alone (as the head) in a noun phrase, with a pronoun function. More commonly, the pro-form *yẽ’ẽ* uses a construction suffixed by the morpheme *nõ’õ* ‘where’ to express ‘doubt’.[90] Thus, (172) and (173) can be used as interrogatives. The difference between these two is that (172) would allow the answer to be “nothing (is missing)”, whereas in (173), it implies that something is missing.

(172) yẽ’ẽ duyaɾiɾo ãɾĩyũmĩ?

[~yee]$_{NP}$	duya-di-do	~adi-~yu-~bi
what	lack-INTER-NON3.PERF	say-EVID:QUOT/FOLK-3SG:M.IMPERF

‘“What is missing?” he said.’

(173) yẽ’ẽnõõ duyaɾiɾo ãɾĩyũmĩ?

[~yee-~doo]$_{NP}$	duya-di-do	~adi-~yu-~bi
what-where	lack-INTER-NON3.PERF	say-EVID:QUOT/FOLK-3SG:M.IMPERF

‘“What is missing?” he said.’

Unlike *nõã* ‘who’ and *yẽ’ẽ* ‘what’, the interregotive pro-form *di’i* ‘which’ generally occurs as a modifier in the noun phrase. When it occurs as modifier of an animate noun, *di’i* does not receive any extra morphology agreeing showing agreement with the head noun, as shown in (174)-(175). However, *di’i* is overtly marked for the specific class (classifier) feature of an inanimate head noun, as shown in (176)-(177).

(174) di’i kuɾumãhãɾã ãɾĩɾĩ õã nãhsẽãpʉ

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[90] When *nõõ* is suffixed to *yẽ’ẽ* it is pronounced [yẽ’ẽnõõ] and it indicates ‘uncertainty’.

[dii]$_{\text{MOD}}$ [kudu-~baa-~da]$_{\text{N}}$]$_{\text{NP}}$ ~adi-di ~o-a

which knot-location-PL:AN be-INTER DEIC:PROX-PL:AN

~dase-a-pʉ

Tukano-PL:AN-CONTR

‘Which clan are these other Tukano from?’

(175) di’i diaye mʉ̃’ɾẽ kũɾĩãɾĩ

[[dii]$_{\text{MOD}}$ [diaye]$_{\text{N}}$]$_{\text{NP}}$ ~bʉʉ-de ~kudi-a-di

which dog 2SG-REF bite-PERF-INTER

‘Which dog did bite you?’

(176) di’iɾu gahsiɾu eheayuɾi?

[[dii-du]$_{\text{MOD}}$ [gasi-du]$_{\text{N}}$]$_{\text{NP}}$ ea-a-~yu-di

which-CLS:round bark-CLS:round arrive-PERF-EVID:QUOT/FOLK-INTER

‘Which canoe has arrived?’

(177) di’ibu puibu mʉ̃’ʉ̃ ahpiaɾi?

[[dii-bu]$_{\text{MOD}}$ [pui-bu]$_{\text{N}}$]$_{\text{NP}}$ ~bʉʉ api-a-di

which-CLS:concave basket-CLS:concave 2SG leave-PERF-INTER

‘In which basket did you leave (it)?’

Finally, the pro-form *nõ’õ* ‘where’ can occur as an independent word when modifying an animate head noun, as in (178); or, more commonly, as a construction suffixed by nominal morphology indicating origin and location - in which case these constructions function as the head noun, as illustrated in (179) and (180).

(178) nõ’õ mʉ̃’ʉ̃ koaduhkaɾu ahpiaɾi

[[~doo]$_{\text{MOD}}$ [~bʉʉ]$_{\text{N}}$]$_{\text{NP}}$ koa-duka-du where 2SG gourd-fruit-CLS:concave

api-a-di

leave-PERF-INTER

‘Where did you put the bowl?

(179) nõ’omʉ̃hʉ̃ ãɾãɾĩ ĩgʉ̃

[~doo-~bʉʉ]$_{NP}$ ~ada-di i-~gʉ

where-CLS:origin be-INTER DEM:PROX-3SG.MASC

‘Where is he from?’

(180) nõ’õge ãɾãɾi mʉ̃’ʉ̃ã wãĩ

[~doo-ge]$_{NP}$ ~ada-di ~bʉʉ-a ~wai

where-LOC be-INTER 2SG-PL:AN uncle

‘Whereabouts are you (living), uncle?’

4.6.2 Complex Noun Phrases

According to Dryer (2007:151), complex noun phrases are considered those that contain genitive or possessive modifiers or relative clauses.

4.6.2.1 Genitive (or Possessive) Constructions

The term ‘genitive’ is used here generally to refer to the type of constructions in which a noun occurs with another noun phrase denoting possession. However, the semantic relation between the genitive noun phrase and the head noun is not limited to possession; hence the term ‘genitive construction’ is used (cf. Huddleston and Pullum 2009).

4.6.2.1.1 Genitive construction with nominal possessors

In Desano, genitive constructions with nominal possessors are not overtly marked. The possessor and possessed nouns are juxtaposed in Genitive-Noun order, as shown in (181)-(183).

(181) nũhpĩ põɾã

~dupi ~po-~da

mutum.bird progeny-PL:AN

‘mutum bird’s squab’

(182) gahki poadaɾi

gaki poa-da-di

monkey hair-CLS:thread-PL:IN

‘monkey’s hair’

(183) mãhã poaɾi gahsiɾo

~baa poa-di gasi-do

macaw hair-PL:IN bark-CLS:body.part

‘macaw’s feather hairdress’

It should be noticed that when the genitive noun has an attributive function, instead of possessive function, the structure is Noun-Genitive order, as shown in (184a); or it can have the structure Noun-Class Marker, as in (184b).

(184) a. geɾe ʉ̃ɾĩnʉ̃

gede ~ʉdi-~dʉ

season pupunha.fruit-CLS:day

‘the season of pupunha season’ (lit. ‘the season is pupunha fruit’s’)

b. peɾunʉ̃ ãɾã

pedu-~dʉ ~ada

caxiri.drink-CLS:day be

‘day of caxiri drink’ (lit. ‘(It) is caxiry day.)

4.6.2.1.2 Possessive pronouns

The possessive pronoun markers in Desano have the same form as the personal pronouns discussed in Section 4.4.1 above, repeated here for convenience in Table 4.10.

Table 4.10 Possessive pronouns

	SINGULAR		**PLURAL**	
	MASC	**FEM**		
1ST PERSON	*yʉ’ʉ*		*mãɾĩ* ‘inclusive’	*gʉa* ‘exclusive’
2ND PERSON	*mʉ̃’ʉ̃*		*mʉ̃’ã*	
3RD PERSON	*ĩgʉ̃*	*igo*	*ĩɾã* or *ẽɾã*	

Possessives pronouns are independent words which occur before the head noun, as shown in (185). It should be noticed that these pronouns do not undergo any type of phonological change when used in possessive constructions.

(185) a. yʉ'ʉ pagʉ
yʉʉ pa-gʉ
1SG genitor-3SG:M
'my father'

b. mʉ̃'ʉ̃ pagʉsãmãɾã
~bʉʉ pa-gʉ-~saba-~da
2SG genitor-3SG:M-vagina-PL:AN
'your ancestry'

c. ĩgʉ̃ mãgʉ̃
~igʉ ~ba-gʉ
3SG:M child-3SG:M
'his son'

d. mãɾĩ wi'iɾi
~badi wii-di
1PL:INCL house-PL:IN
'our houses'

e. ẽɾã nõmẽã
~eda ~dobe-a
3PL female-PL:AN
'their wives' (lit. their women)

4.6.2.1.3 Alienable and Inalienable Possession

In Desano there is a contrast between alienable and inalienable possession. Kinship terms and body parts are inalienably possessed, that is, where the relationship between possessor and possessed is an inherent or permanent one, as shown in (186a-b). In alienable possession, the relationship is a conventional one, which can be terminated, shown in (187a-b). It should be noticed that, in Desano, the construction with alienable possession has the morpheme *ya* with the possessor noun in (187a-b). This occurs with all instances of alienable possession found in the data.

(186) a. ĩgʉ̃ tĩgõ

~igʉ ~ti-go

3SG:M sibling-3SG:F

‘his sister’

b. igo põɾã

igo po-~da

3SG:F progenee-PL:AN

‘her children’

(187) a. mʉ̃’ʉ̃ ya wi’i

~bʉʉ ya wii

2SG GEN house

‘your house’

b. ĩgʉ̃ ya mʉ̃ɾʉ̃kʉ

~igʉ ya ~bʉdʉ-kʉ

3SG:M GEN tobacco-CLS:tree

‘his tobacco plant’

The possessive marker *ya* is analyzed here as a clitic, as shown in (187) above and (188a-c) below.[91] It can be the root morpheme in derivations such as the ones in (188), in which the the class marker *-gʉ* ‘third person singular masculine’ and *-go* ‘third person singular feminine’ are attched to the root *ya* in (188a) and (188b) respectively.

(188) a. gʉaya kuɾu

gʉa=ya kudu

2PL:EXCL=POSS knot

‘our group’

b. nãhsẽã ya nĩhkʉ̃

~dase-a=ya ~dikʉ

Tukano-PL:AN=POSS land

‘Tukano’s land’

c. ẽɾã ya bueɾi

~eda=ya bue-di

3PL=POSS study-NOM:IN

‘their studies’

(189) a. ĩ doto mãɾĩ yagʉ

~i doto ~badi ya=gʉ

DEM:PROX:AN doctor 1PL:INCL POSS=3SG:M

‘this doctor of ours’

---

[91] Stenzel (2004:197-198) argues that, in Wanano, the morpheme *ya* is a root.

b. ĩgʉ̃ yago

~igʉ ya=go

3SG:M POSS=3SG:F

'his wife'

The example in (190) shows contructions with both alienable and inalienable possession.

(190) ĩgʉ̃ nẽhkʉ̃ ya wi'i

~igʉ ~yekʉ=ya wii

3SG:M grandfather=POSS house

'his grandfather's house'

4.6.2.1.4 The locative possession: -~*baa* <bãhã>

In Desano, the morpheme *bãhã* codes a relationship between beings and their place of origin, as shown in (191) and (192).

(191) iɾi kuɾu mãhãɾã ãɾĩɾĩ

idi kudu ~baa-~da ~adi-di

DEM:PROX knot belong.to-PL:AN.PERF be-PERF

'(They) are from this group.'

(192) wĩɾã sãgabrie mãhãɾã

~wida são.gabriel ~baa-~da

Desano São Gabriel belong.to-PL:AN.PERF

'Desanos from São Gabriel'

4.6.2.2 Relative Clauses Modifiers

In section 4.6.1.3, it was shown that adjectival expressions derived by descriptive and stative verbs, called semantic adjectives, are common modifiers in the noun phrase. Dryer (2007:169) claims that 'semantic adjectives' are not grammatically distinct from relative clauses.

In Desano, relative clauses are nominalized (cf. Kaye 1968, 1971:103-147) constructions as illustrated in the examples (193) and (194), which show the nominalized relative clauses as modifiers of the head noun.

(193) igo mãhĩɾãɾẽ boego ãɾĩmõ

[[igo]$_{\text{N}}$ [~bai-~da-de boe-go]$_{\text{RC MOD}}$]$_{\text{NP}}$ ~adi-~bo

3SG:F child-PL:AN-REF:OBJ study-3SG:F be-3SG:F

'She is the one who teaches children.' (= 'she is a teacher.')

(194) ĩgʉ̃ wa'i wehigʉ ãɾĩmĩ

[[~igʉ]$_{\text{N}}$ [wai wei-gʉ]]$_{\text{RC MOD}}$ ~adi-~bi

3SG:M fish kill-3SG:M be-3SG:M.IMPERF

'The one who kills fish.' (lit. 'He is a fisherman.')

4.7 Summary

In this chapter I have described the nominal morphology of Desano. I described the basic structure of nouns and the different types of nouns, including the ones derived from particles. It was shown in section 4.3 that nouns in Desano are divided into two main types: animate and inanimate. These nouns are subcategorized according to the noun-class markers they take. Animate nouns take general class markers (gender markers) and inanimate nouns take specific markers (classifiers). The general class markers were also described in this chapter, followed by a discussion of how they are used to derive new nouns from other nominal roots or verbal roots.

The chapter also presented a discussion of pronouns and other pro-forms (section 4.4). It was shown that it is possible to identify five pro-forms for the language: personal pronouns, demonstrative pronouns, and interrogative pronouns. Other nominal morphemes were described in section 4.5. Two lexical morphemes were identified: the diminutive morpheme -~*ga* and the augmentative morpheme -*guro*. There are six grammatical morphemes that attach to nouns. These were discussed in the order in which they appear when suffixed to the root (or stem).

Finally, in section 4.6, it was shown that the structure of noun phrases can be divided in two groups according to the types of modifiers they take. One is the simple noun phrase, formed by a pronoun or noun plus simple modifier (demonstrative and numeral) and the other is complex noun phrase, formed by possessive (or genitive modifiers) or relative clauses.

CHAPTER 5

VERBAL MORPHOLOGY

5.1 Introduction

In this chapter, I describe the verb types and their morphological structure. In Section 5.2, the general structure of verb roots is characterized. Section 5.3 presents a description of the verb classes found in Desano, namely, stative, non-stative, and auxiliary verbs. Section 5.4 describes the types of serial verb constructions. In Section 5.5 the grammatical morphemes that are suffixed onto the verb root are described in the order they appear in the verb template, these include dependent verb roots, negative suffix, aspectual suffixes, markers of modality and evidentiality and agreement markers.

5.2 Structure of Verb Roots

The Verb roots in Desano have the following characteristics:[92]

iv. they are bimoraic: [góé] 'to return', [koɾé] 'to stay';

v. they are lexically specified as nasal [+nasal] or oral [-nasal]: /~adi/ [ãɾĩ] 'to be', /adi/ [aɾi] 'to come'; and,

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[92] For discussions of tone, bimoraic root structures, and morphemes specified as nasal vs. oral, see Chapter 2 on Phonology.

vi. Verbs are lexically specified for tone (each root requires at least one high tone): /~adi/ [ã́ɾ̃ĩ] ‘to be’, /~adí/ [ãɾ̃ĩ́] ‘to say’. The great majority of verb roots in Desano is bimoraic and has CVCV shape. However, verb roots of the shape V are also found, for example, /i/ [ii] ‘to do’; /u/ [uu] ‘to seal’. Unlike nouns, verb roots are not marked for stress. Stress is assigned when additional morphology is suffixed to the root (see Section 2.3.2, Chapter 2).

5.2.1 Derived Verbs

In Desano, verbs can be derived from nominals in two ways. One is derivation with the verbalizer suffix *-kʉ* attached to a nominal root; and the other is derivation through noun incorporation.

5.2.1.1 Verbs Derived with the Verbalizer *-kʉ*

Some verbs are derived from nominals with the nominalizer suffix *-kʉ*, as shown in examples (1) and (2). In (1), the verb *wãĩkʉ* ‘to name/be called’ is derived from the noun *wãĩ* ‘name’; after being verbalized, it receives the aspectual suffix *-di*, seen in (1). In (2), the verb *dikʉ* ‘to become fat’ is derived from the noun *di* ‘meat’, and receives the Subject-verb agreement marker *-mĩ* for third person masculine.

(1) ĩgʉ̃ yo’gʉ wãĩkʉdi ãɾ̃ĩmĩ

~igʉ	yogʉ	**wãĩ-kʉ-di**	~adi-~bi
3SG:M	stutter	**name-VBLZ-IMPERF**	be-3SG:M.IMPERF

‘He was called stutterer.’

(2) ĩgʉ̃ dikʉmĩ

~igʉ **di-kʉ-~bi**

3SG:M **meat-VBLZ-3SG:M.IMPERF**

‘He fattened (up).’

5.2.1.2 Noun Incorporation

In Desano, some verbs stems are derived by a process of noun-verb compounding generally know as noun incorporation (cf. Mithun 1999:44). Examples of noun incorporation are shown in (3) and (4). In (3), the verb stem *dʉhkawaɾi* ‘to split up’ is derived from the noun root *dʉhka* ‘fruit’ and the verb root *waɾi* ‘to split’. In (4), the verb stem *pagãɾ̃ĩ* ‘to crawl’ is derived from the noun root *pa* ‘belly’ and the verb root *gãɾ̃ĩ* ‘to advance’.

(3) õã wãĩmʉ̃’ʉ̃sã dʉhkawaɾiyũmã

~o-a ~wai-~bʉʉ-~sa

DEIC:PROX-PL:AN uncle-2SG-ADD

dʉka-wadi-~yu-~ba

fruit-split-EVID:QUOT/FOLK-3PL:AN.IMPERF

‘These nephews (of mine) also split up (in groups).’

(4) pagãɾ̃ke

pa-~gadi-ke

belly-advance-IMP

‘Crawl!’ (imperative)

In general the type of noun incorporation found in Desano involves simple compounding of a noun plus a verb, as shown in the examples above. This type of noun incorporation is considering Type I, in Mithun's (1984) typology of noun incorporation.

Miller (1999:110-111) mentions other types of verbal derivations. She mentions, for example, the suffix *-ye* which can be suffixed to a noun root to derive verbs coding the meaning 'give'. Thus the noun root *wãĩ* 'name' derives the verb *wãĩye* 'to name'. Miller also describes a derivational process in which the 'assertive perfect' aspect suffix *-a* is attached to noun roots to derive verbs coding 'making into', for example, *dehko* 'water' derives the verb *dehkoa* 'melt'. I have not found examples of these types of derivation in my data.

5.3 Verb Classes

The Desano verbs can be classified into two major classes: stative and non-stative. The verbs in these classes have similar inflectional morphology when occurring in finite clauses. The inflectional verb paradigm is shown in Table 5.1. This section describes the morphosyntactic characteristics of these two classes of verbs, as well as their semantic subcategories.

5.3.1 Stative Verbs

The subcategories of stative verbs in Desano are: the copula verb *ãrĩ* /~adi/ 'be/exist/live/stay'; the nonexistential verb *mãrĩ* /~badi/; the stative possessive *ohpa* /opa/; locative and postpositional verbs; and descriptive stative verbs (semantic adjectives).

Table 5.1 Template of verbal morphology

Simple Verb Root	1 MAN	2 ASP	3 MOD	4 NEG	5 ASPECT	6 CLAUSE MODALITY	7 AGREEMENT MARKERS
(INDEP) ROOT	DEPENDENT VERB ROOT			bi(di)	PERFECT IMPERFECT ‘participle’	EVIDENTIAL INTERROGATIVE ‘ORIENTED’	‘third-person’ ‘non third-person’

5.3.1.1 Copula Verb

The copula verb *ãɾĩ* /~adi/ is used in constructions that code permanent or temporary states. The predicates in these clauses may function to describe the permanent states or attributes of the subject of the clause. The examples in (5) show that the copula verb is used to code an attribute or permanent state of the subject.

(5) a. ĩgʉ̃ colombiamʉ̃hʉ̃ ãɾĩmĩ

~igʉ Colombia-~bʉʉ **~adi-~bi**

3SG:M Colombia-CLS:origin **be-3SG:M.IMPERF**

‘He is Colombian.’

b. yʉhkʉgʉ wʉadigʉ ãɾã

yʉkʉ-gʉ wʉa-di-gʉ **~adi-a**

tree-CLS:trunk be.big-NOM-CLS:trunk **be-PERF**

‘The tree is big.’

In Desano, copula verbs are also used in constructions with dummy-subject clauses, as shown in (6). These constructions generally describe events referring to natural conditions or weather phenomena (cf. Givón 2001:117).

(6) a. ahsiɾi ãɾã

asi-di **~adi-a**

be.hot-NOM **be-PERF**

‘(It) is hot.’

b. wãɾĩnʉ̃ ãɾã

~wa-di-~dʉ **~adi-a**

be.good-NOM-CLS:day **be-PERF**

‘(It) is a good day.’

Besides coding states and attributes, the copula verb *ãɾĩ* is also used to indicate permanent or temporary location. In these cases, the copula is usually translated as ‘live’ or ‘stayed’ by the speakers.[93] The expression ‘dos ãyõ mẽõ’ in (7b) is a borrowing from Portuguese ‘dois anos e meio’ (two and a half years).

(7) a. eɾo ãɾĩyõɾã ẽɾã paɾe

edo **~adi-~yo-~da** ~eda pade

DEIC:DIST **be-EVID:HSAY-PL:AN.PERF** 3PL then

‘Then they lived there.’

---

[93] Stenzel (2004:264) also reports that for Wanano, speakers often gloss the copula as ‘to stay’ instead of ‘to be’.

b. ãɾĩkãmʉ̃ɾĩbʉ yʉ’ʉ õ teɾesitaɾe dos ãyõ mẽõ

~adi-ka-~bʉdi-bʉ yʉʉ ~o

be-EXIST-HAB-NON3.PERF 1SG DEIC:PROX

teɾesita-de dos ano meio

Teresita-REF two and half years

‘I was/stayed (lived) in Terezita for two and half years.’

Another function of the copula *ãɾĩ* is to indicate existence, as shown in (8).

(8) a. ãɾĩyũɾi?

~adi-~yu-di

be-EVID:QUOT/FOLK-INTER

‘There were (people there)?’

b. ĩgʉ̃ wahaɾã i yebapʉsãɾẽ bahaɾã ãɾĩkãyũmã

~igʉ waa-~da i yeba-pʉ-~sa-de

3SG:M enmity-PL:AN DEM:PROX land-CONTR-ADD-REF

baa-~ɾa **~adi-ka-~yu-~ba**

many-PL:AN **be-EXIST-EVID:QUOT/FOLK-3PL:AN.IMPERF**

‘There were many of his enemies in this land.’

5.3.1.2 The Nonexistence Verb

The stative verb *mãɾĩ* /~badi/ is an inherently negative stative verb that indicates ‘nonexistence’, as shown in examples (9) and (10). Cognates of the verb *mãɾĩ* /~badi/ are found in other Eastern Tukanoan language and with different glosses. [94]

(9) iɾi sibuɾe mãɾĩɾĩmã

idi sibu-de **~badi-di-~ba**

DEM:PROX time-REF **not.exist-IMPERF-3PL:AN.IMPERF**

'(During) this time, there were no (doctors); they (doctors) didn't exist.'

(10) nẽ mãɾĩyũmã nẽ mãɾĩyũmã yuhudiayeta ãɾĩkãya

~de **~badi-~yu-~ba**

nothing **not.exist-EVID:QUOT/FOLK-3PL:AN.IMPERF**

~de yuu-diaye-ta[95] ~adi-ka-ya

nothing simply be-EXIST-EVID:RES

'There was nothing; simply nothing existed.'

The stative verb *mãɾĩ* can also occur with noun incorporation, indicating 'lack of X/without X', as shown in (11) and (12); *mãɾĩ* can also indicate 'a few', as in (13).

(11) ĩgʉ̃ suɾimãɾĩ

~igʉ sudi-~**badi**

3sg:M clothing-**not.exist**

'He (is) naked'

(12) kaɾu dimãɾĩgʉ̃ ãɾĩmĩ

Carlos di-~**badi**-gʉ ~adi-~bi

Carlos meat-**not.exist**-3sg:M be-3sg:M.IMPERF

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[94] The glossing 'not.exist' is used here following Stenzel's gloss for the same verb in Wanano (2004:264).

[95] At this point, I do not have a final analysis for the word *yuhudiayeta* glossed by my consultants as 'simply'. Thus, for now, I use his gloss.

‘Carlos is skinny.’

(13) gʉa mõhõmãɾ̃kʉ̃ɾã

gʉa ~boo-~**badi**-kʉ-~da

1PL:EXCL hand-**not.exist**-FRUST-PL:AN.PERF

‘We (are) a few (people).’

5.3.1.3 Stative Possession: *ohpa* ‘HAVE’

The state of possession is coded by the transitive verb *ohpa* ‘to have’, as illustrated in the examples (14)-(16). It is used in constructions coding permanent states, as in (14), or in constructions coding temporary states, as in (15). The verb *ohpa* can also be used meaning ‘to hold’, as in the serial verb construction in (16).[96]

(14) bugu puaɾi ohpaɾimĩ

bugu pua-di **opa-di-~bi**

anteater claw-PL:IN **have-IMPERF-3SG:M.IMPERF**

‘The anteater has big claws.’

(15) ĩgʉ̃ teboɾi ohpamĩ

~igʉ tebo-di **opa-~bi**

3SG:M be.lazy-NOM **have-3SG:M.IMPERF**

‘He is lazy.’ (lit. ‘He has laziness.’)

(16) yẽã ãĩgãɾĩ wi’ige ehomãhsũopayũmã

~yea-~ai-~gadi wii-ge

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[96] According to Givón (2001:134), cross-linguistically, the verb of possession ‘to have’ is “historically derived from verbs such as ‘take’, ‘grab’, ‘seize’, ‘hold’ or ‘obtain’.”

comprise-take-advance house-LOC

eo-~basu-**opa**-~yu-~ba

feed-tame-**have**-EVID:QUOT/FOLK-3PL:AN.IMPERF

‘(They) caught them (the birds), took them home and raised them.’

5.3.1.4 Stative Verbs Indicating Location/Position

The verbs in this subgroup code (temporary or permanent) position or location of an entity, as illustrated in examples (17)-(24). The verb *nĩgĩ* /~digi/ ‘be standing’ in (18) has also a semantically related sense of ‘to stay’, as in (19) and (20). However, the verb *mẽɾẽ* /~bede/ is generally used to code the meaning ‘to stay’ (living permanently), as illustrated in examples (20) and (21). Another verb coding the meaning of ‘to stay’ is *duo*, as shown in (22) and (23). Finally, the verb *peya* ‘to be on top of’ occurs as a dependent verb, as in (24).

(17) ĩta mʉ̃tãyũmĩ

~i-ta **~bʉta**-~yu-~bi

DEM:PROX:AN-EMPH **be.before**-EVID:QUOT/FOLK-3SG:M.IMPERF

‘This (male person) went ahead of us.’

(18) igo dihsipoɾo nĩgĩmõ

igo disi-podo **~digi**-~bo

3SG:F mouth-CLS:curve **be.standing/stay**-3SG:F.IMPERF

‘She is standing by the door.’

(19) eɾoge nĩgĩyũɾo iɾigʉ

edo-ge **~digi**-~yu-do

DEIC:DIST-LOC **be.standing/stay**-EVID:QUO/FOLK-NON3.IMPERF

idi-kʉ

DEM:PROX-CLS:tree

‘This hill was standing/stayed/was located over there.’

(20) ʉ̃yʉ̃yã wi’igoɾoge ehamẽɾẽyʉ̃mĩ

~ʉyʉ-~ya wii-godo-ge

avocado-CLS:creek house-clear.field-LOC

ea-**~bede**-~yu-~bi

arrive-**stay**-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He arrived and stayed in the community in the Avocado creek.’

(21) gʉa piamẽɾẽã waka pade

gʉa pia-**~bede**-a wa-ka pade

1PL:EXCL come-stay-PERF go-EVID:REAS then

‘Then we came and stayed (here).’

(22) mʉ̃’ʉ̃ã õ duhoke

~bʉʉ ~o **duo**-ke

2PL DEM:PROX **stay**-IMP

‘You stay here.’

(23) duhoagʉ paɾe mãɾĩ yẽkʉ̃ ãɾĩbugʉ aɾiyʉ̃mĩ paɾe

duo-a-gʉ pade ~badi ~yekʉ ~adi-bʉ-gʉ

stay-PERF-3SG:M then 1PL grandfather be-NON3.PERF-3SG:M

adi-~yu-~bi pade

come-EVID:QUOT/FOLK-3SG:M.IMPERF then

‘Then he came and stayed to be our grandfather.’

(24) ĩgʉ̃pʉ buhapʉ yãpeyapʉ ẽɾãɾẽ

~igʉ-pʉ	bua-pʉ	~ya-**peya**-pʉ	~eda-de
3SG:M-CONTR	pigeon-CONTR	see-**be.on.top.of**-3SG.M.PERF	3PL-REF:OBJ

‘The pigeon observed them from above.’

It should be noticed that the stative verbs *mẽɾẽ* /~bede/ ‘to stay/ in (20) and (21), and the verb *peya* ‘to be on top of’ in (24) occur as dependents in serial verb constructions.[97] Stative verbs coding location/position can also be nominalized, as shown in (25).

(25) ẽɾã peyaɾibeɾoɾi mõmẽyũmã

~eda **peya-di**-bedo-di

3PL **be.on.top.of-NOM:IN**-circle-PL:IN

~bobe-~yu-~ba

work-EVID:QUOT/FOLK-3PL:AN.IMPERF

‘They worked on the headdresses.’

5.3.1.5 ‘Adjectival’ Stative Verbs (Semantic Adjectives)

As mentioned in Section 4.6.1.3 of Chapter 4, Desano does not have a lexical class of adjectives. It was argued that adjectival meanings are expressed by descriptive stative verbs through nominalization, as shown in (26)-(29), with the adjectival expressions in bold (see also example 25, above).

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[97] See Section 5.4 for a description of serial verb constructions.

(26) yʉhkʉgʉ wʉaɾigʉ ãɾã

yʉkʉ-gʉ **wʉa-di-gʉ** ~adi-a

tree-CLS:trunk **be.big-NOM:IN-CLS:trunk** be-PERF

‘The tree is big.’

(27) yʉhkʉgʉ ãmẽɾigʉgã ãɾã

yʉkʉ-gʉ **~abe-di-gʉ-~ga** ~adi-a

tree-CLS:trunk **be.short-NOM:IN-CLS:trunk-DIM** be-PERF

‘The tree is (very) small.’

(28) ẽɾã dehko ãɾ̃ĩmĩ ẽɾã pagʉ wʉagʉ

~eda deko ~adi-~bi ~eda pa-gʉ **wʉa-gʉ**

3AN:PL half be-3SG:M.IMPERF 3PL:AN genitor-3SG:M **be.big-3SG:M**

‘Among them there was their big father.’

(29) ĩgʉ̃ yo’gʉ wãĩkʉdi ãɾ̃ĩmĩ ĩgʉ̃ yo’gʉ bʉgʉ

~igʉ yogʉ wãĩ-kʉ-di ~adi-~bi ~igʉ yogʉ

3SG:M stutter name-VBLZ-IMPERF be-3SG:M.IMPERF 3SG:M stutter

bʉ-gʉ

be.old-3SG:M

‘He, the stutterer, was called old stutterer.’

Descriptive stative verbs can also be inflected by regular verbal morphology, as shown in (30)-(32). In (31), the verb *wã̃* /~wa/ is inflected with the evidential suffix *-ka* ‘reason’. In (31), the verb *~budi* ‘to be hard’ forms a serial verb construction with the active verb *~ya* ‘to see’. In (32), the verb *pobe* ‘be fast’ inflects for negation and evidentiality.

(30) mĩnĩstuɾʉ dapoɾaɾe paɾe! tʃau, wãka mʉ̃'ʉ̃

minitro dapoda-de pade tchau **~wa-ka** ~bʉʉ

minister now-REF:TEMP then INTERJ **be.good-EVID:REAS** 2SG

'Now you are a (church) minister, then. Golly! You are good.'

(31) ĩgʉ̃ bʉɾiyãduaɾimĩ

~igʉ **~bʉdi-~ya-dua-di-~bi**

3SG:M **be.hard-see-DES-IMPERF-3SG:M.IMPERF**

'He wanted very much to see you.'

(32) mʉ̃'ʉ̃ pobebiɾika

~bʉʉ **pobe-bidi-ka**

2SG **be.fast-NEG-EVID:REAS**

'You are not fast.'

5.3.2 Non-Stative Verbs

In this section the main semantic subclasses of non-stative verbs are described: *active verbs*, *verbs of motion*, and *verbs of perception and mental processes*. The lists of verbs presented do not pretend to be exhaustive; rather, they are intended to show the main characteristics of each of these subclasses.

5.3.2.1 Active Verbs

Active verbs describe events that are deliberately started by an active agent as the SUBJECT of the clause (cf. Givón 2001:106). Verbs describing actions may be intransitive (with no object complement) as shown in (33); transitive (with a direct object complement) as in (34); and ditransitive (with two object complements) as in (35).

INTRANSITIVE ACTIVE VERBS

(33) a. ĩgʉ̃ mõ'mẽbiɾimĩ

[~igʉ]$_{\text{SUBJ}}$ **~bobe**-bidi-~bi

3SG:M **work**-NEG-3SG:M.IMPERF

'He doesn't work.'

b. peebʉ kuɾibʉ yʉ'ʉsã

pe-bʉ **kudi**-bʉ [yʉʉ-~sa]$_{\text{SUBJ}}$

listen-NON3.PERF **walk**-NON3.PERF 1SG-ADD

'I also listened and walked.'

c. diaye tuɾiamĩ

[diaye]$_{\text{SUBJ}}$ **tudi**-a-~bi

dog **bark**-PERF-3SG:M.IMPERF

'The dog barked.'

d. ĩgʉ̃ ĩmĩpage gõɾẽãmĩ

[~igʉ]$_{\text{SUBJ}}$ ~ibi-pa -ge **~gore**-a-~bi

3SG:M sand-CLS:fine.particles-LOC **urinate**-PERF-3SG:M.IMPERF

'He urinated on the sand.'

e. ẽɾã doamã

[~eda]$_{\text{SUBJ}}$ **doa**-a-~ba

3PL **sit**-PERF-3PL:AN.IMPERF

'They sit.'

TRANSITIVE ACTIVE VERBS

(34) a. kaɾu pĩɾũɾẽ weheapʉ

[kaɾu]$_{\text{SUBJ}}$	[~pidu-de]$_{\textbf{DIR OBJ}}$	**wee**-a-pʉ
Carlos	snake-REF	**kill**-PERF-3SG:M.PERF

‘Carlos killed the snake.’

b. yʉ’ʉ ĩgʉ̃ɾẽ paabʉ

[yʉʉ]$_{\text{SUBJ}}$	[~igʉ-de]$_{\textbf{DIR OBJ}}$	**pa**-a-bʉ
1SG	3SG:M-REF	**hit**-PERF-NON3.PERF

‘I hit him.’

c. bua ẽɾã nõmẽã põɾãɾẽ sʉyabiɾipʉ

[bua]$_{\text{SUBJ}}$	[~eda	~dobe-a	~po-~da-de]$_{\textbf{DIR OBJ}}$
pigeon	3PL	female-PL:AN	progeny-PL:AN-REF

sʉya-bidi-pʉ

like-NEG-3SG:M.PERF

‘The pigeon didn’t like the girls.’

d. ĩgʉ̃ yegʉɾe bohkayũmĩ

[~igʉ]$_{\textbf{SUBJ}}$	[yegʉ-de]$_{\textbf{DIR OBJ}}$	**boka**-~yu-~bi
3SG:M	sacred.cane-REF	**find**-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He found the sacred cane.’

e. guaho dehko ahsiɾimẽɾã soeamõ wahaɾiɾe

[gua-o]$_{\text{SUBJ}}$	deko	asi-di-~beda
Guaho	water	be.hot-NOM-COM/INSTR

soe-a-~bo	[waadi-de]$_{\textbf{DIR OBJ}}$

burn-PERF-3SG:F.IMPERF Wahari-REF

‘Guaho burned Wahari with the hot water.’

DITRANSITIVE ACTIVE VERBS

(35) a. ĩgʉ̃ gʉaɾe wehkʉa õ’mʉ̃ɾ̃ĩɾ̃ãmĩ

[~igʉ]$_{\text{SUBJ}}$ **[gʉa-de]**$_{\textbf{OBJ}}$ **[wekʉ-a]**$_{\textbf{OBJ}}$

3SG:M 1PL:EXCL-REF tapir-PL:AN

oo-~bʉdi-da-~bi

give-HAB-PERF-3SG:M.IMPERF

‘He used to give us tapirs.’

b. mãɾ̃ĩ kaɾuɾe peɾu o’oamõ

[maria]$_{\text{SUBJ}}$ **[carlos-de]**$_{\textbf{OBJ}}$ **[pedu]**$_{\textbf{OBJ}}$

Maria **Carlos-REF** **caxiri.drink**

oo-a-~bo

give-PERF-3SG:F.IMPERF

‘Maria gave caxiri drink to Carlos.’

5.3.2.2 Verbs of Motion

This section presents a description of some of the motion verbs found in Desano. These are subdivided in fours subgroups: basic motion verbs, directional motion verbs, and relational motion verbs. Each of these is described in the following subsections.

5.3.2.2.1 Basic motion verbs

wa'a /waa/ 'go' - the verb *wa'a* codes a translocative motion (a motion away from the speaker), as shown in (36). It is generally used to code the meaning 'to leave', as in (36a), and 'to happen' as in (36d). The verb *wa'a* [waˀa] is usually reduced to [wa] in fast speech.

(36) a. bahko wa'abiɾika dapa

baku	**waa**-bidi-ka	dapa
boat	**go**-NEG-EVID:REAS	still/yet

'The boat hasn't left yet.'

b. igo yuhugogã wa'apo

igo	yuu-go-~ga	**waa**-po
3SG:F	one-3SG:F-DIM	**go**-3SG:F.PERF

'She went by herself.'

c. tee mãɾĩge kaucheɾo wa'aɾã

tee	~badi-ge	kauʃeɾo	**waa**-~da
until	2PL:INCL-LOC	rubber.tapper	**go**-PL:AN.PERF

'The rubber tappers went all the way to (find) us.'

d. õpã wa'abʉɾo wãĩ

~opa	**waa**-bʉ-do	~wai
thus	**go**-PERF-NON.3	uncle

'(It) happened like that, uncle.'

aɾi /adi/ 'come' - the verb *aɾi* codes a cislocative motion (motion towards the speaker), as shown in (37).

(37) a. aɾiya yʉ’ʉ abewige

adi-ya yʉʉ abe-wi-ge

come-EVID:RES 1SG sun-CLS:house-LOC

‘I come from the house of the Sun’.

b. ĩgʉ̃ aɾiyũmĩ paɾe

~igʉ **adi**-~yu-~bi pade

3SG:M **come**-EVID:QUOT/FOLK-3SG:M.IMPERF then

‘Then he came.’

c. mʉ̃’ʉ̃ aɾiɾi

~bʉʉ **adi**-di

2sg **come**-INTER

‘Are you coming?’

Examples of other verbs of basic motion that occur often in the texts are given verbs are given in (38). They are *uba* ‘to run’ (38a), *kudi* ‘to walk’ (38b), *nʉ̃ɾʉ̃* ‘to chase/to follow’ (38c) and *wʉ* ‘to fly’ (38d). The verb *wʉ* ‘to fly’ is generally used to describe the action of flying in general. However, another verb *peya* ‘to fly’, which does not occur as often as *wʉ*, can be used only with birds, as in (38e).

(38) a. wagãĩnĩgã ũmãyõɾã

wa-~gai-~di-~ga **~uba**-~yo-~da

go-scream-DIR:away-MOV:advance **run**-EVID:HSAY-3PL:AN.PERF

‘(They) ran screaming.’

b. mʉ̃ɾã mãmãɾõ geɾe ʉ̃ɾĩnʉ̃ɾẽ kuɾisʉayũmã

~bʉ-~da ~baba-do gede ~ʉdi-~dʉ-ɾe

elder-PL:AN be.new-NOM season pupunha.fruit-CLS:day-REF
kudi-sʉa-~yu-~ba
walk-like-EVID:QUOT/FOLK-3PL:AN.IMPERF
‘The elders liked to walk (roam around) during the pupunha season.’

c. ĩgʉ̃ nʉ̃ɾʉ̃siayʉ̃mĩ ĩgʉ̃ yebamãhsʉ̃
~igʉ **~dudʉ**-sia-~yu-~bi
3SG:M **chase/follow**-go.behind-EVID:QUOT/FOLK-3SG:M.IMPERF
~igʉ yeba-~basʉ
3SG:M ground-person
‘He followed the *Person of the Ground.*’

d. yuhunʉ̃ yahiyẽhkõmẽɾã mĩmĩ wʉbiɾaɾã iyõɾã
yuu-~dʉ yai-~yeko-~beda ~bibi
one-CLS:day heron-grandmother-COM/INSTR hummingbird
wʉ-bida-~da i-~yo-~da
fly-play-3PL:AN.PERF do-EVID:HSAY-3PL:AN.PERF
‘One day, the tuiuiu bird and the hummingbird were playing flying.’[98]

e. dahaɾo payogãɾĩpʉ
daa-do **payo**-~gadi-pʉ
be.slow-NOM.ABSTR **fly**-advance-3SG:M.PERF
‘He (the tuiuiú) flew slowly.’

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[98] ‘Tuiuiú’ is the local name for the *Jabiru mycteria*.

5.3.2.2.2 Directional motion verbs

A subgroup of motion verbs are the ones that code directions (or spatial orientations), for example, *baha* ‘go uphill/upriver’; *bua* ‘to go downhill/downriver’; and *yuri* ‘to go down’. Cognates of these directional verbs are found in other Eastern Tukanoan languages. As pointed out by Stenzel (2004:284), the Eastern Tukanoan groups travel extensively by the rivers, and the identification of their communities is related to their position on the river and relation to other communities, which make these verbs extremely useful. Most of the traditional Desano communities are located in the headwater of the main streams in the Vaupés, Papurí, and Tiquié rivers, and travelling on foot is also common; thus, these verbs can be used to refer to motion done on land or on the river. The examples in (39) and (40) show the distinction between ‘go uphill/upriver’ and ‘go downhill/downriver’. In (41), the verb *yuri* ‘to go down’ has a more generic sense. Although it can be used to in to refer to ‘go down uphill/downhill’ as shown in (41a); it can also be used in constructions to indicate a movement from a higher place to a lower place, as in (41b).

(39) a. õɾẽ mãhãnʉ̃gãmʉ̃ɾĩbʉ paɾe

~o-de **~baa**-~dʉga-~bʉdi-bʉ pade

DEIC:PROX-REF **go.uphill/upriver**-INCEP-HAB-NON3.PERF then

‘Then we moved up here.’

b. yee mãhãehayũpʉ

ye **~baa**-ea-~yu-pʉ

shaman **go.uphill/upriver**-arrive-EVID:QUOT/FOLK-3SG:M.PERF

‘The shaman arrived.’ (lit. ‘The shaman went upriver).

(40) a. buanʉ̃gãdeɾã ãɾĩmã ẽɾã

bua-~dʉga-de-~da	~adi-~ba	~eda
go.downriver-INCEP-PARTIC-3PL:AN.PERF	be-3PL:AN.IMPERF	3PL

‘They began to go down (to another village).’

b. buadeɾã ãɾĩmã

bua-de-~da	~adi-~ba
go.downriver-PARTIC-3PL:AN.PERF	be-3PL:AN.IMPERF

‘They went down (to another village).’

(41) a. eɾo ẽɾã yuɾiɾiɾã ãɾĩdeɾã ãɾĩmã ãɾĩkʉyãã

edo	~eda	**yudi**-di-~da
DEIC:DIST	3PL	**go.down**-DIR:towards-3PL:AN.PERF

~adi-de-~da	~adi-~ba
be-PARTIC-3PL:AN.PERF	be-3PL:AN.IMPERF

‘They went down (moved) and used to live there.’

b. ĩgʉ̃ mãgʉ̃gã ĩgʉ̃ɾẽ ẽɾã ya wi’i wahpikʉtuɾi ãɾĩɾõge yuɾidihia

~igʉ	~ba-gʉ-~ga	~igʉ-de	~eda	ya
3SG:M	progeny-3SG:M-DIM	3SG:M-REF	3PL	POSS

wii-wapi-kʉ-tudi	~adi-do-ge	**yudi**-di-a
house-double-ADD-CLS:stacked	be-NOM-LOC	**go.down**-DIR:toward-PERF

‘His little son fell off the fourth floor of their house.’

5.2.2.2.3 Relational motion verbs

This subset of motion verbs indicates relation in respect to a reference point which has been contextually established in discourse. Some of the relational verbs commonly found in Desano are: *pia* ‘to move out/into’, *wia* ‘to move forward’ (using the hands), and *wiɾi* ‘to move outward’, as shown in (42)-(44).

(42) a. ãĩõmãã piaɾi aɾiɾibʉ

~ai-~oba-a   **pia**-adi-di-bʉ

take-wrap-PERF   **MOV.out.into**-come-DIREC:towards-NON3.PERF

‘He put (the dead monkey) on his back and left (the forest) coming.’

b. eɾoge ãɾĩmãhsĩbiɾi gʉa piamẽɾẽã waaka

gʉa   **pia**-~bede-a   waa-ka

1PL.EXCL   **MOV.out.into**-stay-PERF   go-EVID:REAS

‘We moved from there (to here).’

(43) a. eɾo wiamʉ̃hʉ̃yũmĩ

edo   **wia**-~bʉʉ-~yu-~bi

DEIC:DIST   **MOV.forward**-lift-EVID:QUOT/FOLK-3SG:M.IMPERF

‘There he handed it (the tobacco plant) in.’

b. ĩgʉ̃ pagʉɾe wiaɲũmĩ

~igʉ   pa-gʉ-de   **wia**-~yu-~bi

3SG:M   genitor-3SG:M-REF   **MOV.forward**-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He gave it (the tobacco) to his father.’

(44) a. õɾẽ ĩgʉ̃ wiɾinʉ̃gãyãyũmĩ

~o-de   ~igʉ

DEIC:PROX-REF 3SG:M

widi-~dʉga-~ya-~yu-~bi

MOV.outward-INCEP-see-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He came outside (of the longhouse) and looked around.’

b. ĩgʉ̃pʉ mãsãtĩgʉ̃ wiɾiduagʉ iɾiyʉ̃mĩ

~igʉ-pʉ ~basa-~tigʉ **widi**-dʉa-gʉ

3SG:M-CONTR people-sibling-3SG:M **MOV.outward**-DES-3SG:M.IMPERF

i-di-~yu-~bi

do-DIR:towards-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He wanted to be born as the people’s brother.’ (‘He wanted to be everyone’s brother’).

5.3.2.3 Verbs of Placement

The only verb of placement occurring as an independent verb (i.e., not suffixed to another verb root) found in my data corpus is *api* ‘to leave’, used with the semantics of ‘placement’ as shown in (45a-b). Other verbs of placement such as *mẽɾẽ* ‘to fall on top’, and *tu* ‘to put’ are dependent verbs and occur in serial verb constructions, discussed in Section 5.4.

(45) a. iyẽɾẽ yʉ’ʉ mʉ̃’ãɾẽ ahpidʉaka

i-~ye-de yʉʉ ~bʉʉ-a-de **api**-dʉa-ka

DEM:PROX-CLS:topic-REF 1SG 2SG-PL:AN-REF **leave**-DES-EVID:REAS

‘I want to leave this subject to you.’

b. wehkʉyage ahpidi ãɾĩmĩ nʉ̃gʉ̃dehkoge

wekʉ-ya-ge **api**-di ~adi-~bi

tapir-CLS:creek-LOC **leave**-IMPERF be-3SG:M.IMPERF

~dʉ-kʉ-deko-ge

forest-CLS:tree-half-LOC

‘He left them in Tapir Creek in the middle of the forest.’

5.3.2.4 Verbs of Perception and Mental Processes

These subclasses of nonstative verbs are described here when they occur as independent roots. They can also occur in dependent root position coding modality. However, I limit the discussion here to their main functions as independent verb roots.

5.3.2.4.1 Verbs of perception

The verbs of perceptions are *yã* ‘to see’, *pe’pi* ‘to feel’ and *pe* ‘to hear’. The verb *yã* can be transitive, as in (46a), or intransitive, as in (46b). The verb *pe’pi* ‘to feel’ in (47a) can also be used to code the meaning ‘to think’ (a mental process), as in (47b). The verb *pe* ‘to hear’ used as a transitive verb in (48a), can also be intransitive, coding the meaning ‘to listen’ as in (48b).

(46) a. yãmẽdihumĩ yʉ’ʉɾe

~**ya**-~be-diu-~bi yʉʉ-de

see-throw-MOV.downwards-3SG:M.IMPERF 1SG-REF

‘He looked at me.’

b. yãgʉ̃ iyʉ̃mĩ

~ya-gʉ i-~yu-~bi

see-3SG:M.IMPERF do-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He was looking.’

(47) a. wãɾõ pe’piaka

~wa-do pepi-a-ka

be.good-NON3.IMPERF feel-PERF-EVID:REAS

‘(Thus) I felt good.’

b. yʉ’ʉ pe’piabʉ

yʉʉ pepi-a-bʉ

1SG feel-PERF-NON3.PERF

‘I thought.’

(48) a. ipẽta yʉ’ʉ pekaɾabʉ

i-~pe-ta yʉ’ʉ pe-ka-da-bʉ

DEM:PROX 1SG hear-EXIST-FRUST-NON3.PERF

‘I heard only this.’

b. peebʉ kuɾibʉ yʉ’ʉsã

pe-bʉ kudi-bʉ yʉʉ-~sa

hear-NON3.PERF walk-NON3.PERF 1SG-ADD

‘I also listened and walked.’

5.3.2.4.2 Verbs of mental processes

The verbs denoting mental process which occur currently in Desano texts are *mãsĩ* ‘to know’, *kẽ* ‘to dream’ and *beye* ‘to explain’. These verbs can be transitive as in (49a, 50a, 51a), or intransitive as in (49b, 50b, 51b).

(49) a. yʉ’ʉ ipẽta mãhsĩka

yʉ’ʉ i-~pe-ta **~basi**-ka
1SG DEM:PROX-SOL-EMPH **know**-EVID:REAS
‘I know only this.’

b. mãhsĩdeɾã ãɾĩmã ẽɾã

~basi-de-~da ~adi-~ba ~eda
know-PARTIC-PL:AN.PERF be-3PL:AN.IMPERF 3PL
‘They have known.’

(50) a. igo yagʉmẽɾã kẽãpo

igo ya-gʉ-~beda **~ke**-a-po
3SG:F POSS-3SG:M-COM/INSTR **dream**-PERF-3SG:F.PERF
‘She dreamt about her man.’

b. igo kẽgõ imõ

igo **~ke**-go i-~bo
3SG:F **dream**-3SG.F.IMPERF do-3SG:F.IMPERF
‘She is dreaming.’

(51) a. iɾiɾe beyeweadoadeɾã ãɾĩmã

idi-de **beye**-wea-doa-de-~da
DEM:PROX-REF **explain**-extract-sit-PARTIC-3PL.PERF

~adi-~ba

be-3PL:AN.IMPERF

‘They sat explaining these things.’

b. beyeweagãɾĩgʉ̃ iyʉ̃mĩ

beye-wea-~gadi-gʉ i-~yu-~bi

explain-extract-advance-3SG:M do-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He was explaining and (continuing) analyzing again.’

5.3.4 Auxiliary Verbs

There are three auxiliary verbs in Desano: *i* ‘do’, *wa’a* ‘go’ and *ãɾĩ* ‘be’. Each of these auxiliary verbs has distinctive functions, as described in the following subsections.

5.3.4.1 The Auxiliary Verb *i* ‘do’

The verb *i* ‘do’ is generally used in construction in which the main verb is marked for imperfect aspect, as in the examples (52a-b), which are constructions equivalent to ‘progressive’ constructions. In (53), the verbe *i* ‘do’ is the main verb of the clause, i.e., not in an auxiliary function.

(52) a. ĩgʉ̃ mõmẽgʉ̃ imĩ

~igʉ ~bobe-gʉ i-~bi

3SG:M work-3SG:M.IMPERF do-3SG:M.IMPERF

‘He is working.’

b. bugʉ sĩɾĩgʉ̃ mĩ

bu-gʉ ~sidi-gʉ i-~bi

elder-3SG:M die-3SG:M.IMPERF do-3SG:M.IMPERF

‘The old man is dying.’

(53) a. ẽɾã ideɾã

~eda i-de-~da

3PL do-PARTIC-PL:AN.PERF

‘They have done (it).’

b. yʉ’ʉ mʉ̃’ʉ̃ɾe õpã iaya ã’ɾ̃ibiɾika

yʉʉ ~bʉʉ-de ~opa **i**-a-ya ~adi-bidi-ka

1SG 2SG-REF so/thus **do**-PERF-EVID:RES say-NEG-EVID:REAS

‘I can’t say you did so.’

In the perfect constructions in (54a-b), the verb *i* follows a series of verb constructions with no overt marker for perfect/imperfect aspect. In these cases, the events described by the main verbs are interpreted as perfect, which is marked by the subject agreement marker *-mĩ* /-~bi/ in the examples in (54).

(54) a. eɾosãɾẽ pãmũgoɾa ibiɾiyũmĩ

edo-~sa-de ~pabu-goda

DEIC:DIST-ADD-REF ferment-reach

i-bidi-~yu-~bi

do-NEG-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He didn’t create (everything) there.’

b. yuhunʉta mãgãɾ̃ipãmʉ̃ mãgãɾ̃i ibiɾiyũmĩ ĩgʉ̃

yuu-dʉ-ta ~ba-~gadi-~pabʉ

one-CLS:day-EMPH go.uphill-advance-ferment

~ba-~gadi **i**-bidi-~yu-~bi ~igʉ

go.uphill-advance **do**-NEG-EVID:QUOT/FOLK-3SG:M.IMPERF 3SG:M

‘He didn’t come at once, and he didn’t come creating at once.’

The auxiliary verb *i* ‘do’ can also occur in serial verb constructions, as in (55a-b).

(55) a. ĩgʉ̃ itamũãmĩ

~igʉ i-~tabu-a-~bi

3SG:M do-help-PERF-3SG.M.IMPERF

‘He helped.’

b. ikuɾimʉ̃ɾ̃iabʉ yʉ’ʉsã suɾaɾa wa’agʉ

i-kudi-~bʉdi-a-bʉ yʉ’ʉ-~sa suɾaɾa waa-gʉ

do-walk-HAB-PERF-NON3.PERF 1sg-ADD soldier go-3SG:M.IMPERF

‘I used to be a soldier.’ (lit. ‘I walked (lived) being a soldier.’)

5.3.4.2 The Auxiliary Verb *wa’a* ‘go’

While the auxiliary *i* ‘to do’ is used with both perfect and imperfect constructions; the auxiliary verb *wa’a* ‘to go’ is used to form constructions coding the perfect aspect, as shown in (56). In the examples in (56a, b, c), the verb *wa’a* ‘go’ verb as an auxiliary codes ‘change of state’.

(56) a. igo kaɾia wa’amõ

igo kadi-a waa-~bo

3SG:F sleep-PERF go-3SG:F.IMPERF

‘She fell asleep.’

b. dʉhpʉ tuɾia wa’abʉ

dʉpʉ tudi-a waa-bʉ

branch break-PERF go-NON3.PERF

‘The branch broke.’

c. ohteɾi sĩɾ̃a wa’abʉ

ote-di ~sidi-a waa-bʉ

sow-NOM die-PERF go-NON3.PERF

‘Plantation died.’

d. mẽsiɾinʉ̃kã waamã bahaɾ̃ã

~be-sidi-~dʉga waa-~ba baa-~da

throw-do.repeatedly-INCEP go-3PL:AN.IMPERF many-3PL.AN

‘Many (people) left.’

5.3.4.3 The Auxiliary Verb *ãɾĩ* ‘be’

The verb *ãɾĩ* ‘be’ is also used to code perfectivity. It is used in constructions in which the main verb is in its participle form, which is coded by the participial morpheme -*de*, as shown in the examples in (57). When glossing sentences that have this type of structure (i.e., main verb the ‘participle’ suffix -*de* and auxiliary *ãɾĩ*), my consultants would often translate them as describing an event that combines past and present. For example, sentence (57c) was translated as ‘they also lived and live there’. Thus, I treat these constructions and coding (present) perfect aspect.

(57) a. buanʉ̃gãdeɾã ãɾ̃ĩmã ẽɾã

bua-~dʉga-**de**-~da **~adi**-~ba ~eda

go.downriver-INCEP-**PARTIC**-3PL:AN.PERF **be**-3PL:AN.IMPERF 3PL

‘They began to go down (to another village).’ (repeated from 40)

b. eɾo ẽɾã yuɾiɾiɾã ãɾ̃ideɾã ãɾ̃imã ãɾ̃ikʉyãã

edo ~eda yudi-di-~da

DEIC:DIST 3PL go.down-DIR:towards-3PL:AN.PERF

~adi-**de**-~da ~adi-~ba

be-**PARTIC**-PL:AN.PERF be-3PL:AN.IMPERF

‘They went down (moved) and used to live there.’ (repeated from 41)

c. gʉa pagʉsã eroduhuadeɾã ãɾ̃imã

gʉa pa-gʉ-~sa edo dua-**de**-~da

2PL:EXCL genitor-3SG:M-ADD DEIC:DIST stay-**PARTIC**-PL:AN.PERF

~adi-~ba

be-3PL:AN.IMPERF

‘Our fathers too have lived there.’

5.4 Serial Verb Constructions

Serial verb constructions (SVC) are defined as “a sequence of verbs which act together as a single predicate, without any overt marker of coordination, subordination or syntactic dependency of any other sort” (Aikhenvald 2006:1). Thus, the concepts coded by each verb in the construction are described as one single event. Aikhenvald uses four parameters to establish a typology of SVCs: ‘composition’ (symmetry), ‘contiguity’, ‘wordhood of components’, and ‘marking’. ‘Symmetrical’ constructions are formed by verbs from the same semantic or grammatical classes (open/unrestricted verbs), where each of them has equal status in the construction as a whole. ‘Asymmetrical’ constructions are formed by verbs from the ‘open/unrestricted’ (for example, activity verbs) class plus verbs from the ‘closed/restricted’ (for example, motion/placement verbs) class. In a continuous SVC, the verbs are placed next to each other without any element intervening between them; the non-continuous SVC can have intervening elements. The verbs in a SVC may form an independent phonological or grammatical word (incorporating) or may not (non-incorporating). Finally, marking of grammatical categories (person/number of the subject, tense, etc.) may occur only once (single marking) or categories may be marked on every component of the construction (concordant marking).

5.4.1 Serial Verb Constructions in Desano

As in other Eastern Tukanoan languages, SVCs are a highly productive morphological process in Desano. The SVCs in Desano can be characterized as being ‘continuous’ and ‘incorporating’; showing both symmetrical and asymmetrical constructions, and having both single and concordant marking. Concordance marking is not very common.[99]

The symmetrical and asymmetrical constructions are illustrated in (58) and (59), respectively.

(58) SYMMETRICAL

yuhunʉ̃ yahiyẽhkõmẽɾã mĩmĩ wʉbiɾaɾã iyõɾã

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[99] For analysis of serial verb constructions in other Eastern Tukanoan languages, see Stenzel (2007) for Wanano and Piratapuyo; and Gomez-Imbert (2007) for Barasano and Tatuyo.

yuu-~dʉ	yai-~yeko-~beda	~bibi
one-CLS:day	heron-grandmother-COM/INSTR	hummingbird
wʉ-bida-~da	i-~yo-~da	
fly-play-3PL:AN.PERF	do-EVID:HSAY-3PL:AN.PERF	

‘One day, the tuiuiu bird and the hummingbird were flying and playing.’[100]

(59) ASYMMETRICAL

eɾoge ãɾĩmãhsĩbiɾi gʉa piamẽɾẽã waaka

gʉa	**pia-~bede**-a	waa-ka
1PL.EXCL	**MOV:out.into-stay**-PERF	go-EVID:REAS

‘We moved from there (to here).’ (repeated from 42b)

Concordant marking does not occur often; however, instance of this type of marking can be found, as shown in (60). Each verb is marked for person/number of the same subject.

(60) peebʉ kuɾibʉ yʉ’ʉsã

pe-bʉ	**kudi**-bʉ	[yʉʉ-~sa]$_{\text{SUBJ}}$
listen-NON3.PERF	**walk**-NON3.PERF	1SG-ADD

‘I also listened and walked.’ (repeated from 33b)

5.4.1.1 The Structure of SVCs in Desano

SVCs in Desano share the structural characteristics found in other languages in the area: they can have up to four verb roots (although the most common SVCs have two or three verb roots); and they can be analyzed as having two basic positions in the SVC template, which can be simple or complex (cf. Ospina Bozzi and Gomez-Imbert, to appear).

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[100] ‘Tuiuiú’ is the local name for the *Jabiru mycteria*. (repeated from 38b)

The structures in (61) illustrate the types of SVCs found in Desano.[101] In (61a), the simple structure is formed by two verb roots, each occupying one of the two positions of the SVC template, as illustrated with the examples in (62), with the structure inside the brackets.

(61)

	POSITION 1	POSITION 2	
a.	$[R_1$	$R_2]$	simple SVC structure
b.	$[R_1$	$[R_2\ R_3]]$	complex SVC structures
c.	$[[R_1\ R_2]$	$R_3]$	
d.	$[[[R_1\ R_2]\ R_3]$	$R_4]$	
e.	$[[R_1\ [R_2\ R_3]]$	$R_4]$	
f.	$[[R_1\ R_2]$	$[R_3\ R_4]]$	

(62) a. ĩgʉ̃ yegʉ mẽɾã keogãɾĩgʉ̃

~igʉ	ye-gʉ-~beda	**[keo-~gadi]**-gʉ
3SG:M	jaguar-CLS:trunklike-COM/INSTR	**measure-advance**-3SG:M

He (was) approaching with the jaguar cane ('sacred cane').

b. ĩgʉ̃pʉ buhapʉ yãpeyapʉ ẽɾãɾẽ

~igʉ-pʉ	bua-pʉ	**[~ya-peya]**-pʉ	~eda-de
3SG:M-CONTR	pigeon-CONTR	**see-be.on.top.of**-3SG:M	3PL-REF

'The pigeon observed them from above.' (repeated from 24)

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[101] Following Ospina Bozzi and Gomez-Imbert (to appear) analysis of SVCs in Yuhup (Makuan), Barasano and Tatuyo (Eastern Tukanoan).

The complex structures are illustrated in (63)-(67).

(63) $[R_1$ $[R_2$ $R_3]]$

beyeweagãɾĩgʉ̃ iyũmĩ daha

[beye-[wea-~gadi]]-gʉ i-~yu-~bi daa

explain-extract-advance-3SG:M do-EVID:QUOT/FOLK-3SG:M.IMPERF again

‘He was explaining and (continuing) analyzing again.’ (repeated from 51b)

(64) $[[R_1$ $R_2]$ $R_3]$

õɾẽ ĩgʉ̃ wiɾinʉ̃gãyãyũmĩ

~o-de ~igʉ

DEIC:PROX-REF 3SG:M

[[widi-~dʉga]-~ya]-~yu-~bi

MOV.outward-begin-see-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He began to come outside and looked around.’ (repeated from 44a)

(65) $[[[R_1$ $R_2]$ $R_3]$ $R_4]$

ĩgʉ̃sã yãkuɾimãhĩdihia goepʉ

~igʉ-~sa **[[[~ya-kudi]-~bai]-dii]**-a goe-pʉ

3SG:M-ADD **see-walk-turn-descend**-PERF return-3SG:M.PERF

‘He also walked looking back going down (the river), and returned (home).

(66) $[[R_1$ $[R_2$ $R_3]]$ $R_4]$

ĩgʉ̃ kuɾiyãpeoyuɾia wa’ayũmĩ

~igʉ **[[kudi[-~ya-peo]]-yudi]**-a wa’a-~yu-~bi

3SG:M **walk-see-end-go.down**-PERF go-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He walked, finished seeing (everything) and went down.’

(67) [[R_1 R_2] [R_3 R_4]]

pãmũpahayããpeoyũmĩ

[[~pabu-paa][-~ya-peo]]-~yu-~bi

ferment-float-see-end-EVID:QUOT/FOLK-3SG:M.IMPERF

'(He) floated (on the river) transforming (and) finished seeing (everything).'

5.4.1.2 Semantics of Verb Roots in SVCs

The SVCs in Desano consist of two types of verbs which occur in dependent position (i.e., after the first verb in the construction): motion verbs, coding displacement (i.e., 'to go', 'to come', 'to move uphill/upriver', etc.); location/position (i.e., 'to be on top of', 'to be behind', 'to be before', etc.); and other verbs coding either stative or agentive events (i.e., 'to walk', 'to see', 'to explain', etc.).

In Desano, dependent verbs in SVCs code the following semantic notions: 'adverbial' notion (manner); notion of 'cause-effect'; 'aspectual' notion; and (deontic) modality.

5.4.1.2.1 Dependent roots coding 'adverbial' notions

In SVCs, adverbial notions of 'manner' are expressed by intransitive motion verbs (cf. Aikhenvald 2006). These intransitive motion verbs, when used as a dependent verb in a SVC, indicate *how* the action/event expressed by the independent verb is performed. In Desano, the most common motion verbs used in this function are *ari* 'to come' and *wa'a* 'to go'. In the examples in (68), the verb *ari* is used as a dependent verb indicating that the event described by the independent verb (i.e., the verb in initial position) occurs simultaneously with the cislocative motion (i.e., moving towards the speaker or a referent point).

(68) a. iaɾiyũmĩ ĩgʉ̃

i-adi-~yu-~bi ~igʉ

do-come-EVID:QUOT/FOLK-3SG:M.IMPERF 3SG:M

‘He came doing (things).’

b. ãĩõmãã piaɾi aɾiɾibʉ

~ai-~oba-a **pia-adi-**di-bʉ

take-wrap-PERF **MOV.out.into-come-**DIREC:towards-NON3.PERF

‘He put (it) on his back and left (the forest) coming.’ (repeated from 42a)

The examples in (69) show constructions with the verb *wa’a* ‘to go’ coding a ‘translocative’ motion (i.e., motion away from the speaker or a referent point in the discourse). It should be noticed that *wa’a* [waˀa] is phonologically reduced to [wa] when occurring as a dependent verb.

(69) a. duhawaɾã mʉ̃ɾĩɾĩaɾibʉ daha

dua-**waa**-~da ~bʉdi-di-adi-bʉ daa

return-**go**-EXRT MOV:go.uphill-IMPERF-come-NON3.PERF again

‘Let’s go back, and go up again.’

b. duhkawake nĩhkʉ

duka-**waa**-ke ~dikʉ

split-**go**-IMP land

‘Go dividing the land.’

Other verb roots of motion can be used to code different adverbial notions, as shown in (70). For example, the verb root *yudi* ‘to go down’ in (70a) indicates how the Subject of the sentence is returning to his place of origin. In (70b), the dependent verb *widi* ‘to move outward’ describes how the Creator of the world came out from one of the holes by the river creating new things in the world. Finally, in (70c), the verb *mẽ* ‘to throw’ indicates that the monkey was in a stationary position in the tree while looking towards the hunter on the ground.

(70) a. ĩgʉ̃ mãĩyuɾia ehayũmĩ
~igʉ ~bai-**yudi**-a
3SG:M turn.around-**go.down**-PERF
ea-~yu-~bi
arrive-EVID:QUOT/FOLK-3SG:M.IMPERF
‘He turned around going down (the river), and arrived.’

b. õgeɾe peɾagobege pãmʉ̃wiɾigʉ aɾigʉ paɾe
~o-ge-de peda-gobe-ge ~pabʉ-**widi**-gʉ
DEIC:PROX-LOC port-hole-LOC ferment-**MOV:outward**-3SG:M
adi-gʉ pade
come-3SG:M then
‘Then, coming to create (while) leaving from that hole in the port.’

c. yãmẽdihumĩ yʉ’ʉɾe ãɾĩmĩ
~yaa-~**be(de)**-diu-~bi yʉʉ-de
see-**stay**-MOV:downwards-3SG:M.IMPERF 1SG:M-REF
‘(The monkey) looked at me (from above).’

5.4.1.2.2 Dependent roots coding aspect

SVCs are often used to provide aspectual information regarding an activity or state. Some common aspectual notions coded by SVCs are: indicating the beginning or end of an event; indicating the regular performance of the action; indicates its duration; and emphasizing if the event is completed, among others. The examples in (71) show some of the aspectual notions that are coded by SVCs. In (71a), the verb *nʉ̃gã* 'to begin' codes 'INCEPTIVE' aspect. The verb *mʉ̃ɾĩ* 'to grow' in (71b) is commonly used as a dependent verb coding 'HABITUAL' aspect in SVCs. In (71c), the verb *peo* 'to end' codes the total completion of the event; and in (71d), the verb *sʉ̃* 'to finish' indicates the termination of an event.

(71) a. imĩsõkãyãge ĩgʉ̃ dui wãĩkʉ gohanʉ̃gãdi

i-~biso-ka-ya-ge ~igʉ dui

DEM:PROX-squirrel-CLS:triangular-CLS:creek-LOC 3SG:M Luis

~wai-kʉ goa-~**dʉga**-di

name-VBLZ write-**begin/INCEPT**-IMPERF

'From squirrel creek, he, named Luis, began to write.' (repeated from 55b)

b. ãɾĩkãmʉ̃ɾĩbʉ yʉ'ʉ õ teɾesitaɾe dos ãyõ mẽõ

~adi-ka-~**bʉdi**-bʉ yʉʉ ~o

be-EXIST-**grow/HAB**-NON3.PERF 1SG DEIC:PROX

teɾesita-de dos ano meio

Teresita-REF two and half years

'I lived in Terezita for two and half years.' (repeated from 8b)

c. ĩgʉ̃ kuɾiyãpeoyuɾia wa'ayʉ̃mĩ
~igʉ kudi-~ya-**peo**-yudi-a
3SG:M walk-see-**end/TOTAL**-go.down-PERF
wa'a-~yu-~bi
go-EVID:QUOT/FOLK-3SG:M.IMPERF
'He walked, finished seeing (all) and went down.' (repeated from 65).

d. iɾiyẽ dukãsʉ̃bʉ
idi-~ye du-~ku-**~su**-bʉ pade
DEM:PROX-CLS:topic put.down-FRUSTR-**finish/COMPL**-NON3.PERF then
'Then he abandoned this project.'

5.6.1.2.3 Dependent roots coding modality

Dependent verbs in SVCs are also used to code the notion of deontic modality (i.e., wishes, ability). These deontic notions are expressed by dependent verbs of mental process, as shown in (72a) with the verb *dua* 'to want' coding 'DESIDERATIVE' mode. The verb *mãhsĩ* 'to know' is generally used to code 'ABILITY', as shown in (72b); but it can also be used to code 'permission' as in (72c).

(72) a. ĩgʉ̃ bʉɾiyãduaɾimĩ
~igʉ ~bʉdi-~ya-**dua**-di-~bi
3SG:M be.hard-see-**DES**-IMPERF-3SG:M.IMPERF
'He wanted very much to see you.' (repeated from 31)

b. eɾoge ãɾĩmãhsĩbiɾi gʉa piamẽɾẽã wa'aka paɾe
edo-ge ~adi-**~basi**-bidi gʉa pia-~bede-a

DEIC:DIST-LOC be-**know**-NEG 2PL:EXCL MOV:out.into-stay-PERF

waa-ka pade

go-EVID:REAS then

‘Not being able to live there, we moved (here).

c. ĩgʉ̃ õmʉ̃hʉ̃ ãɾã ã’ɾ̃ĩmãhsĩmĩ

~igʉ ~o-~bʉʉ ~adi-a ~adi-~**basi**-~bi

3SG:M DEIC:PROX-CLS:origin be-PERF say-**know**-3SG:M.IMPERF

‘He can say he is from here.’

5.5 Verb Morphology

In the previous sections, different types of verbs were described, including a description of SVCs and how dependent verb roots can be used to code adverbial, aspectual and deontic modal notions. This section presents a description of the grammatical morphemes that can attach to independent verb roots and SVCs, as shown on Table 5.1.

The first three positions (‘manner’, ‘aspect’, ‘mode’) are coded by dependent verb roots in serial verb constructions, as described in Section 5.4.1.2.

5.5.1 Morphemes Coding Manner

Adverbial-type notions of manner are commonly expressed by verb of motion (see Section 5.4.1.2.1). In these expressions, the verb of motion indicates ‘how’ the action/event is performed. Some common verbs of motion used dependently to code adverbial notions of manner are listed in (73).

(73)	a.	/-~**be**/	/tu-~**be**-yoa/
		‘to throw’	lean-**throw**-suspend
			‘pushing one’s into (something)’
	b.	/-**tu**/	/pua-**tu**-~ba-~ga/
		‘to lean/put against	stumble-**lean**-MOV:quickly-MOV:advancing
			‘stumble leaning’
	c.	/-**widi**/	/~pabʉ-**widi**/
		‘to move outward’	ferment-**MOV:outward**
			‘to go out transforming’
	d.	/-**sidi**/	/pa-**sidi**-~bʉta/
		‘to do repeatedly’	hit-**do.repeatedly**-be.in.front
			‘go ahead protecting’
	e.	/-**pi**/	/~bo’be-**pi**/
		‘to drop/release/quit’	/work-**quit**/
			‘quit working’

5.5.2 Morphemes Coding Aspect

The second slot in the verb morphology template can be occupied by dependent verb roots coding aspect (see Section 5.4.1.2.2). These roots code aspects of both active and stative verbs, as shown in (74). Some common aspectual notions coded by dependent roots in Desano are: inception (74a), duration (74b-d), completion (74e), and habituality (74f).

(74)	a.	/-~**dʉga**/	/were-~adi-~**dʉga**/
		‘begin/inception’	tell-say-**INCEP**
			‘start narrating’
	b.	/-~**dʉgʉ**/	~ai-~bʉʉ-~**dʉgʉ**
		‘stand/do continuously’	take-lift-**CONT**
			‘take it over’
	c.	/-**doa**/	~gʉya-**doa**
		‘sit/do for a period of time	think-DUR
			‘meditate’
	d.	/-~**gado**/	~abu-~gado
		‘continue/do continuously’	fix-CONT
			‘getting better’
	e.	/-**peo**/	kudi-~ya-**peo**
		‘end/do exhaustively	walk-see-**EXRT**
			‘walk and see exhaustively’
	f.	/-~**bʉdi**/	oo-~**bʉdi**
		‘go upriver/do it habitually’	give-**HAB**
			‘be used to give’

5.5.3 Morphemes Coding Deontic Modality

The third slot in the verb morphology template is occupied by dependent verb roots coding deontic modality. As was discussed in Section 5.4.1.2.3, deontic modality is expressed by verbs of mental process, such as *dua* ‘to want’, and *mãhsĩ* ‘to know’, which are used to code ‘DESIDERATIVE’, as in (75a), and ‘ABILITY’, as in (75b-c), modes. See also full sentence examples in (72).

(75) a. /-**dua**/ ba-**dua**
‘eat/desiderative eat-**DEON**
‘want to eat’

b. /~**basi**/ ~a’di-~**basi**
‘know/permission’ say-**DEON**
‘can say’

c. /~**basi**/ ~adi-**~basi**
‘know/ability’ be-**know**
‘be able’

5.5.4 Morphemes Coding Negation

The negative morpheme *-biɾi* /-bidi/ occupies the fourth position in the verb template. In the absence of dependent verbs in positions 1-3, the negative suffix can be suffixed directly to the independent verb root. The negative *-biɾi* can be attached to any type of verb: descriptive (76a), stative (76b), activity (76c), motion (76d), perception (76e), or mental process (76f).

(76) a. igo mʉ̃kʉ̃biɾigo
igo ~bʉkʉ-**bidi**-go ‘
3SG:F be.happy-**NEG**-3SG:F
‘She is not happy’

b. gʉa gahipʉ wa'amʉ̃ãɾã ãɾĩbiɾika

gʉa gai-pʉ waa-~bʉa-~da

2PL.EXCL other-CONTR go-go.downriver-3PL:AN.PERF

be~adi-**bidi**-ka

be-**NEG**-PREDIC

'We are not going to move.'

c. ĩgʉ̃ mõmẽbiɾimĩ

~igʉ bobe-**bidi**-~bi

3SG:M work-**NEG**-3SG:M.IMPERF

'He doesn't work'

d. ʉ̃htãmʉ̃geɾe wabita gʉya ãɾĩka

~ʉtabu-ge-de wa-**bidi**-ta gʉya-~adi-ka

rapids-LOC-REF go-**NEG**-ADMON be.dangerous-be-EVID:REAS

'Don't go in the rapids because it is dangerous.'

e. mãɾĩ pagʉsãmãɾã mãɾĩ yãbiɾibʉ

~badi pa-gʉ ~saba-~da ~badi

1PL.INCL genitor-3SG:M vagina-3PL:AN 1PL.INCL

~ya-**bidi**-bʉ

see-**NEG**-NON3.PERF

'We didn't see our ancestors (grandparents).'

f. ĩgʉ̃ mãhsĩbiɾimĩ

~igʉ ~basi-**bidi**-~bi

3sg:M know-**NEG**-3SG:M.IMPERF

‘He doesn’t know.’

In constructions with auxiliary verbs, the negative morpheme is attached to the auxiliary, and not to the main verb, as shown in (77).

(77) a. eɾosãɾẽ pãmũgoɾa ibiɾiyũmĩ

edo-~sa-de	~pabu-goda
DEIC:DIST-ADD-REF	ferment-reach

i-bidi-~yu-~bi
do-NEG-EVID:QUOT/FOLK-3SG:M.IMPERF

‘He didn’t create (everything) there.’ (repeated from 53a)

b. mãhãɾõ nĩmãpʉ̃ wʉaɾo wa’abiɾo ãɾ̃ibʉ ĩgʉ̃ɾẽ

~baa-do	~diba-pʉ	wʉa-do	**waa-bi**-do
QUANT-NOM	poison-CONTR	be.big-NOM	**go-NEG**-NON3.IMPERF

~adi-bʉ	~igʉ-de
be-NON3.PERF	3SG:M-REF

‘There wasn’t enough poison to (kill) him.’

Miller (1999:136) postulates that the negative morpheme *-biɾi* becomes *-bea* before morphemes she identifies as ‘present tense’ and ‘visual evidence’. In my data corpus, it is possible to see a tendency of the morpheme *-biɾi* to be realized as *-bi*, as in example (77b) above. For the moment, the occurrence of *-be* is considered here as the reduced *-bi* which may go under vowel lowering when occur in near a non-high vowel. However, this is a topic for further investigation.

5.5.5 Morphemes Coding Grammatical Aspect

Section 5.4.1.2.2, showed that dependent roots in serial verb construction can give aspectual information of the event expressed by the independent verb root. There are also two grammatical aspect markers that occur in the fifth position in the verb template: *-a* ‘perfect’ and *-di* ‘imperfect’. These aspect markers allow for perfective and imperfective interpretations of the situation (i.e., state, motion, mental process, etc.) described by the clause. A third morpheme that occurs in this slot is *-de* ‘participle’, which may co-occur with either *-a* or *-di*. The perfect aspect morpheme *-a* is always followed by the participial *-de*, as shown in (78a-b). The examples in (79) show the use of the imperfect aspect marker *-di*, which may be followed by the participle marker *-de*, as shown in (79c). Examples with the participial morphemes without preceding grammatical aspect morphemes are shown in (80).

(78) a. eɾogeta i wĩɾãya kõmõãdeɾo ãɾĩbʉ

edo-ge-ta i ~wida=ya

DEIC:DIST-LOC-EMPH DEM:ANAPH Desano=POSS

~kobo-**a-de**-do ~adi-bʉ

straggle-**PERF-PARTIC**-NON3.IMPERF be-NON3.PERF

‘There, this (traditional knowledge) of the Desanos was abandoned.’

b. yuɾiadeɾã ãɾĩmã

yudi-a-de-~da ~adi-~ba

go.down-PERF-PARTIC-3PL:AN.PERF be-3PL:AN.IMPERF

‘They went down (the river to another village).’

(79) a. ĩgʉ̃ yo'gʉ wãĩkʉdi ãɾĩmĩ

~igʉ yogʉ wãĩ-kʉ-**di** ~adi-~bi

3SG:M stutter name-VBLZ-**IMPERF** be-3SG:M.IMPERF

'He was called stutterer.' (repeated from 1)

b. ĩgʉ̃ yo'gʉ wãĩkʉdi ãɾĩmĩ ĩgʉ̃ yo'gʉ bʉgʉ

~igʉ yogʉ wãĩ-kʉ-**di** ~adi-~bi ~igʉ yogʉ

3SG:M stutter name-VBLZ-**IMPERF** be-3SG:M.IMPERF 3SG:M stutter

bʉ-gʉ

elder-3SG:M

'He, the stutterer, was called old stutterer.' (repeated from 29)

c. ẽɾã ãɾĩɾĩɾẽ

~eda ~adi-di-de

3PL say-IMPERF-PARTIC

'They (have) said.'

(80) a. buanʉ̃gãdeɾã ãɾĩmã ẽɾã

bua-~dʉga-**de**-~da ~adi-~ba ~eda

go.downriver-INCEP-**PARTIC**-3PL:AN.PERF be-3PL:AN.IMPERF 3PL

'They began to go down (to another village).' (repeated from 40a)

b. buadeɾã ãɾĩmã

bua-**de**-~da ~adi-~ba

go.downriver-**PARTIC**-3PL:AN.PERF be-3PL:AN.IMPERF

'They went down (to another village).' (repeated from 40b)

5.5.6 Morphemes Coding Clause Modality

Morphemes that are used to mark clause modality and occupy position six in the verb template are discussed in this section. Table 5.2 summarizes the morphemes according to the subcategories to which they belong. The subcategories are labeled following Stenzel (2004:331). The subcategories correspond to the three types of sentences in which these morphemes occur: statements - which can be realis (marked with evidentials) and irrealis (predictive or speculative); interrogatives; and 'oriented' (commands and permission).

Table 5.2 Clause modality

CLAUSE MODALITY		
STATEMENTS		**'ORIENTED'**
REALIS	**IRREALIS**	
EVIDENTIALS		/-ke/ IMP
∅ VIS	/-ka/ PREDICT	/-ta/ ADMON
/-ku/ NVIS/AUD	/-bo/ SPECUL	/-~da/ EXRT
/-~yo/ HSAY		/-ku/ ADVER
/-~yu/ QUOT/FOLK		
/-ya/ RESUL		
/-ka/ REAS		
INTERROGATIVES		
/-di/ INTER		

5.5.6.1 Realis Statements: Evidentials

The markers of evidentiality occur in the sixth position in the verb template. This section presents a description of the evidential system of Desano according to the current typology of evidentiality. The analysis presented here is not intended to be exhaustive; instead, it aims to show the complexity of the system.

5.5.6.1.1 Evidentials in cross-linguistic perspective

The study of evidentials in Native American languages is relatively new. In his description of Kwakiutl (Kwak'wala), a Wakashan language of Vancouver Island, Frans Boas (1911) described a set of unusual suffixes that expresses 'the *source of subjective knowledge* - as by hearsay, or by a dream" (p. 443). Other early descriptions of evidentials also come from other Native (North) American languages: Hannis, a Coos language of the coast of Oregon (described by Leo Fratchtenberg in 1922); Wintu, a Wintuan language of California (described by Dorothy D. Lee in 1938), and Pawnee, a Caddoan language spoken in North Dakota and Oklahoma (described by Douglas Parks in 1976) (cf. Campbell 1997, Mithum 1999).

The term 'evidentials' was first used by Roman Jacobson in (1957 [1971]). He describes it as a speaker's report of an event on the basis of someone else's report (quotative, i.e. hearsay evidence), of a dream (revelative evidence), of a guess (presumptive evidence), or of his own previous experience (memory evidence).

According to Anderson (1986) and Portner (2009), the terms 'evidentials' and 'evidentiality' can be defined as following:

- *Evidentiality* is defined as a broad semantic category which is found in some form in every language, used to express speaker's assessment for what she says.
- *Evidential* is defined as a syntactically and semantically constrained grammatical marker which is used to express evidentiality.

English also codes evidentiality in some modal verbs, e.g. *Mary must sing* (inferred from the fact that the rest of her family sings, so probably she also sings). Thus, in English, evidentiality is *lexically* marked, as shown in (81), where the words in bold form the expression coding evidentiality.

(81) a. **I heard** the rain falling.

b. **Someone told me** it is raining.

Desano (and all Eastern Tukanoan languages) is a language in which evidentiality is *grammatically* marked by evidential suffixes, as shown in (82).

(82) a. kãɾãyã ʉhegʉ̃ ikumĩ

~kaɾaya ʉe-~gʉ i-**ku**-~bi

chicken kill-3SG:M do-**EVID:NVIS**-3SG:M.IMPERF

'He is killing the chicken.' [I can hear the chickens]

b. yuhusibu õã painõmẽã pai waayõɾã

yuu-sibu pai-~dobe-a pai waa-**~yo**-~da

one-while priest-female-PL:AN priest go-**EVID:REP**-3PL:AN.PERF

'Once, when the missionaries where travelling...' [I heard from others]

5.5.6.1.2 The Desano evidentials

According to the analysis presented here, Desano has five evidentials that are overtly marked with a suffix on the verb, plus an unmarked (visual) evidential, as listed in Table 5.3.

5.5.6.1.2.1 The distinction of information source. Each of the evidential markers listed in Table 5.3 indicates a type (source) of information in a proposition. These evidentials fall within the set of evidential meanings found cross-linguistically (cf. Aikhenvald 2004, Anderson 1986, Bybee 1985, de Haan 1999, Willet 1988). Aikhenvald (2004) lists six semantic parameters used with languages with grammatical evidentiality: 'visual', 'sensory', 'inference', 'assumption', 'hearsay', and 'quotative'. Aikhenvald points out in her typology, that "no systems have been found with all six types expressed" (p. 367).

Table 5.3 Desano evidentials

EVIDENTIAL	GLOSS
-ku	auditory
-~yo	reported
-~yu	quotative/folklore
-ya	inference: results
-ka	inference: reasoning
∅	visual

Table 5.4 Types of Evidence (adapted from Willet 1988:57)

DIRECT			INDIRECT				
Attested			**Reported**			**Inferring**	
Visual	*Auditory*	*Other sensory*	*Second-hand*	*Third-hand*	*Folklore*	*Results*	*Reasoning*
∅	***-ku***		***-~yo***	***-~yu***		***-ya***	***-ka***
	EVID:NVIS		EVID:HSAY	EVID:QUOT/FOLK		EVID:RES	EVID:REAS

The characterization of types of evidentials adopted to describe the evidentials in Desano follows the framework proposed in Willet (1988) for the categorization of types of evidentials, as shown in Table 5.4. The Desano evidential markers have been added to illustrate how they fit in Willet's typology.

5.5.6.1.3 Describing the evidential markers of Desano

5.5.6.1.3.1 Direct visual evidence. In Desano, visual evidence is unmarked.[102] Thus, sentences with no overt marker of evidentiality imply the speaker has witnessed the event. Sentence (83) implies that the speaker saw the person chopping firewood.

(83) ĩgʉ̃ pea tabegʉ imĩ

~igʉ pea tabe-gʉ i-~bi

---

[102] This has also been claimed by Kaye (1970).

3SG:M firewood chopp-3SG:M. do-3SG:M.IMPERF

‘He is chopping the firewood.’

5.5.6.1.3.2 Nonvisual evidential. The morpheme *-ku* is used to code *direct attested* evidential covering information acquired by auditory and other senses (taste, smell, touch). I call *-ku* ‘nonvisual’, indicating information based on direct evidence other than sight, as illustrated in (84) and (85) in two different contexts.

Auditory context I: *Speaker is inside home and hears the noise of firewood being chopped.*

(84) ĩgʉ̃ pea tabegʉ ikʉmĩ

~igʉ pea tabe-gʉ i-**ku**-~bi

3SG:M firewood chopp-3SG:M do-**EVID:NVIS**-3SG:M.IMPERF

‘He is chopping the firewood.’

Auditory context II: *Speaker is inside home and feels a heat (from a fire) and hears noise of things burning. He doesn’t see the fire.*

(85) ẽɾã soeɾa soekumã

~eda soe-**ku**-~ba

3PL burn-EVID:**NVIS**-3PL:AN.IMPERF

‘They are burning (something).’

5.5.6.1.3.3 Reported: Hearsay evidential. The morpheme *-~yo* is used to code *indirect reported* evidential indicating that the information was acquired from some other person who might have (directly) witnessed the event described. I call *-~yo* ‘hearsay’ to indicate information obtained through a third party, as illustrated in (86) and (87) in two different contexts.

Reported context I: *Speaker is talking about a school of a nearby village. The speaker has not seen the school, but was told about it from someone who had seen it and told him about it.*

(86) yuhu eskola iayõrã ĩrã

yuu eskola i-a-~yo-~da ~ida

one school do-PERF-**EVID:HSAY**-3PL:AN.PERF 3PL

'They built a school.'

Reported context I: *Speaker is telling an anecdote he heard from his father, which he believes to be true.*

(87) yuhusibu õã painõmẽã pai wayõrã

yuu-sibu pai-~dobe-a pai wa-~**yo**-~da

one-while priest-female-PL:AN priest go-**EVID:HSAY**-3PL:AN.PERF

'Once, when the missionaries where travelling...'

5.5.6.1.3.4 Reporterd: Quotative/folklore evidential. The morpheme -~*yu* also codes *indirect reported* evidential generally appearing in traditional narratives (folklore). It has a 'near-quotation' function; however, no particular referent for the original speech can be identified as the source of information. This marker is also used in situations where the speaker has heard about the event from someone who has not directly witnessed the event. This marker is used for rumors or news that cannot be 'directly' verified, as shown in (88) and (89) in two different contexts.

Reported 'folklore' context: *a line from a tradition narrative about the Desano mythology.*

(88) wiɾinʉ̃gãyã ĩgʉ̃ mʉ̃ɾʉ̃ uhupuɾi iyʉ̃mĩ

widi-~dʉga-~ya ~igʉ ~bʉdʉ

leave-stand.up-see 3SG:M tobacco

uu-pudi-i-**~yu**-~bi

suck-blow-do-**EVID:HSAY**-3SG:M.IMPERF

‘He left from home looking around (and) smoking tobacco.’

Reported third-hand context: *Same as* (87) *above, but this time the speaker was told about the school from someone who ha not seen the school.*

(89) yuhu eskola iayõɾã ĩɾã

yuu eskola i-a-~yu-~da ~ida

one school do-PERF-**EVID:HSAY**-3PL:AN.PERF 3PL

‘(I’ve been told that) they built a school.’

5.5.6.1.3.5 Inferred: Result evidential. The morpheme *-ya* codes *indirect inferring* evidential. It is used in utterances that express the speaker’s conclusion about an event or state based on some type of (indirect) observed results (i.e., the speaker observes results, rather than the actual event causing the result), illustrated in different contexts in (90) and (91). I call this evidential ‘RESULT’ for short.

Inferred results context I: *Speaker infers based on observable evidence (i.e. by seeing the plants and the ground outside are wet) that it rained during the night.*

(90) dopa yãmĩɾẽ dehko mẽɾãyã

dopa ~yabi-de deko ~beda-**ya**

today night-REF water fall-**EVID:RES**

‘It rained last night.’

Inferred results context II: *Speaker meets with a relative many years since they have last seen each other. The speaker's nephew looks old and tired.*

(90) mõmẽya mʉ̃'ʉ̃ wãĩmʉ̃

~bobe-**ya** ~bʉʉ ~waibʉ

work- **EVID:RES** 2SG nephew

'You've worked (hard), nephew.'

5.5.6.1.3.6 Inferred: Reason evidential. The morpheme *-ka* is also used to code *indirect inferring* evidential. It is based on the speaker's own previous experience, resulting in reasoning suppositions or on his cultural/historical/physical knowledge, resulting in assertions of facts. I call this evidential 'assertion', and its occurrence is shown in different context in (91) and (92).

Reasoning context I: *Speaker infers the situation based on the 'reasoning' that his brother is usually working when the speaker returns home.*

(91) yʉ'ʉ goekʉ̃ mõmẽgʉ̃ yãdʉaka

yʉʉ goe-~kʉ ~bobe-gʉ ~yaa-dʉa-**ka**

1SG return-when work-IMPERF see-DES-**EVID:REAS**

'I hope to see you working when I return.'

Reasoning context II: *It is a general knowledge in the Vaupés Region that the rapids are dangerous, thus, a sentence like* (92) *is generally used to describe some of the dangerous rapids.*

(92) ʉ̃htãmʉ̃gere wabita gʉya ãrĩka

~ʉtabu-ge-de wa-bidi-ta gʉya-~adi-**ka**

rapids-LOC-REF go-NEG-EMPH be.dangerous-be-**EVID:REAS**

‘Don’t go on the rapids because it is dangerous.’

A detailed examination of the morphosyntax and semantics of evidential markers is likely to yield reliable information on the status of evidentials as a grammaticalized evidential system. This is an area of ongoing investigation by the author.

The relationship between evidentials and epistemic values is, according to the claim made by Aikhenvald (2004), that “evidentiality markers occur in the mood and modality slot in verbal word, and are thus mutually exclusive with conditional, imperative, interrogative markers and so on” (p.11). It seems to be the case that, in Desano, evidentials can be analyzed as a (special kind of) epistemic modals, i.e, evidentials contribute to truth conditions. Finally, according to the current typology of evidentiality (Aikhenvald 2004), Desano is unusual in which it expresses the six semantic parameters -- *visual*, *sensory*, *inference*, *assumption*, *hearsay*, and *quotative*, a condition Aikhenvald claimed does not occur in the languages surveyed.

5.5.6.2 Irrealis Statements

There are two morphemes conveying that nonfactuality of an event: *-ka* ‘prediction’, as shown in (93) and *-bo* ‘speculation’ as shown in (94).

It should be noted that the speculative morpheme is always followed by the prediction morpheme.

(93) a. gʉa gahipʉ waamʉ̃ɾã ãɾ̃ibiɾika

gʉa gai-pʉ wa-~bʉdi ~adi-bidi-**ka**

1PL.EXCL other-CONTR go-go.uphill be-NEG-**PREDIC**

‘We will not move to another place.’

b. yʉ'ʉ wãɾõ wa'aʉka ãɾĩyʉ̃mĩ

yʉʉ ~wa-do wa-(g)ʉ-**ka**

1SG be.good-NOM go-3SG:M-**PREDIC**

~adi-~yu-~bi

say-EVID:QUOT/FOLK-3SG:M.IMPERF

'"I will be fine," he said.'

(94) a. ĩgʉ̃ nõmẽkʉ põɾãkʉ pãɾãmẽɾãkʉ wa'gã ikʉ̃ mʉ̃'ʉ̃ɾẽ ehatuabiɾiboka ãɾĩyʉ̃mĩ

~igʉ ~dobe-kʉ ~po-~da-kʉ

3SG:M female-CONJ progenee-PL:AN-CONJ

~pa-~da-~beda-kʉ waa-~ga i-ku

grandchild-PL:AN-COM/INST-CONJ go-MOV:advance do-ADVERS

~bʉʉ-de ea-tua-bidi-**bo**-ka

2SG-REF arrive-lean-NEG-**SPECUL**-PREDIC

~adi-~yu-~bi

say-EVID:QUOT/FOLK-3SG:M.IMPERF

'"When he has a wife, children and grandchildren, it will be difficult for you to live," he said.'

b. wʉataɾiɾo wa'aboka

wʉa-taɾi-ɾo waa-**bo**-ka

be.big-be.long-NOM go-**SPEC**-PREDIC

'(The story) will be too long.'

5.5.6.2.1 Interrogative

The morpheme *-ɾi* /-di/ is used to code questions, as shown in (95). Although the interrogative morpheme is not followed by personal ending morphemes for animates, it may occur with the nonthird person morpheme referring to an inanimate entity, as shown in (96).

(95) a. mʉ̃'ʉ̃ aɾiɾi

~bʉʉ adi-**di**

2SG come-**INTER**

'Are you coming?'

b. di'i kuɾumãhãɾã ãɾĩɾĩ õã nãhsẽãpʉ

dii kudu-~baa-~da ~adi-**di** ~o-a

which knot-location-PL:AN be-**INTER** DEIC:PROX-PL:AN

~dase-a-pʉ

Tukano-PL:AN-CONTR

'Which clan are these other Tukano from?'

(96) a. yẽ'ẽ duyaɾiɾo ãɾĩyũmĩ?

~yee duya-**di-do** ~adi-~yu-~bi

what lack-**INTER-NON3.IMPEF** say-EVID:QUOT/FOLK-3SG:M.IMPERF

'"What is missing?" he said.'

The interrogative morpheme may occur also with evidential markers (97a); irrealis morphemes coding 'speculation' and 'prediction' as shown in (97b) and (97c), respectively. It should be noted that the morpheme *-ka* 'prediction' is realized as [-ku] when followed by the interrogative marker.

(97) a. diʼiɾu gahsiɾu eheayuɾi?

dii-du gasi-du ea-a-~**yu-di**

which-CLS:round canoe-CLS:round arrive-PERF-**EVID**:QUOT/FOLK-**INTER**

‘Which canoe has arrived?’

b. nõã ẽɾãɾẽ siʉbiɾagʉ ãɾ̃ikuɾi?

~doa i-~da-de siʉ-bida-gʉ ~adi-**ka-di**

who DEM:PROX-PL:AN-REF call-play-3SG:M be-**PREDIC-INTER**

‘Who will be the captain of our team?’

c. mãɾ̃i iɾiɾe ãĩwãgãnʉ̃gãbiɾibokuɾi

~badi idi-de ~ai-~waga-~dʉga-bidi-**bo**-ka-**di**

1PL.INCL DEM:ANAPH-REF take-emerge-begin-NEG-**SPEC**-PREDIC-**INTER**

‘(Why) don’t we restart this (project)?’

5.5.6.3 ‘Oriented’ Modality

The markers of oriented modality are: *-ke* ‘imperative’; *-ta* ‘admonitive’; *-da* ‘exhortative’ and *-ku* ‘adversative’. The label ‘oriented’ modality is used here following Stenzel’s (2004:386) adaptation of the terminology ‘speaker-oriented modality’ proposed by Bybee et al. (1994), which claims that these subgroup of modality ‘do not report the existence of conditions on the agent, but rather allow the speaker to impose such conditions on the addressee (Bybee, et al:179). Thus, in Desano, this subgroup of modality is coded by different morphemes.

The imperative morpheme *-ke* is used quite often to code demands or requests as shown in (98a-c). The admonitive is used to code ‘warnings’ for events that might have negative consequences; for example, navigating through some rapids in the river (98d), or warning someone not to go to a party (where there will be too much drinking), as shown in (98e). The 'adversative' oriented modality is shown in (98f). The only exhortative example found in the data is shown in (98g), coding request.

(98) a. mʉ̃'ʉ̃ã õ duhoke

~bʉʉ ~o duo-**ke**

2PL DEM:PROX stay-**IMP**

'You stay here.' (repeated from 22)

b. duhkawa'ake nĩhkʉ

duka-waa-**ke** ~dikʉ

split-go-**IMP** land

'Go dividing the land.'

c. aɾike

adi-**ke**

come-**IMP**

'Come.'

d. ʉ̃htãmũgeɾe wabita gʉya ãɾ̃ika

~ʉtabu-ge-de wa-bidi-**ta** gʉya-~adi-ka

rapids-LOC-REF go-NEG-**ADMON** be.dangerous-be-EVID:REAS

'Don't go on the rapids because it is dangerous.' (repeated from 75d)

e. mʉ̃'ʉ̃ bohsenʉ̃ɾ̃ẽ wa'abita

~bʉʉ bose-~dʉ-de waa-bi(di)-**ta**

2SG party-CLS:day-REF go-NEG-**ADMON**

‘Don’t go to the party.’

g. ĩgʉ̃ nõmẽkʉ põɾãkʉ pãɾãmẽɾãkʉ wa’gã ikʉ̃ mʉ̃’ʉ̃ɾẽ ehatuabiɾiboka ãɾ̃yũmĩ

~igʉ ~dobe-kʉ ~po-~da-kʉ

3SG:M female-CONJ progenee-PL:AN-CONJ

~pa-~da-~beda-kʉ waa-~ga i-ku

grandchild-PL:AN-COM/INST-CONJ go-MOV:advance do-**ADVERS**

~bʉʉ-de ea-tua-bidi-bo-ka

2SG-REF arrive-lean-NEG-SPECUL-PREDIC

~adi-~yu-~bi

say-EVID:QUOT/FOLK-3SG:M.IMPERF

‘“When he has a wife, children and grandchildren, it will be difficult for you to live,” he said.’ (repeated from 94)

f. duhawaɾã mʉ̃ɾ̃ɾ̃aɾibʉ daha

dua-waa-~**da** ~bʉdi-di-adi-bʉ daa

return-go-**EXRT** MOV:go.uphill-IMPERF-come-NON3.PERF again

‘Let’s go back, and go up again.’ (repeated from 68)

5.5.7 Agreement Markers

The last position in the verb morphology template is for the category of personal pronominal agreement; these are morphemes that agree with the subject in gender and number. Besides coding person and number of the subject, these personal endings also code perfect and imperfect aspect, as shown in Table 5.5. These morphemes are obligatorily marked on the verb root in noninterrogative and nonoriented utterances.

The examples in (99) show verb inflection with personal agreement in the perfect aspect and with the unmarked visual evidential. In (99a) the personal ending *-bʉ* 'non-third person perfect' agrees with the first person singular subject *yʉ'ʉ*. In (99b), *-pʉ* agrees with the 'third person singular masculine' subject *Carlos*, and also describes a perfective event. The personal ending *-po*, in (99c) shows agreement with the 'third person singular feminine' subject *igo* 'she'; in (99d), the morpheme *-~da* marks agreement with the third person subject *~eda*.

Table 5.5 Markers of personal agreement

VERB ROOT	**PERSONAL PRONOMINAL (AGREEMENT) SUFFIXES**	
$\text{ROOT}_{\text{INDEP}}$ (+ROOT_{DEP})	PERFECT	IMPERFECT
	/-bʉ/ [-bʉ]	/do/ [-ɾo]
	NON3	NON3
	/-pʉ/ [-pʉ]	/-~bi/ [-mĩ]
	3SG:M	3SG:M
	/-po/ [-po]	/-~bo/ [-mõ]
	3SG:F	3SG:F
	/-~da/ [-ɾã]	/-~ba/ [-mã]
	3PL	3PL

(99) a. pebʉ kuɾibʉ yʉʉsã

pe-**bʉ**	kudi-**bʉ**	**yʉʉ**-~sa
listen-**NON3.PERF**	walk-**NON3.PERF**	**1SG**-ADD

‘I also listen and walked.’

b. kaɾu pĩɾũɾẽ weheapʉ

kaɾu	~pidu-de	wee-a-**pʉ**
Carlos	snake-REF	kill-STAT-**3SG:M.PERF**

‘Carlos killed the snake.’

c. igo yuhugogã wa’apo

igo	yuu-go-~ga	waa-**po**
3SG:F	one-3SG:F-DIM	go-**3SG:F.PERF**

‘She went alone.’

d. eɾo ãɾĩyõɾã ẽɾã paɾe

edo	~adi-~yo-~**da**	**~eda**	pade
DEIC:DIST	be-EVID:HSAY-**3PL.PERF**	**3PL**	then

‘Then, they lived there.’ (repeated from 7a)

Examples of subject agreement for each personal ending coding imperfective aspect are given in (100).

(100) a. eɾoge nĩgĩyũɾo iɾigʉ

do-ge	~digi-~yu-**do**	**i-kʉ**
DEM:DIST-LOC	be.standing/stay-EVID:QUOT/FOLK-**NON3.IMPERF**	**DEM:PROX-CLS:tree**

‘This hill was standing/stay over there.’ (repeated from 19)

b. ĩgʉ̃ mõmẽgʉ̃ imĩ

~igʉ ~bobe-gʉ i-**~bi**

3SG:M work-3SG:M.IMPERF do-**3SG:M.IMPERF**

‘He is working.’ (repeated from 52a)

c. igo dihsipoɾo nĩgĩmõ

igo disi-podo ~digi-**~bo**

3SG:F mouth-CLS:curve be.standing/stay-**3SG:F.IMPERF**

‘She is standing by the door.’ (repeated from 18)

d. ĩgʉ̃ wahaɾã i yebapʉsãɾẽ bahaɾã ãɾĩkãyũmã

~igʉ waa-~da i yeba-pʉ-~sa-de

3SG:M enmity-PL:AN DEM:PROX land-CONTR-ADD-REF

baa-~da ~adi-ka-~yu-**~ba**

many-PL:AN be-EXIST-EVID:QUOT/FOLK-**3PL:AN.IMPERF**

‘There were many of his enemies in this land.’ (repeated from 8b)

5.6 Summary

This chapter outlined the main characteristics of the morphology of Desano verbs. It identified three main classes of verbs: stative, non-stative verbs, and auxiliary verbs. The class of stative verbs is composed of copula verbs, verbs coding non-existence, possessive verbs, verbs indicating location/position and ‘adjectival’ stative verbs. The class of non-stative verbs is composed of active verbs, verbs of motion, verbs of placement and verbs of perception and mental processes. Three auxiliary verbs were identified: *i* ‘do’, *wa’a* ‘go’ and *ãrĩ* ‘be’. It was shown that serial verb construction is a productive morphological process. Dependent roots in these constructions function to code ‘adverbial’ notions of manner, aspect, and modality.

The grammatical morphemes that occur in the verb were also described, focusing on the description of the highly complex evidential system and other markers of clause modality. The personal ending morphemes, which occur in the last slot of the verb template, were described as markers of subject-verb agreement.

CONCLUSION

This dissertation provided a typologically informed grammatical description of Desano. This chapter presents an overview of Desano phonology. In Chapter 1, I presented a description about the Desano people and their language, as well as a history of the research. Desano is an endangered Eastern Tukanoan language with some 300 fluent speakers.

In the second chapter, I described the phonology of the language. Desano phonemic inventory is comprised of 11 consonants, and six vowels, and their variants. I showed that the status of the glottal segments *ʔ* and *h* as full consonant segments is debatable. The chapter also presents a description of the suprasegmentals of Desano, starting with a description of the syllable structure. Stress and tone were treated as a mixed system creating an interaction of *lexical tone* and *metrical tone*. The other suprasegmental trait presented was nasalization. I provided a description of the system and its basic process of nasal spreading. Three morphophonemic processes were described: vowel deletion, vowel fusion, and syllable reduction. The chapter ends with some information on the Desano orthography which I adopt throughout the dissertation.

In Chapter 3, I defined the notion of ‘word’ in Desano according to phonological and grammatical criteria. There are only two open classes of words can be identified in the language: nouns and verbs. Desano does not have adjectives. Adjectival and adverbial notions are derived from nominal and verbal roots.

The nominal morphology of Desano was described in Chapter 4. It presented the basic structure of nouns and the different types of nouns, including the ones derived from particles. It was shown that nouns in Desano are divided into two main types: animate and inanimate. These nouns are subcategorized according to the noun-class markers they take. Animate nouns take general class markers (gender markers) and inanimate nouns take specific markers (classifiers). The general class markers were also described in this chapter, followed by a discussion of how they are used to derive new nouns from other nominal roots or verbal roots. The chapter also presented a discussion of pronouns and other pro-forms. It was shown that it is possible to identify five pro-forms for the language: personal pronouns, demonstrative pronouns, and interrogative pronouns. Each nominal morpheme was also described. Two lexical morphemes were identified: the diminutive morpheme -~*ga* and the augmentative morpheme -*guro*. There are six grammatical morphemes that attach to nouns. These were discussed in the order in which they appear when suffixed to the root (or stem). The chapter ends with a description of the structure of noun phrases. It was shown that noun phrases can be divided in two groups according to the types of modifiers they take. One is the simple noun phrase, formed by a pronoun or noun plus simple modifier (demonstrative and numeral) and the other is complex noun phrase, formed by possessive (or genitive modifiers) or relative clauses.

Chapter 5 is the last chapter. It outlined the main characteristics of the morphology of Desano verbs. It described three main classes of verbs: stative, non-stative verbs and auxiliary verbs. The class of stative verbs is composed of copula verbs, verbs coding non-existence, possessive verbs, verbs indicating location/position and ‘adjectival’ stative verbs. The class of non-stative verbs is composed of active verbs, verbs of motion, verbs of placement and verbs of perception and mental processes. Three auxiliary verbs were identified: *i* ‘do’, *wa’a* ‘go’ and *ãrĩ* ‘be’. It was shown that serial verb construction is a productive morphological process. Dependent roots in these constructions function to code ‘adverbial’ notions of manner, aspect and modality. The grammatical morphemes that occur in the verb were also described, focusing on the description of the highly complex evidential system and other markers of clause modality. The personal ending morphemes, which occur in the last slot of the verb template, were described as markers of subject-verb agreement.

The present description is an on-going project. Although many of the most interesting typological traits have been described here, there are many aspects of the grammar are currently under investigation. For example, the description of sentence and argument structures, and some discourse-pragmatic considerations. The language has much to contribute to linguistics. Linguistic investigations of Tukanoan languages have been important for linguistic typology. Finally, it is important to mention that this work is a result of a collaborative language documentation project is the product of a language documentation project that also aims to provide material to aid in the Desano educational projects.

APPENDIX A

SURVEY OF NUMBER OF SPEAKERS AND LANGUAGES SPOKEN IN THE DESANO COMMUNITIES

Abbreviations:

BAR	Barasano	MAK	Makuna	TUK	Tukano
DES	Desano	POR	Portuguese	TUY	Tuyuca
KUB	Kubeo	SPA	Spanish	WAN	Wanano
HUP	Hupda	TAR	Tariano	WER	Werekena

Community: Sao Luís, Tiquié River							
Ethinic group	No. of people	Languages spoken by the individuals					
MALES		DES	HUP	POR	TUK	TAR	WAN
Desano	2	✓		✓	✓		
	2			✓	✓		
Hupda	3		✓	✓	✓		
	4		✓		✓		
FEMALES							
Tukano	1			✓	✓		
Piratapuyo	1			✓	✓		
Tariana	1			✓	✓	✓	✓
Hupda	2		✓		✓		
	4		✓	✓	✓		

Community: Urubú Lago, Tiquié River					
Ethinic group	No. of people	Languages spoken by the individuals			
MALES		DES	HUP	POR	TUK
Desano	6	✓		✓	✓
Karapanã	2			✓	✓
FEMALES					
Desano	2	✓		✓	✓
Miriti-Tapuya	4				✓
Tukano	1			✓	✓
Hupda	1		✓		✓

Community: Santa Rosa, Tiquié River							
Ethinic group	No. of people	Languages spoken by the individuals					
MALES		DES	HUP	POR	TUK	TAR	WAN
Desano	8	✓		✓	✓		
Tukano	1	✓		✓	✓		
Hupda	4		✓		✓		
	1		✓	✓	✓		
FEMALES							
Desano	1	✓			✓		
Tukano	4				✓		
	2			✓	✓		
Tariana	1			✓	✓	✓	✓
Hupda	2		✓		✓		
	4		✓	✓	✓		

Community: Santo Antônio, Tiquié River						
Ethinic group	No. of people	Languages spoken by the individuals				
MALES		DES	POR	TUK	TUY	SPA
Desano	3	✓	✓	✓		✓
	3	✓	✓	✓		
	2		✓	✓		
Tukano	1		✓	✓		
FEMALES						
Tukano	4		✓	✓		
	1		✓	✓	✓	

Community: Piracema/ Umari River /Tiquié River							
Ethinic group	No. of people	Languages spoken by the individuals					
MALES		DES	HUP	POR	TUK	TUY	SPA
Desano	10	✓		✓	✓		
FEMALES							
Desano	2	✓		✓	✓		
Tukano	1	✓		✓	✓		
	2			✓	✓		
Tuyuca	1	✓		✓	✓	✓	✓
Hupda	2		✓		✓		

Community: São João Batista, Tiquié River					
Ethinic group	number of people	Languages spoken by the individuals			
MALES		DES	HUP	POR	TUK
Desano	6	✓		✓	✓
Tukano	5			✓	✓
FEMALES					
Desano	1	✓		✓	✓
Tukano	1	✓		✓	✓
	7			✓	✓
Tariana	1			✓	✓

Community: Tucandira, Umari River / Tiquié River						
Ethinic group	number of people	Languages spoken by the individuals				
MALES		DES	HUP	POR	TUK	TUY
Desano	3	✓		✓	✓	
FEMALES						
Tukano	1	✓		✓	✓	
Tuyuca	1	✓		✓	✓	✓

Community: São Sebastião do Umari, Tiquié River											
Ethinic group	No. of people	Languages spoken by the individuals									
MALES		BAR	DES	HUP	KUB	MAK	POR	TAR	TUK	TUY	WER
Desano	9		✓				✓		✓		
	3		✓				✓		✓		
	2		✓				✓		✓	✓	
	1	✓	✓			✓	✓		✓	✓	
	1		✓			✓	✓		✓	✓	
	1		✓		✓	✓					✓
	1		✓		✓		✓		✓		
	1		✓				✓		✓	✓	✓
Tukano	2		✓				✓		✓		
	8						✓		✓		
Kubeo	1						✓		✓		
Karapanã	1						✓		✓		
Tuyuca	1		✓				✓		✓	✓	
FEMALES											
Desano	5						✓		✓		
	4		✓				✓		✓		
	1		✓				✓		✓		✓
Tukano	4						✓		✓		
	1		✓				✓		✓		
	1		✓				✓		✓	✓	
Makuna	1					✓			✓		
	1						✓		✓		
Tuyuca	1		✓						✓	✓	
	1		✓				✓		✓	✓	
	1						✓		✓	✓	
	1								✓	✓	
Kubeo	1				✓		✓		✓		
	1				✓		✓				
Miriti-Tapuya	1						✓		✓		
Tariana	1							✓			
Hupda	2			✓					✓		

APPENDIX B

TEXT 1 - THE HUNTER AND THE MONKEY

1 yuhunʉ̃ yʉ’ʉ yẽhkʉ mʉ̃ɾõ Kãdĩ mʉ̃ɾʉ̃ wa’ipuɾiwa’abʉ

yuu-~dʉ	yʉʉ	~yekʉ	~bʉdʉ	kadi	~bʉdʉ
one-CLS:day	1SG	grandfather	deceased	Candido	deceased
wai-pudi-waa-bʉ					
hunt-blow-go-NON3.PERF					

‘One day, my deceased grandfather Candido went hunting (with a blowgun).’

2 ĩgʉ̃ nʉ̃hkʉ̃ge ĩgʉ̃ waakʉ̃ õã sẽɾã mãhãɾã ãɾĩmã ã’ɾĩmĩ

~igʉ	~dʉgʉ-ge	~igʉ	waa-~kʉ	~o-a	~seda
3SG.M	forest-LOC	3SG.M	go-when	DEIC:PROX-PL.AN	woolly.monkey
~baa-~da		~adi-~ba	~adi-~bi		
many-PL.AN		be-3PL.IMPERF	say-3SG.M.IMPERF		

‘When he went into the forest, he used to see many woolly monkeys, he said.’

3 õãɾẽ puɾiɾa ãɾĩduɾinĩgʉ̃ yããbʉ ã’ɾĩmĩ

~o-a-de	pudi-da	~adi-dudi-~di-~gʉ	~yaa-bʉ
DEIC:PROX-PL.AN-REF	blow-PERF	be-hide-IMPERF-3SG.M	see-NON3.PERF

~adi-~bi

say-3SG.M.IMPERF

‘He used to stay put (hiding) to watch them and catch them, he said.’

4 mʉ̃htãɾãgã ãɾĩmã ã’ɾĩmĩ

~bʉta-~da-~ga ~adi-~ba ~adi-~bi

be.small-PL:AN-DIM be-3PL.AN.IMPERF say-3SG.M.IMPERF

‘The monkeys were very small, he said.’

5 mʉ̃htãɾãgã taɾiamʉ̃ɾĩmã ã’ɾĩmĩ

~bʉta-~da-~ga tadi-a ~bʉdi-~ba ~adi-~bi

be.small-PL.AN-DIM transmit-PERF climb-3PL.AN.IMPERF say-3SG.M.IMPERF

The little monkeys jumped around (from branch to branch), he said.’

6 ẽɾã dehko ãɾĩmĩ ẽɾã pagʉ wʉagʉ ã’ɾĩmĩ

~eda deko ~adi-~bi ~eda paa-gʉ wʉa-gʉ

3PL half be-3SG.M.IMPERF 3PL genitor-3SG.M be.big-3SG.M

~adi-~bi

say-3SG.M.IMPERF

‘Among then, there was the father, who was big, he said.’

7 ĩgʉ̃ eɾo paagãɾĩkʉ̃ ĩã ĩgʉ̃ɾẽ mĩũbeobʉ ã’ɾĩmĩ tsu tsu ibʉ ã’ɾĩmĩ

~igʉ edo paa-~gadi-gʉ i-a ~igʉ-de

3SG.M DEIC:DIST belly-advance-3SG.M do-PL.AN 3SG.M-REF

~biu-beo-bʉ ~adi-~bi i-bʉ ~adi-~bi

breast.feed-CEL-NON3.PERF say-3SG.M.IMPERF do-NON3.PERF say-3SG.M.IMPERF

‘When the monkey came crawling there, he (my dad) said *tchu tchu*, he said.’

8 yãmẽ dihiumĩ yʉ’ʉɾe ã’ɾĩmĩ

~yaa-be-diu-~bi yʉʉ-de ~adi-~bi

see-CEL-downwards-3SG.IMPERF 1SG-REF say-3SG.M.IMPERF

‘The monkey stared at him, he said.’

9 ĩgʉ̃ yãmẽ dihiukʉ̃ yããwããɾõ puɾita iɾibʉ ã’ɾĩmĩ

~igʉ ~yaa-be-diu-~kʉ ~yaa-~wa-do pudi-ta

3SG.M see-CEL-downwards-when see-go-NON3.IMPERF blow-EMPH

idi-bʉ ~adi-~bi

DEM:PROX-CLS.concave say-3SG.M.IMPERF

‘He said that when he say the monkey staring,’

10 ĩgʉ̃ gãmĩɾõgã ãɾõnõhõgã ĩgʉ̃ɾẽ puɾimẽ siugʉɾa ãɾĩɾibʉ ã’ɾĩmĩ

~igʉ ~gabi-do-~ga ~ado-do-ga ~igʉ-de

3SG.M ear-CLS:body.part-DIM DEIC:PROX-CLS:body.part 3SG.M-REF

pudi-~be-siu-gʉda ~adi-di-bʉ ~adi-~bi

blow-CEL-pierce-hit be-IMPERF-NON3.PERF say-3SG.M.IMPERF

‘He said that when he blew the blowgun, he wanted to hit right on the monkey’s little ear.’

11 be’e eɾopa ãɾĩgʉ̃ ĩgʉ̃ nĩmãmẽɾã puɾikʉ̃ ĩgʉ̃ yuɾidihia wa’amĩ ã’ɾĩmĩ

bee edopa ~adi-~gʉ ~igʉ ~diba=beda pudi-~kʉ

by.the.way thus say-3SG.M 3SG.M poison=COM/INSTR blow-when

~igʉ yudi-dii-a waa-~bi ~adi-~bi

3SG.M go.down-descend-PERF go-3SG.M.IMPERF say-3SG.M.IMPERF

‘By the way, he was blowing the blow gun with poison and the monkey fell off, he said.’

12 ĩgʉ̃ yuɾidihia yã’ã iɾi buhuwahkaɾe ãĩ ãĩkaɾabʉ ãɾĩmĩ

~igʉ yudi-dii-a ~yaa idi buu-waka-de

3SG.M go.down-descend-PERF see DEM:PROX ***-skewer-REF

~ai ~ai-kada-bʉ ~adi-~bi

take take-loosen-NON3.PERF say-3SG.M.IMPERF

‘He said the monkey fell down and he went to take the skewers that hit the monkey.’

13 mãhãɾõ nĩmãpʉ̃ wuaɾo waabiɾo ãɾĩbʉ ĩgʉ̃ɾẽ ã’ɾĩmĩ

~baa-do ~diba-pʉ wʉa-do waa-bi-do

many-NOM.ABSTR poison-CONTR be.big-NOM.ABSTR go-NEG-NON3.PERF

~adi-bʉ ~igʉ-de ~adi-~bi

be-non3.PERF 3SG.M-REF say-3SG.M.IMPERF

‘However, the poison wasn’t enough (to kill) him (the monkey).’

14 eɾopi ĩgʉ̃ɾe seiɾe ãĩ ãĩõmãbʉ ã’ɾĩmĩ

edopi ~igʉ-de sei-de ~ai ~ai-~oba-bʉ

thus 3SG.M-REF monkey-REF take take-run-NON3.IMPERF

~adi-~bi

say-3SG.M.IMPERF

Thus, he took the monkey and put it on his back.’

15 ãĩõmãã piaɾiaɾiɾibʉ ã’ɾĩmĩ

~ai~oba-a pia-di-adi-di-bʉ

take-wrap-PERF MOV:out.into-DIR:towards-come-DIR:towards-NON3.IMPERF

~adi-~bi

say-3SG.M.IMPERF

‘Putting the monkey on his back, he returned, he said.’

16 yʉ’ʉ piaɾikʉ̃ ĩgʉ̃ yẽĩsiɾu mãhsã waaɾi ãɾĩmĩ ã’ɾĩmĩ paɾe

yʉʉ pia-di-~kʉ ~igʉ ~yei-sidu[103] ~basa-waa-di

1SG MOV:out.into-when 3SG.M be.ugly-deceased know-go-IMPERF

~adi-~bi ~adi-~bi pade

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[103] *siɾu* is a Tukano word that means ‘deceased,’ the word in Desano is *bʉɾu*.

be-3SG.MASC.IMPERF say-3SG.M.IMPERF then

‘He said that when he was returning, the monkey came back to life.’

17 mãhsãpeemãhsĩtuaha yʉʉɾe ãɾõyõɾa puibugoɾa yʉʉɾe kũɾĩkãɾãmĩ ã’ɾĩmĩ

~basa-pee-~masi-tua-da yʉʉ-de ado-goda

know-listen-know-lean-PERF 1SG-REF DEIC-CLS:shell

pui-bu-goda

basket-CLS:concave-CLS:shell

‘He said that he noticed the monkey was moving on his back, then the monkey bit him on his buttocks.’

18 agʉa mʉ̃ʉ̃ yẽĩsiɾu yʉʉɾe kũɾĩkohoaka ãɾĩ ĩgʉ̃ɾẽ mẽpĩkãbʉ ã’ɾĩmĩ

agʉa ~bʉʉ ~yei ~bʉdʉ yʉʉ-de ~kudi-koa-ka ~adi

ouch 2SG be.ugly deceased 1SG-REF bite-throw.away-EXIST be

~igʉ-de ~bepi-ka-bʉ ~adi-~bi

3SG.M-REF throw.away-EXIST-NON3.PERFsay-3SG.M.IMPERF

‘“Ouch! You bit me damn monkey!” He said throwing the monkey from his back.’

19 ĩgʉ̃ mẽhpĩkʉ̃ ĩgʉ̃pʉ̃ paamʉ̃ɾĩã waamĩ ã’ɾĩmĩ

~igʉ ~bepi-~kʉ ~igʉ-pʉ paa-~bʉdi-a wa-~bi

3SG.M throw.away-when 3SG.M-CONTR hit-climb-PERF go-3SG.M

~adi-~bi

say-3SG.M.IMPERF

‘He said that when he threw the monkey, the monkey climbed on the trees.’

20 yẽ’ẽdaɾo ika mʉ̃siɾu ĩgʉ̃ɾẽ ãɾĩ ĩgʉ̃ɾẽ yʉhkʉgʉ ta’abe ĩgʉ̃ɾẽ pabʉ

~yee-da-do i-ka ~bʉʉ ~bʉdʉ ~igʉ-de ~adi

be.bad-PERF-NOM.ASBTR do-exist 2SG deceased 3SG.M-REF be

~igʉ-de yʉkʉ-gʉ taa-be ~igʉ-de paa-bʉ

3SG.M-REF tree-CLS:trunk cut-CEL 3SG.M-REF hit-NON3.PERF

‘“You did bad,” the deceased (man) told the monkey; “I got a piece of wood and hit him,” he said.’

21 ĩgʉ̃ dihpuɾu pawabʉ ĩgʉ̃ɾe paɾe ã’ɾĩmĩ

~igʉ dipu-du paa-wa-bʉ ~igʉ-de pade ~adi-~bi

3SG.M head-CLS:concave hit-go-NON3.PERF 3SG.M-REF then say-3SG.M.IMPERF

‘He said that he hit the monkey on the head.’

22 yẽẽ ãɾĩmã mãɾĩwaimʉ̃ɾã baadʉakʉ̃ ŋãmẽkãmã iɾãsã ãɾĩ weɾenĩmĩ

~yee-~adi-~ba ~badi wai-~bʉdamʉ̃dã baa-dʉa-~kʉ

be.bad-be-3PL.AN.IMPERF 1PL fish-deceased eat-DES-when

~gabe -~ka-~ba i-~da-~sa ~adi wede-~adi-~bi

want-PREDIC-3PL.AN.IMPERF DEM:PROX-PL.AN-ADD be tell-say-3SG.M.IMPERF

‘The animals are evil when we try to eat them; the animals also get revenge, he narrated.

APPENDIX C

TEXT 2 - COLLECTING MATERIALS TO MAKE ORNAMENTS

1 ẽɾõpĩɾã mʉ̃ɾã mãmãɾõ geɾe ʉ̃ɾĩnʉ̃ɾẽ kuɾisʉayʉ̃mã

~edopida	~bʉ-~da	~baba-do	gede	~ʉdi-~dʉ-de
thus	elder-PL.AN	be.new-NOM.ASBSTR	season	pupunha.fruit-CLS:day-REF

kudi-sʉa-~yu-~ba
walk-like-EVID:QUOT/FOLK-3PL.AN.IMPERF

‘Thus, the elders like to go walking during the pupunha fruit season.’

2 waitu ãĩɾã nʉ̃hpĩ põɾã yẽãɾã kaɾamʉ̃hʉ̃ põɾã omõãborebu põɾã yẽãɾã

waitu	~ai-~da	~dupi	~po-~da	~yea-~da
wild.fruit	take-NON3.PERF	mutum.bird	progenee-PL.AN	hold-3PL.PERF

kada-bu	~po-~da	o	~boa-bode-bu
jacu.bird-CLS.concave	progenee-PL.AN	or	salt-CLS.buddle-CLS.concave

~po-~da	~yea-~da
progenee-PL.AN	hold-3PL.PERF

‘(They) caught *waitu* fruit, caught babies of mutum birds, babies of jacu birds end babies of jacamim birds.

3 ẽɾã mãhsʉ̃duaɾã ĩyʉ̃ɾã ẽɾãɾẽ

~eda ~basʉ-dua-~da i-~yu-~da ~eda-de

3PL tame-DES-PL.AN.PERF do-EVID:QUOT/FOLK 3PL-REF

‘They want to tame them.’

4 yẽããĩgãɾĩ wi’ige eho mãhsʉ̃ opayʉ̃mã

~yea-~ai-~gadi wii-ge

comprise-take-advance house-LOC

eo-~basʉ-opa-~yu-~ba

feed-tame-have-EVID.QUOT/FOLK-3PL.AN.IMPERF

‘They took the caught the birds and brought them home to raise them.’

5 goe ʉ̃mʉ̃gʉ̃ge waayʉ̃mã daha ʉ̃mʉ̃gʉ̃ge mʉ̃ɾĩã ʉ̃mʉ̃ poɾaɾe ʉ̃mʉ̃ suɾiɾe taayʉ̃mã

goe ~ubu-gʉ-ge waa-~yu-~ba daa

return japu.bird-CLS.trunk-LOC go-EVID:QUOT/FOLK again

~ubu-gʉ-ge ~budi-a ~ubu ~po-~da-de

japu.bird-cls.trunk-LOC climb-PERF japu.bird progenee-PL.AN-REF

~ubu sudi-de taa-~yu-~ba

japu.bird nest-REF cut-EVID.QUOT/FOLK-3PL.AN.IMPERF

‘They returned again looking for trees where the japu birds breed to collect the nests with the baby birds.’

7 taaãĩdihaɾi ehomãhsũ ĩyũmã
taa-~ai-dia-di eo~basu i-~yu-~ba
cut-take-descend-IMPERF feed-tame do-EVID:QUOT/FOLK-3PL.AN.IMPERF
‘They cut off the nests, took the baby birds, climbed down and raised the baby birds.’

8 ẽɾã peyaɾi beɾuɾi ĩmõɾã ãɾĩɾã
~eda peya-di bedu-di ~ibo-~da ~adi-~da
3PL headdress-PL.IN circle-PL.IN obtain-PL.AN.PERF be-PL.AN.PERF
‘They (the elders) caught them (the birds) to make headdresses.’

9 ẽɾã mẽɾã ẽɾã poaɾi mẽɾã ãĩ ẽɾãpeyaɾi beɾoɾi mõmẽyũmã
~eda=~beda ~eda poa-di=~beda ~ai ~eda peya-di
3PL=COM/INSTR 3PL hair-PL.IN=COM/INSTR take 3PL be.on.top.of-NOM
bedo-di ~bobe-~yu-~ba
circle-PL.IN work-EVID:QUOT/FOLK-3PL.AN.IMPERF
‘With these birds, they took their feathers and worked on the headdresses.’

10 mãhã poaɾiɾe mãhã poaɾi gahsiɾo waya
~baa poa-di-de ~baa poa-di gasi-do waa-ya
macaw hair-PL.IN-REF macaw hair-PL.IN bark-CLS:body.part go-EVID:RES
‘The macaw feathers formed the headdresses of macaw feather.’

11 gahkia dopa ãɾĩɾã ãĩyũmã daha i poadaɾi gahki poadaɾi ĩmõɾã ãɾĩɾã

gaki-a	dopa	~adi-~da	~ai-~yu-~ba	daa
monkey-PL.AN	like	be-PL.AN.PERF	take-EVID:QUOT/FOLK-3PL.IMPERF	again

i	poa-da-di	gaki	poa-da-di
DEM:PROX	hair-CLS:thread-PL.IN	monkey	hair-CLS:thread-PL.IN

~ibo-~da	~adi-~da
obtain-PL.AN.PERF	be-PL.AN.PERF

‘Again, they took any monkey to make headdresses of monkey’s hair.’

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