Me:ɾuɾu, ɸoku, and tʃitowiʃ:

An analysis of ideophones in Katuena (Tunayana)

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ABSTRACT

This thesis investigates the structure and uses of ideophones, sound-symbolic words evoking sensory imagery, in Katuena (Tunayana), an Amerindian language spoken in the Amazon basin. The Katuena language has a large number of ideophones, and these are used both in story-telling and in daily conversation. The first part of this study provides an introduction to the Katuena people, their history and their language, as well as an overview of the literature on ideophones. The second part uses a corpus of Katuena and interviews with speakers to provide a comprehensive analysis of the phonological and morphological structures of Katuena ideophones, as well as their syntactic characteristics. This is followed up by an analysis of the meanings and uses of ideophones, including the ways iconicity contributes to their meanings, and the gestures which frequently accompany these sound-symbolic words.

For my father, Richard A. Smoll.

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DECLARATION

I, Laetitia Smoll, declare that this thesis titled, 'Meːɾuɾu, ɸoku, and tʃitowiʃ: Ideophones in Katuena (Tunayana)' and the work presented in it are my own. I confirm that:

- This work was done wholly or mainly while in candidature for a research degree at this University.
- Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.
- Where I have consulted the published work of others, this is always clearly attributed.
- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.
- I have acknowledged all main sources of help.
- Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.

Signed: _____

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Second reader: Dr. Matthias Urban

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ABBREVIATIONS

1	first person
1PRO	first person pronoun
3	third person
3COR	third person coreferential
3S	third person nominative subject
3SG	third person singular
ADMIR	admirative
ANAPH	anaphoric
ATTEN	attenuative
AUGM	augmentative
CAUS	causative
CIRC	circumstantial nominalizer
CL	classifier
CMPL	completive
DIR	directional
DP	distant past
EMPH	emphatic
EXH	exhaustive focus (‘only, just’)
IDEO	ideophone
IMP	imperative
INAN	inanimate
INCH	inchoative
INTERJ	interjection
INTR	intransitive
IP	immediate past
IPF	imperfective
LNK	linker
LOC	locative
NEG	negation
NP	noun phrase

PAST	nominal past
PF	perfective
PITY	pity / non-control
PL	plural
POSS	possessed stem
PP	postposition
PRIV	privative
PURP	purpose-of-motion subordination
REF	adverb phrase referent nominalizer
REFL	reflexive
REP	reportative
SC	spatial classifier
SF	sentence-final / afterthought
SPC	spatial formative
TAM	tense aspect mood
TOT	totalitative
VOC	vocative
VP	verb phrase

Part I

INTRODUCTION & BACKGROUND

1

INTRODUCTION

This thesis investigates the meanings and uses of ideophones in Katuena (Tunayana), a Cariban language spoken in Suriname, Guyana and Brazil. Ideophones are sound symbolic words that tend to exchibit very special phonological, morphological and syntactic properties. Katuena has a very large number of ideophones that are used both in narratives and in daily conversation. The current work investigates the ways in which Katuena ideophones adhere to the general structure of the language and the ways in which they diverge from this, through data collected in the form of narratives, but also through interviews with speakers during fieldwork in southern Suriname. Though an entire book could be written about ideophones in Katuena, this work aims to provide a general outline of their meanings and uses in the language. Chapter 1 provides an overview of the fieldwork setting, participants and orthographic conventions used, and Chapter 2 provides a description of the history of Katuena (Tunayana) and the Waiwai, with whom they now form a group, as well as a typological description of the Katuena language. Chapter 3 discusses the definition and characteristics of ideophones cross-linguistically, and Chapters 4 to 7 investigate the phonology, morphology, syntax, meanings and uses of ideophones in Katuena.

1.1 FIELDWORK, DATA & CONVENTIONS

1.1.1 *Fieldwork setting*

Kwamalasamutu, an Amerindian village in southern Suriname, is situated at a latitude of 2,19° N and at a longitude of 56,46° W, on the lower reaches of the Sipaliwini river (see Figure 1.1.1). The Sipaliwini runs in a northwestern direction from the northern ranges of the Tumuc Humac mountains, which stretch all along the southern border of French Guyana and Suriname with Brazil up to the Kutari river, and then bends to a western direction shortly before it passes the village. Whereas the headwaters of the Sipaliwini lie in a savannah region that extends to the south into Brazil, Kwamalasamutu itself is situated in the tropical rainforest at an altitude of 275 m. Kwamalasamutu, or Kwamala as it is commonly called, is a multi-ethnic village with a fluctuating population of 800-1000 inhabitants. The population is composed of a majority of Trio (ethnonym: Tarëno) people and several minority groups including Waiwai, Mawayana, Katuena (Tunayana), Sikïiyana and Akuriyo. The Katuena (Tunayana) group has about 200 members.

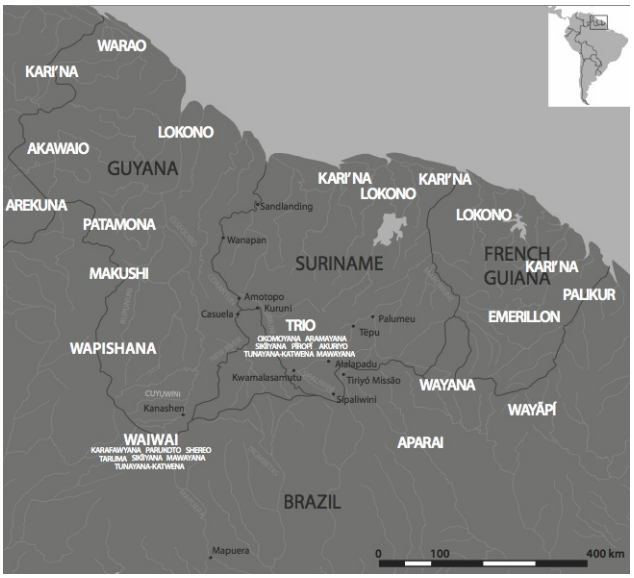

Figure 1: Map of Suriname (from Carlin and Mans (2014), used with permission)

1.1.2 *Participants*

Recordings of eight speakers, four female (Chufuyu, Waniya, Waka, Yahkara), and four male (Mišo, Amakara, Yakuta, Omhi), were used for this study. At the time of recording, all Katuena informants were between 60 and 75 years old, with the exception of Waka, who was in her 50s. Misho, who provided the majority of texts, is Amakara's older brother; Omhi, who acted as a flute player, is their half-brother. Waniya and Omhi are spouses. Chufuyu's younger brother Shaafi, who is allegedly the best storyteller of their group and who also participated in translating the Bible into Waiwai, could not be consulted, since he had moved to the village of Ayarama across the Brazilian border a few years before the initial fieldwork for this study was conducted. Yakuta has the official status of a *basja* (assistant to the village head) of the Katuena group. The other informants do not have any outstanding political functions.

1.1.3 *Audio and video recording*

Audio and video recordings used for this research were made by Roland Hemmauer during fieldwork trips to Kwamalasamutu in January-March 2006 and February-April 2007, as part of a *Nederlands Organisatie voor Wetenschappelijk Onderzoek* (NWO - 'Netherlands Organisation for Scientific Research') endangered languages project (no. ELP-05-01) entitled 'Giving them

back their languages: The endangered Amerindian languages of the Guianas' (applicants: Prof. Dr. Willem Adelaar & Dr. Eithne Carlin), running from 2005 to 2009. Audio files were recorded on a Hi-MD MiniDisc recorder, using either a headset or a table microphone. Video recordings were made on MiniDV tapes.
Narratives and life histories were recorded. Texts were transcribed by Roland Hemmauer with the help of the narrators themselves. Younger helpers, who had a passive understanding of Katuena and who were occasionally consulted during Hemmauer's two fieldwork periods, turned out to only have an active command of Waiwai and were unable to reproduce spoken Katuena.

Of the several texts that Hemmauer recorded and that I used for this study, one, namely *Waatafuru* (Forest Monster), was translated into English. All the other texts I used were partially and inconsistently glossed and had to be checked in the field. During fieldwork I also worked on a complete glossing and translation for the following three stories: *Nuuñe* (Moon), *Mashimashima* (Daughter-in-law) and *Kwashari Ifikoymo* (Flood and Inferno). Hemmauer's manuscript has been used with his permission.

Given the state of the corpus, I decided to undertake a fieldwork trip to Kwamalasamutu in January-February 2014 in order to translate these narratives, elicit more ideophones, and question informants about the uses and meanings of these. This trip was made possible through grants from the Leiden University Fund (LUF) and the *Gesellschaft für bedrohte Sprachen e.V. (GbS)*, 'the Society for Endangered Languages.' The narratives were translated with the help of Aisa, a Katuena man who speaks good English. Both Misho and Waniya were also consulted to verify translations as well as for the elicitation of ideophones and verification and analysis of data.

1.1.4 *Orthographic conventions*

In contrast to Waiwai, Katuena is not a written language. Among the Katuena living in Kwamalasamutu, Katuena is only spoken in the home sphere, Trio is used with other villagers, and Waiwai is used for liturgical purposes, including songs. When writing Waiwai, the Katuena make use of the Waiwai orthography developed by Hawkins (see Hawkins, 1998) while working with the Brazilian Waiwai. Since the Waiwai and Katuena consonant and vowel systems are similar, Waiwai orthography could also be applied to the Katuena language. However, since this orthography shows some Portuguese-based idiosyncrasies (e.g. <x> for /ʃ/) and conceals some phonetic realizations (e.g. <p> for /ɸ/: [ɸ]), Hemmauer (2009) proposes a more practical orthography which is used in the current work for proper names and in cases where the IPA was not deemed necessary. This orthography uses symbols that are more widespread among Americanists in general. Table 1 contrasts the orthography used here with Katuena phonemes in the International Phonetic Alphabet (IPA) and Hawkins' orthography.

Table 1: **Waiwai and Katuena orthographies**

IPA	Hawkins (1998)	Hemmauer (2009)
/t/	*t*	*t*
/tʃ/	*c*	*č*
/k/	*k*	*k*
/ɸ/	*p*	*f*
/s/	*s*	*s*
/ʃ/	*x*	*š*
/h/	*h*	*h*
/m/	*m*	*m*
/n/	*n*	*n*
/ɲ/	*ĥ*	*ñ*
/ɾ/	*r*	*r*
/ɾʲ/	*r̂*	*ɾʲ*
/w/	*w*	*w*
/j/	*y*	*y*
/i/	*i*	*i*
/ɨ/	*î*	*ɨ*
/u/	*u*	*u*
/e/	*e*	*e*
/a/	a	a
/o/	*o*	*o*

2

KATUENA

2.1 KATUENA, TUNAYANA, WAIWAI

Although there is a distinction between the Katuena and the Tunayana, whether one is a subgroup of the other, or whether they are simply two groups speaking the same language is unclear. Both these groups have been incorporated into the relatively recently-formed Waiwai group. The following outlines the historical mentions of all three of these groups, with a view to better understanding the connections between them.

2.1.1 *Katuena*

The first mention of the Katuena is by Farabee (1924), who met but one man from this group at a village along the Apiniwau in northern Brazil. Farabee refers to them as 'Katawians,' a sub-tribe of the Parukutus (1924, p.197). In 1952, the botanist Nicholas Guppy was told of Katawians living in Guyana, and his source described them as very fierce people (Guppy, 1958, p.28). Yde (1965, p.319) uses a different name, making very brief mention of a 'Katwéma' territory located to the west of the Mapuera. George Mentore (1984, p.200) lists the 1978-1979 residents of Shepariymo village in southern Guyana as including Waiwai, Wapishana, Mawayana, Hishkaryena, 'Katawina,' Parukoto, Aaramayena, Chikena, Shereo, Marakayena and Tunayana.

Hawkins (1998) makes mention of both the 'Katwena' and the 'Tuuna Yana' as being separate groups absorbed into the multiethnic Waiwai group, however Carlin (1998, p.35), who worked among the Trio of southern Suriname directly connects the Katuena to the Tunayana: 'The Trio seem to be unaware of the name Tunayana and refer to that group as Katuena, with the result that some people refer to themselves as Katuena-Tunayana. As far as I could ascertain by means of wordlists, Tunayana and Katuena are one and the same.'

More recently, Catherine Howard (2001) conducted research in Waiwai villages in northern Brazil and collected data on the language of the Katuena living in those villages. While discussing the lability of identity claims among residents, she notes a link between Katuena and Tunayana, but does not explicitly equate the two:

> '[...] individuals who called themselves Waiwai on certain public occasions might assert their Xerew affiliation on others, while in a domestic setting they might con-

> trast themselves with their Xerew neighbors and claim Tunayana identity, which, however, might be challenged behind their back in gossip about their Katuena roots' (Howard, 2001, p.81).

Whether these terms denote two different groups or just one is still unclear. It may be that the terms Tunayana and Katuena refer to the same people and language. Alternatively, Katuena may indeed be a separate, but related group. What is clear is that the languages referred to as Tunayana and Katuena in different sources can be considered the same language.

According to Hemmauer (ms), the Katuena group living in Kwamalasamutu prefer to be referred to with the name 'Tunayana.' Futhermore, Carlin (2011, p.235) maintains that the Katuena are actually a subgroup of the Tunayana people. At the time of these two researchers' visits to Kwamalasamutu, it seemed that the term Katuena perhaps held negative connotations. Interestingly, during my own time in Kwamalasamutu, the term Tunayana was hardly used, and people referred to themselves (often proudly) as Katuena. Only upon direct questioning of individuals' group affiliations was Tunayana once used to describe someone. This person was Mišo, who is also considered to be Katuena, thus indicating the distinct but related nature of the two groups. Seeing as Katuena appears to be the same language as Tunayana, with no further dialect splits, the term 'Katuena' will be used for the remainder of this thesis as a cover term for both the language and the people, unless noted otherwise.

The Katuena are known among other Amazonian groups for making very durable cassava graters and impressive headdresses. As Carlin et al. (2011, p.173) note, a man will provide a suitable board about 60-70cm long and 30cm wide, and a woman will cut it and decorate it. Designs are painted on the sides, and the center section of some are also embellished with a large depiction of a lizard or alligator. Pieces of chipped stone are then hammered into the wood. Just as the number of speakers of Katuena is diminishing, the number of people still in possession of the cultural knowledge to create these types of objects is also on the decline (Carlin et al., 2011).

2.1.2 *Tunayana*

The Tunayana were long thought to be a mythological, amphibious people who slept underwater at night. The first mention of this mysterious tribe is by Barrington Brown, who in 1871 was told of a tribe of Water People, the Tunayana, 'who have ponds of water encircled by stockades, to which they retire for the night, sleeping with their bodies submerged' (quoted in Guppy, 1958, p.36). Henri Coudreau also heard about these people who would sleep on pilings in the swamps and rivers at night: 'Les Patacachianas ou Tounayanas, qui se retirent la nuit dans les marais et les rivières pour y dormer sur des pilotis' (1893, p.91). The legend of the Tunayana survived into the 20th century, with de Goeje recounting the description by the Trio chief Majoli of the 'Toenajana's [sic] or Patakasjiana's [sic] who, according to the saga, at night sleep under water' (1906, p.4, and 1905, p.132, translated by Bos 1998:258). The Penard brothers, in contrast to contemporary and later scientists, believed there to be some truth in the legend, supposing that

> 'The Patakajana in reality were man-eaters, whose main stratagem was to approach their enemies by swimming or walking through the water, whereas only their heads were above the surface. [...] Later on, when they became extinct or were exterminated, the name remained, fiction took possession of it, and so originated the legend of the Indians living and sleeping submerged.' (Penard and Penard, 1907, p.59, translated by Bos, 1998, p.259).

In the Encyclopaedia of the Dutch West Indies (*Encyclopaedie van Nederlandsch West Indië*), de Goeje (1917, pp.170-175) wrote about the Tunayana that 'Both among the Ojana's [sic] and the Trio's [sic] and tribes of British Guiana there is a story that these people sleep under water (toena = water in Carib languages). If a tribe of this name really exists or has existed is uncertain' (translated by Bos, 1998, p.259).

Several other sources such as Schomburgk (1845, p.84) and de Goeje (1908, p.1119) mention the Tunayana (or 'Toenajana' in the case of the latter) but make no reference to their amphibious habits. The first European record to mention an actual meeting with the Tunayana however, is Farabee's (1924) 'The Central Caribs.' Farabee met a Tunayana family in 1913, and includes a picture of the wife in his published work.

> '[...] we found a young man with his wife and a baby who had come from the region east of the Honawau River a long time ago. He had forgotten his former language which he said was entirely unlike Parukutu' (Farabee, 1924, p.198).

Bos (1998, pp.257-258) makes the claim that the Tunayana were first encountered by the Dutch mining director Salomon Herman Sanders in 1720 (published in Ijzerman, 1911), who referred to them as 'Intoniaanen,' and that the subsequent identification of the Intoniaanen as Taruma, Mawayana and Itourane was incorrect, but not all scholars agree with his analysis.

The myth of the Tunayana was still remembered by other groups in the area when Frikel, a German missionary working among the Trio in Brazil, journeyed to the Mapuera in 1949. He remarked: 'It is said that their ancestors would have slept under water' (Frikel, 1957, p.559, translated by Bos, 1998, p.261). In 1952, the botanist Nicholas Guppy questioned the Waiwai in Guyana about the Tunayana and was told that 'They live beyond the Mawayáns, but nobody knows about them anymore' (Guppy, 1958, p.164). Although the anthropologist Peter Rivière was at first skeptical about the existence of the Tunayana (Rivière, 1963, p.216), he later met some Tunayana (1969, p.52n; 1981, p.2), and reconsidered their status as a fictitious group, though he erroneously presumed that their language did not belong to the Cariban family. In 1982, however, the Tunayana were included on Magaña's list of 23 'Tribus míticas de los indios Kariña' (Mythical tribes of the Kali'na indians)[1] (Magaña, 1982, p.87).

The only record of Tunayana living in the village of Kwamalasamutu comes from the director of the Suriname Museum, who visited there in December 1982. He writes that at that time, 'there lived about 620 people, divided into Trio, Okomojana, Katujana, Wai Wai, Mawajana, Kasujana and Tunejana' (Egger, 1992, p.38, translated by Bos, 1998, p.262). The majority of

1 The Kaliña, or Kali'na, are a coastal Cariban group.

Tunayana living in Kwamalasamutu speak Waiwai amongst themselves, and Trio with the Trio, who form the majority of the inhabitants of the village (Carlin et al., 2011, p.171).

As mentioned above, only a few researchers ever gave any credence to the existence of the Tunayana, a situation also observable in regards to other allegedly mythical groups. The reality of these tribes was not in doubt for the Amerindians of the surrounding areas however. Having investigated the reports of tribes considered to be mythical, imaginary, or spirit tribes, Bos (1998, p.264) concludes that about 60% of these can be identified with existing or extinct tribes. Thus, the information provided by the Indians encountered by early explorers and researchers traveling in the Amazon basin appears to have been more reliable than it was believed to be at the time. In addition, Bos (1998, p.265) also makes the interesting observation that the accessibility of allegedly mythical tribes from the territories of the informants is a significant factor in the attribution of supernatural characteristics.
To conclude this section therefore, it seems that it took over one hundred years of uncertainty about the existence of the Tunayana, the 'Water People,' for the mystery to finally be cleared up. Whether the terms Tunayana and Katuena actually indexed different groups in the past is still unclear however, and further investigation is required to answer this question. Nowadays it seems that at least in Suriname, these two terms refer to the same group of people speaking a single language and forming a part of the new, multiethnic Waiwai group, although the two ethnonyms may hold different connotations.

2.1.3 *Waiwai*

The reigning confusion with regards to group names in lowland Amazonia has often been noted by scholars (Butt-Colson, 1973, p.18). As Guppy (1958, pp.98-99) states, a tribe may well have its own name to refer to itself and its members, but may also be referred to by other names by members of other groups. Thus, one tribe may be referred to by several names, and several tribes may be referred to by some groups with just one name. To complicate matters, lowland Amazonian groups often live in multi-ethnic villages and have in some cases been more or less absorbed into the more dominant groups. This is, to a certain extent, the situation for the Katuena/Tunayana (in Suriname, but also in Brazil, where they form a part of the larger Waiwai group according to Howard, 2001). Although the Waiwai have often been perceived as a uniform group speaking a single language also called Waiwai (described in Hawkins, 1998), the term refers to an ethnically and linguistically mixed group, into which different groups of the region have been absorbed.

The term 'Waiwai,' which was originally the Wapishana word for tapioca, alluding to the comparatively light skin of the Waiwai,[2] has long referred to a group with roots in many different ethnic groups (Carlin, 2011, p.231). When Farabee visited the Waiwai in 1913, there were 'only five pure blood Waiwais remaining' (Farabee, 1924, p.176). The Waiwai had been intermarrying with the Taruma, whose language is most likely an isolate, the Parukoto (themselves

2 Howard (2001, p.46), in addition to this explanation, also heard that the Waiwai were given this name because of the copious amounts of fermented tapioca drinks they used to offer at festivals.

perhaps an ethnically mixed group), and the Mawayana, speakers of an Arawakan language (Carlin, 2011, p.231). One reason for this interethnic mixing was certainly the havoc wreaked by western diseases, leading surviving groups to consolidate their settlements, though some scholars have suggested that such mixing has considerable historical depth and could also be attributed to the sociopolitical dynamics of groups in the region (Howard, 2001, p.28). In the 1950s, however, this type of interethnic affiliation intensified, largely at the instigation of the North American Protestant missionaries newly-installed in the area (Howard, 2001; Carlin and Mans, 2014, p.10). After having evangelized the Waiwai, the missionaries took advantage of the Waiwai propensity for visiting other villages in order to bring their beliefs to other groups, and the Waiwai used their access to missionary goods, medicines and new forms of knowledge such as writing to convince these groups to join them. When the Waiwai eventually assumed responsibility for the church around the 1960s, they continued their expeditions to the villages of so-called 'uncontacted tribes,' using the language of evangelization to further spread their influence and persuade more groups to join them, thus increasing the variety of ethnic groups making up the Waiwai (Howard, 2001, p.56).

Despite this amalgamation of groups under the one term, Waiwai, scholars working with the Waiwai (and the multiethnic villages of Amazonia more generally) now emphasize the robust nature of individual ethnic terms, and the strong awareness of the individual differences in both ethnic affiliations and language or dialects among group members (Carlin, 2011, p.231, Howard, 2001, p.81), though this was not the case in the time of Rivière (Rivière, 1981). These differences in descent are often overtly revealed through geographical residence. 'In a physical sense most groups live in clusters in the villages so that while one cannot talk of absolute clear-cut territorial boundaries, there are indications now of a return to segregation with for example a Waiwai cluster, a Katuena (Tunayana) cluster, an Akuriyo cluster, etc.' (Carlin, 1998, p.17).

2.1.4 *Number of speakers*

The number of people identifying themselves as ethnically Katuena, as well as the number of speakers of the language is quite difficult to gauge, whether one is interested in the historical or the current situation of this group. The confusion regarding the ethnonyms 'Katuena,' 'Tunayana,' and 'Waiwai', and the language(s) spoken by these groups is partly to blame for this. Furthermore, the oversimplification of variability in census records as well as other design flaws such as the inconsistency of criteria used to assign people to a specific group, the questionable ethnographic validity of the criteria and the fact that they are often not based on indigenous concepts, hardly make these reliable sources for information regarding the group affiliation of residents of one village, let alone for those of an entire region. FUNAI (*Fundação Nacional do Índio*), the Brazilian National Indian Foundation, conducted a census in 2010, in which they list 137 ethnically Katuena people, and 107 ethnically Tunayana people in Brazil. 2290 people are reported as ethnically Waiwai. Interestingly, although 2217 people are reported to speak Waiwai, there is no listing for speakers of either Katuena or Tunayana

(FUNAI, 2010). Howard (2001) compiled a word-list of Katuena when working in Brazil, indicating that there were speakers present during her time there in between 1984 and 1986, but whether these speakers are still living in Brazil and have simply been ignored in the government census, or whether they have all moved or passed away since Howard's visit is unknown. No reliable numbers are available for the Katuena in Guyana, as they have never been seen as separate from the Waiwai.

As previously mentioned, there are about 200 Katuena in the village of Kwamalasamutu, in the Sipaliwini region of Suriname, of which, according to Carlin et al. (2011, p.171), only 12-15 still speak the language. There seems to have been a recent increase in the Katuena population in Kwamala, as Carlin (1998, p.10) states that there were only 80 Katuena in Kwamalasamutu at that time.

2.2 THE KATUENA LANGUAGE

2.2.1 *Classification*

Durbin (1977, p.35) suggested that Katuena ('Cachuena') and Waiwai were separate languages, however more recent investigations have taken into account the nearly identical phonemic systems, morphological and syntactic patterns, and high level of lexical cognates (96% according to Howard, 2001, p.461), who conducted a linguistic survey of Waiwai, Katuena, Hixkaryána and Xerew), leading to the conclusion that these should be considered close dialect variants rather than separate languages. Waiwai is characterized by a great number of morpho-phonological processes such as vowel loss, consonant reduction or loss, vowel harmony, palatalization and elision, among others (Hawkins, 1998, pp.156-165), whereas Katuena words only undergo high vowel harmony and vowel epenthesis (Hemmauer, 2009). Ethnologue lists both Katuena and Tunayana as dialects of Waiwai, which is spoken in Brazil, Suriname (Ibid.) and Guyana (Howard, 2001, p.51, citing Mentore, 1984; 1987, p.515), thus placing it in the Cariban language family (Lewis et al., 2013). The status of Katuena as a dialect of Waiwai is also confirmed by Eithne Carlin (p.c).

2.2.2 *Typological profile*

A complete analysis of the Katuena language is outside the scope of this study, however a typological overview will be useful for a comprehensive understanding of ideophones in the language, and is made possible with the analysis provided by Hemmauer (2009). In terms of phonology, Katuena has a fairly small phonemic inventory. Hemmauer's analysis proposes 14 consonants, with a preponderance of corresponding alveolar/palatal pairs, and a symmetric six-vowel system. Hemmauer gives the glottal stop, three implosives and the sound [tʲ] semi-phonological status, however in 4.1, I suggest that all of these except [tʲ] these might be better analyzed as full phonemes if their status in ideophones is taken into account, and further include three phonemic long vowels and the dipthong /aɨ/, resulting in

a phoneme inventory consisting of 17 consonants, 9 vowels and one phonemic dipthong. On the syllable-structure level, Katuena is characterized by extensive consonant clustering which occurs word-initially, word-medially and across word boundaries, mainly as a result of the above-mentioned phonological processes of elision and reduction.

Like Waiwai, Katuena has variable word order. Though the preferred position for the object is before the verb (OV), a free-form subject can occur before or after the verb. After a participant has been introduced, the personal name or noun is often omitted, and the subject is solely indicated by one of four person categories marked on the verb: first person (1), second person (2), third person (3) and inclusive person (1+2). Plural number is encoded separately by postpositions: various forms fused with tense, aspect, mood (TAM) suffixes for verbs, and *komo* for nouns.

A defining feature of ideophones is their tendency to break away from the phonological, morphological and syntactic system to which the rest of the lexicon adheres. Now that the general typological characteristics of Katuena have been outlined, the ways in which Katuena ideophones adhere to and deviate from the general structural patterns of the language can be discussed. Before diving into Katuena ideophones however, some background on ideophones is required. The following chapter discusses the definition of ideophones, and using examples from a variety of different languages from around the world, attempts a rough typological overview of ideophones on the basis of their different features. Chapters 4 to 7 will then describe the particular phonological, morphological, syntactic and semantic characteristics of ideophones in Katuena.

3

IDEOPHONES

Ideophones are a particular lexical class of expressive words depicting perceptual events or states, and are said to be a universal or near-universal feature of language (Dingemanse, 2012, p.655; Kilian-Hatz, 2001, p.163). They can indeed be found in Dravidian (Emeneau, 1969), Austronesian (Carr, 1966; Klamer, 2001), Australian (Alpher, 1994), Mon-Khmer (Durand, 1961; Diffloth, 1979), Mayan (Durbin, 1973), Sino-Tibetan (Matisoff, 1994), and Bantu languages (Doke, 1935), as well as in Jamaican Creole (DeCamp, 1974), Pidgin Sango (Noss, 1975), Liberian English and (Sierra Leone) Krio (Childs, 1994b), Korean (Martin, 1962, cited in Diffloth, 1994, p.108, Japanese (Kita, 1997) and Pastaza Quechua (Nuckolls, 2001), among others. Despite their ubiquity, they have long been relegated to the fringes of language description. This is partly due to the fact that they generally do not form a significant part of the lexicon of highly-studied Indo-European languages, but also because there is no precise definition of the term 'ideophone' that can be applied to all languages, since the characteristics of these words, in terms of form, syntax, semantics, and use, are quite variable from one language to the next.

In the words of Mark Dingemanse (Dingemanse, 2011, p.25), who has probably collected more information on ideophones than anyone, ideophones (also referred to as 'expressives' or 'descriptives,' as well as many other terms) are 'marked words that depict sensory imagery.' They can refer to a range of sensory imagery from smell to movement and weight to cognitive states, and although some involve the re-creation of a sound and are therefore clearly iconic, many ideophones refer to events or states that do not inherently have an auditory component. In light of this variety, a myriad of definitions have been proposed by researchers, often making cross-linguistic analysis a complex and confusing endeavour. Furthermore, the lack of a clear, precise and cross-linguistically viable definition of ideophones, the difficulties in capturing the meaning of these expressive elements, and the long-held misconception that ideophones are simply a literary device of the narrative genre, has meant that scholars have largely ignored them in their language descriptions. Ideophones are a widespread and peculiar feature of language however, and a closer look at their particularities sheds light on not only the variation in the expression of perceptual experience, but also on the general process of sound symbolism.

3.1 DEFINING IDEOPHONES

Despite their ubiquity in the languages of the world, there is no generally-accepted, precise, and formalistic definition of ideophones that can be applied to all languages. Even the designation 'ideophone' is not used by all researchers. The term 'ideophone' is generally used in reference to African languages, whereas in Asian languages they are mostly called 'expressives,' 'descriptives,' or in reference to Japanese, 'mimetics.' In the past, these types of words have been referred to with a great variety of terms, a small selection of which are listed in Table 2.

Table 2: **Terms used to refer to ideophones (Weakley, 1973, pp.1-2)**

Term	**Language**	**Source**
radicals	Zulu	Doke (1935)
descriptive adverbs	Ronga	Junod (1896)
intensive interjections	Bemba	Lammond (1957)
onomatopoeic adverbs	Nsenga	Ranger (1928)
onomatopoeia	Lamba	Doke (1922)
mimic nouns	Zulu	Wanger (1927)
indeclinable adjectives	Bangi	Whitehead (1899)
picture words	Ewe	Westermann and Bickford-Smith (1965)
graphic radicals	Xhosa	Bennie (1953)
mimetics	Japanese	Kita (1997)

Not only is the use of the term 'ideophone' not always completely agreed upon, but there is also no completely agreed-upon set of features characterizing ideophones, and the term is used to describe words that vary from one language to the next in terms of their phonological, morphological and syntactic features. Furthermore, the ways in which they are used in discourse and their particular functions and effects also vary cross-linguistically. Even within one area of the world, ideophones can vary widely in terms of their characteristics, and scholars now seem to agree that they should be defined based upon language-internal grounds (Dingemanse, 2011, p.175). A few strong tendencies and vague generalizations are the only defining characteristics that can be applied to ideophones in (almost) all languages:

- Ideophones are semantically highly marked and express perceptual imagery of events and states.
- Ideophones generally have a special phonology.
- Ideophones often do not fit into normal syntactic patterns.
- Ideophones are often subject to processes of reduplication.

- Ideophones are often only used in oral language and tend to have a special dramaturgic effect.
  (Voeltz and Kilian-Hatz, 2001, p.2)

Furthermore, ideophones are often sound-symbolic in that they imitate sounds made in the real world, or contain phonaesthemes: particular sounds or sound sequences that suggest a certain meaning, often through iconicity (Martin, 2008, p.32). Ideophones are also generally not lexically cognate across languages and have no clear etymologies, but are often used to create a family of related words (Blench, 2010, p.274). Languages differ in the proportion of the lexicon composed by ideophones however, and some languages seem to have more ideophones than others. For example, Alpher (2001, p.11) reports that there are just over one hundred ideophones in Yir-Yoront (Pama-Nyungan), whereas in some dialects of Finnish (Finno-Ugric), about 30% of the lexicon is made up of ideophones (Leskinen, 1993, p.97, cited in Mikone, 2001, p.224). De Jong (2001, p.128) found that ideophones only made up 0.2% of the total words in a corpus of Didinga (Eastern Sudanic) narratives, a genre that is traditionally thought to be the locus of ideophonic vocabulary, and there are about 8000 to 9000 ideophones in Gbaya (Ubangi) (Samarin, 1979, p.55). Some scholars maintain that European languages, and in particular English (excluding certain so-called 'new Englishes' in which ideophones may be more prevalent due to influence from other languages), do not have ideophones at all, but only sound symbolic forms (Kulemeka, 1993, p.24). Others might say that in English, ideophones *sensu stricto* are onomatopoeic (such as *ding-dong* or *kaboom*), but that there are also ideophonic words - perhaps less confusingly referred to as *sound symbolic words* - in other grammatical categories, such as the verbs *clap* and *rumble* (Langdon, 1994, p.95). Though some scholars refer to these as ideophones, the identification of sound symbolic nouns, verbs, adverbs, etc. such as these as ideophones is problematic, in that the usefulness of the category *ideophones* is diminished if any sound symbolic word already belonging to a so-called traditional part of speech can also be termed an ideophone. It might be more logical to consider these as a sound symbolic subcategory of the particular part of speech whose structure they adhere to. This point will be returned to below in discussions of the morphological and syntactic characteristics of ideophones. The lack of a formal and agreed-upon definition of ideophones means that the results of quantitative studies such as those mentioned above are often questionable. Although the formulation of a precise definition of ideophones that would be applicable to all languages will not be attempted here, the following sections examine the different characteristics of ideophones in the world's languages, attempting to clarify and categorize the different types found, and with the ultimate aim of revealing the complexity of this linguistic concept and the unique role it plays in language. A secondary aim is the formulation of a backdrop against which we can examine Katuena ideophones.

3.2 PHONETICS AND PHONOLOGY OF IDEOPHONES

Ideophones tend to have a special phonology in terms of their phoneme inventory, syllable structures, phonotactics, statistical distribution of phonemes, suprasegmental features and adherence to the phonological rules of the languages in which they are used. Each of these aspects is discussed below.

3.2.1 *Phoneme inventories*

In terms of ideophonic phoneme inventories, languages can be divided into two types:

- *Languages in which ideophones have the same phoneme inventory as other words*
  For example in Didinga, ideophones use the same consonant inventory as other words (de Jong, 2001, p.130).

- *Languages in which ideophones contain segments that are not part of the regular phoneme inventory of the language*
  For example, Yir-Yoront ideophones exhibit sounds such as fricatives (e.g. voiceless bilabial fricative: *fffft* of blowing a fire) and trills (e.g. voiceless bilabial trill: B̥B̥B̥B̥B̥ of handcuffs falling off) not found in other words (Alpher, 1994, p.163). As will be discussed in section 4.1, in Katuena two phonemes (/p/ and /ŋ/) occur only in ideophones, and are not found in the rest of the lexicon.

Based on a cursory investigation, it appears that there are no languages in which the phoneme inventory is restricted for ideophones, and that in most most languages the normal phoneme inventory of the language is extended for these types of words (though certain phonemes might also be lacking from ideophones). Some of these additional sounds are the result of loans which have retained their phonological shape (Jarva, 2001, p.111), though it might also be that the depictive function of ideophones (particularly in the case of onomatopoeic ideophones) leads to sounds that are not part of the normal phonemic inventory of the language, but which closely resemble environmental sounds, being used and retained. Whether ideophones have preserved lost sounds in these languages or have added them through borrowing or for reasons related to iconicity is unclear however (Schultze-Berndt, 2001, p.387). Further typological research on ideophones needs to be conducted in order to determine phonemic patterns in the ideophonic vocabulary of the languages of the world and exactly how the phonemic and phonological peculiarities of ideophones have arisen.

Another aspect in which ideophones can differ from the rest of the lexicon is the types of phonological distinctions made in these words. Some languages neutralize certain distinctions in the phonemic inventory of ideophones (e.g. according to Elders (2001, p.100), Mundang neutralizes the distinction between /i/ and /ɪ/ in ideophones but not in other vocabulary), while in other languages, certain phonological distinctions are made in ideophonic vocabulary that are not present in words from other categories (e.g. According to Childs

(1994a, pp.181-182), in ChiTumbuka (Bantoid) ideophones both vowel nasalization and length are contrastive whereas in the rest of the language they are not.).

3.2.2 *Phonotactics*

In terms of phonotactics, ideophones also exhibit special features, since in many languages they violate particular phonotactic constraints. As well as language-internal variation between the phonemic inventory of ideophones and that of the rest of the lexicon, ideophones often exhibit idiosyncrasies in terms of their syllable structure. Languages can be grouped into those in which ideophones maintain the canonical syllable structure of the language, such as Emai (Egbokhare, 2001, p.88), and those in which they do not. An example of this latter type is Guinea-Bissau Kriyôl, which has a basic CV syllable structure but in which ideophones can contain closed syllables (Bartens, 2000, p.15). Katuena also violates certain syllable structure constraints, namely the prohibition of closed syllables in certain contexts (see section 4.3). In the vast majority of languages that have ideophones however, these follow the regular rules of the language in some respects while violating them in others, and in some cases complex interactions between phonotactic constraints and the ways in which they are disregarded can take place. At one end of the spectrum one could place Guaraní ideophones, which mostly follow the phonological constraints of the language, but are slightly restricted in that they cannot begin with /r/, /l/, /m/, /n/, /ɲ/, /h/ or /v/ (Langdon, 1994, p.95). At the other end of the spectrum, Yir-Yoront ideophones exhibit an expanded range of phonotactic possibilities such as voweless syllables (e.g. *trrrt* 'of entering') and syllable-inital clusters (e.g. *nychip* 'of being pierced by a catfish spine'), which do not occur in other types of words (Alpher, 1994, p.163). A more complex case is Hausa (West Chadic), where ideophones use the same phoneme inventory as prosaic words and obey standard phonotactic rules such as restrictions on true consonant clusters (those that do not occur across syllable boundaries) and on two glottalized consonants in one word (with a few exceptions), but violate a constraint on word-final consonants. Words violating this constraint do adhere to the restriction on the types of consonants that can appear syllable-finally within a word however (Newman, 2001, pp.252-253).

It must be noted that ideophones are not the only types of words that use a special phoneme inventory and violate the phonotactics of a language. Loanwords also display some of the marked properties of ideophones (Ameka, 2001, p.30), and any analysis needs to take into account the etymology of ideophones (and other words) when investigating the special phonotactics of ideophonic vocabulary.

3.2.3 *Expressive use of suprasegmentals*

In keeping with the general theme of ideophones having markedly different structural features from other types of words, there are languages in which ideophones also differ from the rest of the lexicon in terms of suprasegmental features. Tone is one of these features that

often exhibits special characteristics in ideophonic vocabulary. The tonal idiosyncrasies of ideophones can occur in the form of frequencies or tonal patterns. Setswana (Bantoid), for example, displays both of these types of particularities: certain tonal sequences appear to have unusually high frequencies in Setswana ideophones, and although all sentences are subject to downstep, when an ideophone is used at the end of a sentence this rule is violated (Creissels, 2001, p.75). In some languages, tones on ideophones are not necessarily fixed but are exploited to manipulate the expressive meaning of the word. In Ewe for example, the word *kũũ* uttered with a low tone depicts a bad smell, but it can be produced with an extra low tone to increase the intensity of the meaning, indicating that the smell in question is a very bad one (Ameka, 2001, p.30). It seems that this type of 'suprasegmental unstability' (Kabuta, 2001, p.143), which is observable in the ideophonic vocabulary of many languages (and is not restricted to tone modification), is due to the expressive quality of ideophones, and allows speakers to provide additional information to their interlocutor(s) about the precise intensity, manner and duration of the event or state being depicted. The particular phonological mechanisms that perform such a function include the following suprasegmental features (among others):

- **diverse phonation phenomena**, such as breathy or creaky voice, as in Ewe (Ameka, 2001, p.30)
- **expressive stress**, such as in Zulu (Msimang and Poulos, 2001, p.244)
- **vowel lengthening**, which occurs in the ideophones of many Cariban languages such as Trio (Carlin, 2004, p.70). Katuena speakers also employ this strategy when using ideophones, as will be discussed in section 4.5.1.
- **gemination**, which is used in Lamang to express higher degrees of intensity (Wolff, 1983, p.183)
- **tone**, which is manipulated in Ewe ideophones depending on the properties of the event being depicted (Ameka, 2001, p.30)
- **extended pitch range**, as in Temne (Wilson, 1961, p.43)
- **variation of speech rate/tempo**, such as in Ndyuka, Kisi, Temne and Shona (Bartens, 2000, p.18)

In sum, it seems that in terms of their phonology and phonotactics, '[...] ideophones seem to form a class in which almost all normally discouraged phonological behaviors are allowed' (Kabuta, 2001, p.143). The iconic nature of many ideophones certainly plays a role in the presence of unusual phonological features in ideophonic vocabulary, though some may also be due to borrowing, and even perhaps to semantic spreading, as is thought to be the case with ejective and aspirated stops in certain varieties of Quechua (Kohlberger, 2012). These only occur in words that are part of semantic networks that include ideophones, but also nouns, verbs and adjectives such as the following:

- **Bodily movement of fluids:** *kʰasaj* 'to burp'; *hach'ij* 'to sneeze'
- **Liquid particles:** *pʰuju* 'fog'; *pʰusuqu* 'foam/bubbles'
- **Violent/sudden action:** *tʰankana* 'to push'; *hajt'aj* 'to kick'
- **Negative connotations:** *pʰiŋa* 'angry'; *kʰarka* 'dirty'
  (Kohlberger, 2012)

As previously mentioned, the etymology of ideophones is not always clear, and the origins of the phonological particularities of these words need to be investigated on a language-by-language basis. What can safely be stated however, is that many of the unusual phonological features found in ideophones stem from, or have been maintained due to the iconic sound-meaning relationship they impart to these types of words.

3.3 MORPHOLOGY OF IDEOPHONES

The morphological characteristics of ideophones are also generally quite peculiar, and most descriptions state that ideophones take little-to-no morphology (Dwyer and Moshi, 2003, p.186). The sound-symbolic nouns, verbs, adverbs, etc., that some researchers refer to as ideophones, may exhibit some or all of the morphological properties (including inflection) of the particular type of word they are functioning as. For example, what (Watson, 2001, p.399) considers to be Somali (Eastern Cushitic) ideophones are nouns, and like other nouns have a suffixed determiner and feminine gender marking, but unlike other nouns in the language, they cannot carry a plural marker. As previously mentioned, labelling words subsumed into existing grammatical categories as 'ideophones' because they are sound symbolic and perhaps exhibit a few special phonological, morphological and/or syntactic properties is problematic and complicates the endeavour to formalise a definition of the term. I would suggest that these types of words simply be considered subcategories of whichever grammatical part of speech into which they can be grouped. In many languages, a distinct syntactic category of ideophones can be clearly distinguished from other parts of speech however, and these words are not necessarily subjected to regular morphological processes such as inflection and derivation.

The one morphological process that is characteristic to ideophones in all languages (at least those in which ideophones have been identified and analyzed), is reduplication. Here as well, there is some cross-linguistic overlap, but also much variation in the reduplication processes ideophones are subjected to.

3.3.1 *Reduplication*

There appear to be four types of reduplication that ideophones can undergo:

1. **Inherent reduplication:** These ideophones occur only in their reduplicated or triplicated forms. Reduplication is obligatory, and in many instances, a consonant or vowel

alternation occurs (as in the English *tick-tock*, or *bow-wow*, for example). One could argue that the morphological process of reduplication is not truly at work here (at least not anymore), since these 'reduplicated' forms are considered roots. In Katuena, as discussed in 5.1.1, quite a few ideophones are inherently reduplicated.

2. **Full reduplication:** These ideophones can be subject to full reduplication/triplication, generally for emphasis or to indicate duration and/or repetitive action. In Zulu for example, monosyllabic ideophone stems are triplicated whereas disyllabic ones are reduplicated for emphasis or dramatization: *ngqo* 'of knocking' → *ngqongqongqo*; *qatha* 'of dropping easily' → *qathaqatha* (Msimang and Poulos, 2001, p.243)

3. **Partial reduplication:** The exact form this takes varies from language to language. For example, in Emai the reduplication of initial syllables is favoured (e.g. *tókó* 'blobby' → *tótókó* 'mushy') (Egbokhare, 2001, p.89). The preferred pattern of partial reduplication in Katuena is reduplication of the final syllable, and this is used to indicate an increase in intensity, to expand the distributive pattern of the event being referred to, or to indicate an increase in its duration (see 5.1.2).

4. **Modified reduplication:** These ideophones undergo reduplication in addition to other processes such as vowel modification or affixation. For example, in Sre (Mon-Khmer) some reduplicated ideophones undergo vowel modification, as in *cʉk-cɛk* '(speaking) too much, carelessly' and *rɲjuh-rɲjahn* 'bushy, messy' (Diffloth, 1979, p.54). These are different from modified inherently reduplicated ideophones in that they can be used in their unreduplicated form.

Languages may take advantage of one or several of these strategies, depending on the particular ideophone and the intended meaning. An iconic relationship between the sound and its reference is often obvious here, particularly in the case of ideophones reduplicated to express repeated action, duration and distributive pattern (de Jong, 2001, p.127). In this way, ideophones make use of what is referred to as Gestalt iconicity, in that the spatio-temporal structure of the even being referred to is iconically mapped onto the structure of the word itself (Perniss et al., 2010, p.3). Reiteration or repetition, while similar to full reduplication, is another cross-linguistically common way of expressing emphasis that also applies to ideophones (Bartens, 2000, p.16 & p.24).

3.3.2 *Derivation*

There are five main distinctions to be made with regards to the derivational potential or provenance of ideophones. First, there are some languages that do not allow the derivation to or from ideophones, such as Upper Necaxa Totonac (Totonacan) (Beck, 2008, p.4), and Yir-Yoront (Alpher, 2001, p.9). In other languages there are morphological processes that allow the derivation of words from ideophones, as in Zulu (Msimang and Poulos, 2001, pp.242-243),

the derivation of ideophones from other words, such as in Ilocano (Rubino, 2001, pp.308-319), or both, as in Cilubà (Kabuta, 2001, p.143).

Katuena presents an interesting case of a fifth morphological process involving derivation that is not mentioned in the literature on ideophones (as far as this author is aware). In Katuena, certain ideophones can be compounded to create new ones. For example, the ideophone *ɸuŋ* can be paired with many other ideophones to indicate a movement preceding another event, as in the ideophones *ɸuhtutʃu* 'to jump (and land)', and *ɸu?dow* 'to drop or lie down.' This process will be discussed in further detail in 5.2.1.

A subcategorisation of languages based on the derivation mechanisms applicable to ideophones might involve the particular types of words that can be derived from ideophones and those that can be used to derive ideophones. For example, Childs (1994a, p.186) notes the cross-linguistically frequent relationship between verbs and ideophones (at least in African languages), but he avoids making claims about the directionality of the derivation, as this can be difficult to determine. There does appear to be a tendency for languages to derive ideophones from verb roots and derive nominals from ideophones (Bartens, 2000, p.141), however McGregor (2001) makes a strong case for attributing the origins of a compound verb construction in Northern Australian languages to ideophonic sources. Some scholars (such as Moshi, 1993, p.190) also note the likelihood of ideophones being a source for adjectives through grammaticalization, thus augmenting the class of words into which they are integrated. More research on the etymology of ideophones and the ways they are created may even shed light on the evolution of language in general, as onomatopoeic or mimetic vocabulary is thought to have played a part in the language of early modern humans (Mithen, 2005, pp.169-170).

3.4 THE SYNTAX OF IDEOPHONES

Having read the preceding paragraphs on the relative poverty of morphological processes involving ideophones, it may not come as a surprise to the reader that ideophones are said to 'rarely possess any syntax unique to their class except the relative absence of syntax' (Klamer, 2001, p.167). There are nevertheless some interesting typological observations to be made about the syntax of ideophones in different languages.

3.4.1 *Lexical category*

Looking through the literature, one of the main typological distinctions to be made regarding the words researchers define as ideophones is whether they are analyzed as constituting a separate word class of their own, a subcategory of words of one grammatical category, or whether they cross-cut several grammatical categories. For example, (Newman, 1968, p.116) analyses Hausa as having no separate class of ideophones, but refers to ideophonic nouns, verbs, adverbs, etc. In Igbo (Igboid) and Nembe (Ijaw) on the other hand, there is an open and productive class of words termed *ideophones* (Maduka, 1988). Scholars sometimes offer competing analyses of the status of ideophones in one language: Courtenay (1976) places

Yoruba (Defoid) ideophones in multiple word categories, while Awoyale (1981) maintains that they form their own class. The criteria used by investigators to analyze the nature of ideophones and propose a definition clearly differs from language to language.

The broad distinction between languages in which ideophones form a grammatical category of their own and those in which they appear in several word classes has been the basis of the two investigative traditions that have emerged in research into ideophones: the sound symbolism/iconic approach and the grammatical class approach (Kulemeka, 1995, p.73). The first approach, which has for the most part been adopted by investigators researching ideophones in Asian languages, involves analyzing sound symbolic segments, or phonaesthemes, which correlate with certain meanings in a language (e.g. *gl-* in English words referring to 'shining' or 'light,' such as *glint, glimmer, glow, glisten* etc.), as well as iconic vocabulary in which the sound of a word imitates the sound of the referent in the real world, such as onomatopoeic words. Although a significant proportion of ideophones fall into this latter category, many languages such as Katuena also have ideophones that depict events or states involving no actual sounds (discussed in Chapter 7). The grammatical class approach, which often leads to the sound-symbolic aspect of ideophones being ignored (at least past mentioning that some ideophones share this feature), involves determining whether ideophones share enough idiosyncratic features to warrant placing them in a grammatical class of their own. This has generally been the approach used in African linguistics. The insistence of some investigators on assigning the category of *ideophone* to words that can be subsumed into existing grammatical categories may play a part in the confusion and difficulties in formalising a definition for ideophones. It may be simpler and clearer to refer to nouns, verbs, adverbs, adjectives, etc. that are sound symbolic in nature and perhaps display some special characteristics in terms of their phonology, morphology and syntax as *sound symbolic* subcategories of these parts of speech, and reserve the term *ideophone* for those sound symbolic words that are truly a category apart, with their own very particular place in the structure of the language in question. The current work aims to integrate both the sound symbolism and grammatical class approaches in order to highlight the sound-symbolic nature of Katuena ideophones, without ignoring the grammatical role of the ideophone in the language system. As will be seen in 5.2.2 however, ideophones that have been affixed with verbal morphology are not considered to be ideophones in this work, but rather sound symbolic verbs. Whether these types of words were derived from ideophones or whether the associated ideophone was derived from the verb is a question that cannot always be easily determined.

3.4.2 *Syntactic function of ideophones*

Despite the problematic nature of assigning the label *ideophone* to words which can be subsumed into existing grammatical categories, this is often the analysis arrived at by investigators. The grammatical status of ideophones, in terms of the class of words to which they belong and the typological correlations stemming from this, therefore sets the stage for a large degree of syntactic variation across languages and cannot be ignored. Indeed, Childs (1994a,

p.188) proposes that the wide cross-linguistic variability of ideophones limits the usefulness of syntactic features for identifying and classifying ideophones. Nevertheless, a few notes and generalizations concerning the syntax of ideophones can be made. As previously mentioned, in some languages the term *ideophone* is used to describe a subcategory of a word class such as noun, adjective, verb or adverb, or a subcategory cross-cutting several of these categories. In these languages, both the syntactic form and the function of ideophones generally follows that of the class of words to which they belong (often with a few idiosyncrasies peculiar to ideophones). In languages where ideophones are less integrated into the grammar, on the other hand (i.e. ideophones form a class of their own, or a subcategory of one class), ideophones vary syntactically in terms of their level of 'aloofness,' or independence in a clause, their collocational restrictions, and the sentence types in which they occur. Taking into account both these types of ideophones, a broad four-way distinction can be made (based on work by Bartens, 2000 & Creissels, 2001:

- **Type 1** Sound symbolic nouns, adjectives, adverbs, etc. These follow the syntactic patterns of the class of words to which they belong, with perhaps a few syntactic idiosyncrasies particular to them. It might be more useful to label these as 'sound symbolic nouns,' 'sound symbolic adjectives' and so on, rather than 'ideophones,' as they are generally fully incorporated into the grammar, and are only considered to be ideophones because of their particular phonological and morphological shapes (extended phoneme inventory and reduplication) as well as their sound symbolic nature. Many words in English, such as the sound symbolic nouns *bling*, referring to shiny and expensive jewelry, and *flim-flam*, referring to a confidence trick, can be categorized as this type.

- **Type 2** ideophones modify verbs/predicates, nouns and/or adjectives:
  - *ideophones modifying verbs:*
    The meaning of these ideophones is often very general, but in combination with a particular verb, either their meaning or that of the verb becomes more specific, or the ideophone serves to intensify the main verb. In the latter case, the ideophone often has a meaning very close to, or is in a quasi-synonymous relationship with the main verb. In ChiTumbuka, for example, ideophones can only co-occur with verbs to which they are directly related, in that one is derived from the other (Mphande, 1989, p.34 & p.36):

    (3.1) *Mwana* **wakozga** *a nyina* **kozge.**
    'The child resembles the mother exactly/completely.'

    (3.2) *Delele la* **lelenduka lelendu**.
    'The okra has become very, very sticky.'

    In some languages, it is also possible to leave the verb unexpressed in these types of constructions, resulting in increased vividness and speed in communication, as in

the following example from Cilubà. In this language, the construction VP+IDEO is very frequent, and although one can also find NP+IDEO structures, Kabuta (2001, p.146) claims that the verb is simply understood:

(3.3) *Bônso lubilu* **ndùùn.**
all speed IDEO
'They all ran away.'
Kabuta (2001, p.146)

– *ideophones modifying nouns:*

(3.4) **Dagaare**

à	*dɔ̀ɔ̀*	*zú*	**bɔ̀nggɔ̀lɔ̀ng**	*nă*	*wàè*	*lá*
DEF	man	head	IDEO(unwieldy-like/big)	DEM	come	FOC

'The man with the big/unwieldy head has come.'
(Bodomo, 2006, p.206)

– *ideophones modifying adjectives*

(3.5) **Temne**

Ù-wáθ	*ù-lɔ̀s*	**pít**	*kɔnɔ̀*	*dèr*
CL-child	CL-bad	IDEO(very)	3SG	come

'A very old man arrived.'
(Kanu, 2008, p.128)

- **Type 3** ideophones collocate with an auxiliary verb often meaning 'say,' 'do,' or 'be,' although sometimes other verbs may be used, such as 'go,' 'fall,' or 'beat,' as in Kanuri (Western Saharan - Hutchison, 1989, p.4, cited in Childs, 1994a, p.187), or an indefinite verb with the meaning 'has the qualities of' (Emenanjo, 1978, cited in Childs, 1994a, p.187). The restriction is semantically rather than syntactically determined. Structures of this type are considered to be quotative constructions in which the meaning and the subcategorization properties are determined entirely by the particular ideophone (Creissels, 2001, p.78). In these types of verbal compound constructions, the lexical meaning and the argument structure of the compound are determined by the ideophone, whereas the grammatical elements of a verb form such as subject/object markers, tense, aspect, and mood (TAM) are carried by the auxiliary. In certain languages, such as Southern Sotho (Bantoid), the auxiliary verb can be omitted without altering the quotative sense of a sentence. Constructions in which the auxiliary are omitted, as in the first example below, are assumed to be past tense, despite their being no formal indication of tense:

(3.6) *Nkgo* **bjɑrɑ**.
'The claypot **bjɑrɑ**.'
'The claypot broke.'

(3.7) *Nkgo ya re* **bjara**.
The claypot did **bjara**.
The claypot did break.
(Kunene, 2001, p.185)

Katuena speakers often use these quotative constructions. Auxiliary verbs used include 'to say' and 'to make.' These constructions will be discussed in section 6.3.

- **Type 4** ideophones are the least grammatically integrated of ideophones and they display a high degree of 'syntactic aloofness' - they may even be syntactically independent. As Kilian-Hatz (2001, p.157) puts it, they often 'have sentence-like character and denote inherently not only a state or an action but also the cause and other participants (e.g. patient, instrument, etc.) of the event.' These correspond to Dwyer and Moshi's (2003) primary ideophones. Often they can fully replace argument-predicate structures. In Mon-Khmer languages, for example, ideophones generally function as independent clauses, 'uttered in isolation as minor sentences' (Svantesson, 1983, p.79). Similarly in Yir-Yoront, ideophones display a large amount of aloofness. They can occur either immediately before the verb (e.g. *Ngoyo tor piw ungh.* 'Tor! I hit him,' *Ngoyo kat kil ungnh.* 'Kat! I speared it.'), intonation- (usually clause-) finally and separated by a falling intonation contour (e.g. *Piw 'y ungnh,' tor!* 'I hit him, *tor*!,' *Kil 'y ungnh, kat!* 'I speared it, *kat*!'), or in sentences where the verb is absent but understood (e.g. *Ngoyo kat!* 'I [speared it], *kat*!') (Alpher, 1994, p.168). Although these uses resemble those of adverbials in this language, unlike adverbials, ideophones in Yir-Yoront cannot occur in subordinate clauses, or with negatives or imperatives (Alpher, 1994, p.169).

Katuena ideophones are often used in this way, as independent clauses. Entire episodes of a narrative can be composed solely of ideophones and be fully understood by listeners. This is discussed in section 6.1.

It must be noted that the borders of these categories are quite fuzzy. It is not always clear to which category a given ideophone belongs, and some ideophones might fit into more than one category depending upon the context in which they are used. Nevertheless, the classification outlined above proposes a scale ranging from ideophones highly assimilated into the grammar of the language to those least assimilated. If we consider Type 1 words to simply be sound symbolic woods of one or another grammatical category, a language's ideophones can be of Type 2, 3 or 4, or more commonly, a language will have a mix of two or more of these types.

Some scholars recognize the existence of ideophonic words of different grammatical categories even in languages that are said to have a separate class of words designated by the term *ideophones* (cf. Kabuta, 2001, pp.149-152). Thus, the major distinction discussed above, based on the grammatical status of ideophones, is not always a simple one to make, and depending on one's analysis it could be claimed that some languages with a particular class of words termed *ideophones* also have Type 1 sound symbolic words. It cannot be overstated, therefore, that this classification is extremely broad, and cannot easily take into account the

more intricate characteristics of ideophones such as their morphological possibilities (in some languages) and certain syntactic idiosyncrasies. For example, Hausa augmentatives are sound symbolic adjectives (syntactically and morphologically), but the plurals corresponding to these augmentatives have a distinctly ideophonic phonology and do not occur pre-nominally like singular augmentatives, but instead occur after the noun:

(3.8) **fíʀdéedè***ndóokìi* 'a very large, strong horse'
*dáwáakíi***fírdáɑ-firdàɑ** 'huge **horses**'
sántáléé*lìyárbùdúrwáa* 'a slender good-looking young lady'
*ˊyámmáatáa***sántáláa-sàntàlàɑ** 'slender good-looking **girls**'
(Newman, 2001, p.257)

3.4.3 *Other syntactic features of ideophones*

Some further generalizations that can be made about ideophones involve the types of clauses in which they occur. For example, ideophones tend to occur in affirmative declarative clauses, which is the main sentence type of narratives (Bartens, 2000, p.35). This does not apply to ideophones in all languages however, as they can appear in sentences containing the present indicative in Cilubà (Kabuta, 2001, p.146), future tense in Southern Sotho (Kunene, 1978, p.12), and imperative sentences in Yir-Yoront, Uw-Oykangand (Paman) (Alpher, 2001, p.11), and Katuena. Katuena ideophones also occur in interrogatives, as in example 3.9. That ideophones tend not to occur in negative sentences is not surprising given the fact that the function of ideophones is to simulate or depict an event or sensation, and not its absence (Kilian-Hatz, 2001, p.158). In some rare cases however, they can occur in negative sentences, as in Baka, where constructions of this sort are used for rhetorical effect, as in example 3.10:

(3.9)	*Ahtʃe*	*katʃʰo*	*how*	*how*	*mɨːke?*
	ahtʃeɸu	ka-toɸo	how	how	m-ka-ja
	what	say-CIRC	IDEO(dogs.barking)	IDEO(dogs.barking)	2S-say-IPF

What are you barking at? (lit. What are you saying '*how how*' at?)

(3.10) *Mòjèɛ* *de?* **Kpèɛh!**
2SG.hear.PAST NEG **kpèɛh**
Don't you hear?: **kpèɛh**.
(Kilian-Hatz, 2001, p.158)

Interestingly, there is an ideophone in Katuena, *tɨ* (which has cognate in other Cariban languages such as Trio and Wayana), that can take an inchoative verbalizer and can subsequently be negated with the negative suffix *-hɾa* (discussed in 5.2.2). Seeing as this stem is subject to all the normal morphological and syntactic processes applied to verbs in Katuena, this derived form is not in this work considered to be an ideophone, but rather a verb, and thus its negation is not surprising.

3.5 MEANINGS AND USES

A definition of ideophones based solely on structural characteristics would not be cross-linguistically viable since, as outlined above, ideophones have such variable features across languages and broad tendencies are the only generalizations that can be made regarding their form. It might be argued that a definition based on semantics may prove to be more useful, however only the characterization of ideophones as 'words with meanings based in the domain of sensory events' might be applicable to all ideophones. This definition is very broad, encompassing many types of words that would not necessarily possess the structural features of ideophones. It should therefore be clear that identifying ideophones requires identifying a combination of shared features. The definition by Dingemanse (2011, p.25) referred to in the introduction, which defines ideophones as marked words that depict sensory imagery, proposes that ideophones share three essential characteristics: structural (marked), semiotic (depictive), and semantic (sensory imagery). Having summarized the general tendencies and variation in the marked structural attributes of idephones, I now turn to their semiotic and semantic properties.

Ideophones have traditionally been seen as descriptive words. Doke (1935, p.118) states that ideophones are 'a word, often onomatopoeic, which describes a predicate, qualificative or adverb in respect to manner, colour, sound, smell, action, state or intensity.' Recently however, the performative nature of ideophones has led to a re-thinking of the particular mode of representation that is at work in these words. Ideophones do not simply describe a state or event, but rather they simulate it, allowing the speaker to perform the event and raising the illusion that it is occurring at the moment of the utterance (Kilian-Hatz, 2001, p.155). As Daniel Kunene (2001, p.183) puts it, 'the ideophone is the closest linguistic substitute for a non-verbal, physical act.' Like a stage performance that creates a world outside of the one unfolding in the theatre, ideophones create or depict an event, emotion, or perception that is removed from the ordinary language act composed of subjects, predicates, objects, adverbs and adjectives. The distinction being made here is the same as that made by Dwyer and Moshi (2003) between the analytic dimension of language and the expressive dimension, of which ideophones form a part and which also includes paralinguistic phenomena such as gesture and intonation. Perhaps fittingly, ideophones are often accompanied by gestures approximating the act being depicted (Voeltz and Kilian-Hatz, 2001, p.3), and which can even sometimes completely replace the spoken word (Kunene, 1978, p.12). It seems that iconic gestures, those which share formal characteristics with the semantic content of the accompanying speech, are the most common type co-occurring with ideophones. The frequency and types of gestures co-coccurring with Katuena ideophones are analyzed and discussed in section 7.3.

The fact that iconic gestures are the most common type co-occurring with ideophones goes hand in hand with the iconic nature of idephones themselves. Three main types of iconicity can be found in ideophones:

- **imagic iconicity**, in which a word mimics a sound in the real world (onomatopoeia such as *bang* or *tick-tock* in English)

- **Gestalt iconicity**, in which the morphological structure of a word resembles the spatio-temporal characteristics of its reference (e.g. reduplicated ideophones indicating the repetition of an event)
- **relative iconicity**, in which words with similar forms have similar meanings (e.g. English words beginning with -gl such as *glimmer, glow, gleam, glitter*, etc.)

Onomatopoeic ideophones are those in which the iconic nature of ideophones might be grasped most easily. The following example from Estonian shows how the speaker does not simply describe the sound of someone's footsteps, but rather he or she produces the particular sound with the help of an ideophone, thereby becoming the actor in a sense, and creating an image in sound that offers vivid information about the particular manner in which the steps were taken.

(3.11) *Tüdruk* *möödus* *tänavamuusikust* **kips-kõps, kips-kõps**.
girl 3SG:PAST-pass SG:ELAT-street.musician **kips-kõps kips-kõps**
'The girl passed a street musician with quick and short steps, in high-heels.'
(Mikone, 2001, p.229)

Iconicity in relation to Katuena ideophones is discussed in section 7.1.

Ideophones have been categorized according to their semantics in many different ways, but one of the most common distinctions has been that between onomatopoeic ideophones (*phonomimes*) and those which depict an event or state that does not inherently involve any audible noise (*phenomimes* for external phenomena, *psychomimes* for psychological states). Although some languages such as Kxoe (Central Khoisan) only have onomatopoeic ideophones,[1] most have a mixture of both, and the percentage of these types will vary depending on the language (Weakley, 1973, p.2). Some authors insist that only non-onomatopoeic, or synaesthetic ideophones are truly ideophones, however most authors maintain that the differentiation between phonomimes and phenomimes is not necessary, useful, or even possible in some cases (Bartens, 2000, p.13).[2]

Nevertheless, there are certain sounds that commonly recur as ideophones in different languages: blows and explosions, objects falling (subfields might include objects falling into/onto certain types of materials or containers, etc.), water in movement, burning, speaking, bodily functions (e.g. swallowing, coughing, sex, etc.), manner of running and walking, flying or speed of movement, noises, confusion, commotion, etc. Other interesting fields in which many terms of onomatopoeic or ideophonic origin can be found is the terminology for birds and certain other types of fauna (Bartens, 2000, pp.26-27). It is quite common cross-linguistically for birds to be named after their calls (presumably, as it might be that the name

1 'In Kxoe, ideophones are semantically restricted to denoting exclusively audible sensations and/or visible sensations that must be associated with a certain sound [...]' (Kilian-Hatz, 2001, p.159).

2 As noted by Bartens (2000, p.27), onomatopoeic sound symbolism and synaesthetic sound symbolism are not always easy to tease apart, and even speakers may disagree as to whether an ideophones is depicting the sound of a bird flapping its wings, the speed of its flight, or perhaps both.

of the species led to the call being interpreted in a particular way), or perhaps the call leads to the name of the species, though this does not explain the high incidence of ideophony in the terms for fish, plants, foods and dishes and diseases in some languages (Bartens, 2000, p.27). Presumably, like the ideophonic words used as nicknames or terms of endearment (see below), it is the physical characteristics of these, or the effects they may have on the non-auditory human senses that leads to them being associated with ideophonic vocabulary.

While some scholars have kept their classifications quite general, others have emphasized the wide range of semantic fields in which ideophones occur. For example, Klamer (2001, p.169) proposes three semantic categories for ideophones:

1. **Sense**, which includes sound, touch, taste, smell, feeling, emotion and sight
2. **Name**, which includes person or place names, nicknames, terms of endearment and names for flora and fauna
3. **Bad**, which includes 'lexical items with negative connotations or referring to undesirable states and referents'

Kilian-Hatz (1997, pp.146-147)[3] on the other hand, lists 22 semantic fields from Baka in which ideophones are found, including hitting and cutting, falling and throwing, arriving and landing, emptying and unpacking, and eating and drinking, among others.

With any semantic classification of this type, there is bound to be overlap between categories and ideophones which may not be easily placed into one category or another. Thus, most semantic categorizations will no doubt be arbitrary to a certain extent. Some ideophones have a very broad meaning, and deciding which category to place them in is problematic, as their precise meaning depends upon the context in which they are used (Weakley, 1973, p.14). For example, the Pastaza Quechua ideophone *tak* encodes the very general idea of 'contact,' but can be used with at least 65 different verbs which help to specify its meaning in each case. Nuckolls (2001, pp.280-283) broadly classifies the meanings of *tak* into two categories, the punctual meanings of *tak* (subdivided into 'sound of contact,' 'soundless contact,' and 'contactless contact'), and the completive meanings of *tak* (subdivided into 'contact that surrounds,' 'contact that surrounds and impedes,' 'filling up,' 'swelling,' and 'uncomfortable pressure or pain').

On the other hand, there are also many ideophones that have very specific meanings. For example, in Kisi there are two ideophones referring to rice-beating: *gburj gburj* 'rice beaten by one person' and *pirn pirn* 'rice beaten by two or more people.' There are also several depicting different types of rain: *wa-a-a* 'sound of rice being sown or gentle rain,' *bia-a-a* 'sound of soft rain,' *bakala-bakala* 'sound of rain falling in single droplets' (Childs, 1994a, pp.188-198). As can be gleaned from the two different meanings of *wa-a-a*, even very specific ideophones may be interpreted quite differently depending on their context of occurrence. A simlar example from Katuena is the ideophone *ɸoku*, which can be used to evoke the image of a bend in a

3 cited in Bartens, 2000, p.27

river, or that of someone going away, depending upon the context. The meanings and contexts of use of ideophones in Katuena will be discussed further in Chapter 7.

Like classifications based on the phonological, morphological and syntactic characteristics of ideophones therefore, it seems that cross-linguistic semantic classifications of ideophones either run the risk of being too general to be very helpful, or too specific so as to make the categorization of some ideophones quite problematic. Language-specific classifications are therefore probably of more use, though one can certainly see that there are certain semantic fields, such as sound, sight, taste, smell, emotion and touch, as well as names for flora and fauna, where ideophones are very common.

3.5.1 *Function and use of ideophones*

Having discussed the problems in defining ideophones as well as their phonological, morphological, syntactic and semantic characteristics, there remain a few brief points to be made about their uses and the types of pragmatic and discourse functions they have in different languages, as well a few notes about the sociolinguistic differences in the use of ideophones.[4]

Traditionally, the function of ideophones as literary or stylistic devices used for dramatic enhancement in narrative texts, generally storytelling or poetry. They also often occur in lullabies and traditional songs (Mphande, 1992, p.118). They are very often only used in oral language, which is one further reason why they have largely been ignored by traditional descriptions of grammar (Voeltz and Kilian-Hatz, 2001, p.2). Indeed, there are some languages where ideophones are restricted to particular genres, but as more and more attention is paid to this particular type of expressive vocabulary, it is becoming apparent that in many (perhaps most) languages that have ideophones, they are also used in general conversation or in other types of interactions. For example in Katuena, ideophones are not only used in narratives, but also in daily conversations, as in Ewe where they are also used in radio and television broadcasts (Ameka, 2001, p.33). In ChiTumbuka they are used equally in both narratives and everyday conversations (Mphande, 1989, p.33), but they also occur in lullabies and form an important part of child-directed speech, contributing significantly to the acquisition of intonation (Mphande, 1992, p.118).[5] In some Australian languages (such as Yir-Yoront), ideophones are the only vocalizations allowed in certain social contexts where speech is not permitted, or in sign language discourse (Wik and Centralian languages) (Alpher, 1994, p.170).

As previously stated, ideophones are largely restricted to oral communication, and it has been observed that these tend to be eliminated through the standardization and graphiciza-

4 These topics deserve much more attention than can be afforded here, however these areas have largely been ignored by most investigators, and further research needs to be conducted.

5 The 'childishness' of ideophones is a recurring theme in the literature. For example, Childs (1994a, pp.194-195) notes that some of his highly-educated informants deny the existence of ideophones in their language, characterizing them as childish. In Japanese mimetics, palatalization of consonants is pervasive and (particularly the palatalization of alveolar stops and fricatives) is associated with concepts of childishness and immaturity, but also instability, unreliability, uncoordinated movement, diversity, excessive energy, noisiness, lack of elegance, and cheapness (Hamano, 1994, p.154).

tion of languages (Bartens, 2000, p.32). However, Mphande (1992) notes that at least in modern African literature, ideophones are being used by some African authors writing in their own languages but also in the colonial languages of their native countries, imbuing their work with a certain African reality and emphasizing their identities as modern African writers. In Tamil they are also frequently used both in spoken and written language (Asher, 1982, p.242). Thus, not only the genre, but also the medium in which ideophones can occur varies cross-linguistically. Furthermore, the function, or the effect of ideophones also varies. As previously mentioned, the dramatic quality of ideophones is their most emphasized effect, however in particular genres or particular languages, they may serve other functions. In Ndyuka (Maroon Creole) for example, when used in non-narrative styles, they are only used for emphasis (Shanks and Velanti, 1990, cited in Bartens, 2000, p.34), and in Mari (Finno-Ugric) there are riddles made up entirely of ideophones (and others composed solely from gestures and mimicry) (Saarinen, 1991, p.135, cited in Bartens, 2000, pp.171-172). Another example is Baka, speakers of which use only imitations of animal sounds to communicate when hunting (Kilian-Hatz, 1997, p.125, cited in Bartens, 2000, p.33).

In view of the mainly oral nature of ideophone usage, societies with little or no history of literacy in their language seem more likely to use ideophones extensively, and although there are exceptions, this does seem to be the case (Kunene, 2001, p.190). Several investigators have also found that the use of ideophones is correlated with social factors such as age and sex, as well as degree of urbanization (Childs, 2001, pp.67-68). Others have noted that in some languages, both men and women use ideophones to the same extent however (e.g. Mphande (1989, p.33) for ChiTumbuka). Bartens (2000, p.43) notes that in the Atlantic pidgins and creoles that have ideophones, they are generally a sign of rural identity and tend to disappear during koinization and pidginization as it occurs particularly during urbanization. The sociolinguistic differences in the use of ideophones are often not even taken into account by researchers however, and a closer look at these issues may reveal some interesting features of ideophone usage. Due to the very small number of Katuena speakers remaining, and seeing as they are all above the age of 50 and reside in remote villages, unfortunately the sociolinguistic patterns of ideophone usage in Katuena cannot be investigated comprehensively.

Part II

IDEOPHONES IN KATUENA

There are many ideophones in Katuena, and these are used quite often both in narratives and daily conversations. Ideophones in Katuena form their own grammatical class and behave much differently than other words in the language. Like ideophones in other languages, they have a special phonology (including an enlarged phoneme inventory and particular phonotactics), they are not subject to many morphological processes, except for reduplication and compounding (certain ideophones can also be found with the transformative or inchoative verbalizers, however this process does not appear to be productive), and they are most often syntactically independent, constituting clausal nuclei of their own. Their meanings are very varied, and they can be quite general or quite specific, but often iconically depict an entire event. They are also often accompanied by depictive gestures which amplify their performative character.

As mentioned above, ideophones are used very frequently in Katuena, but just how many are there, and how often do they occur? Although it is not possible to determine exactly how many ideophones there are in Katuena, this study used a corpus of 13 texts (1 instructional text, 1 life story, and 11 myths) spoken by three speakers, totalling 26485 words, and found 199 different ideophones. Five of these texts are only partly glossed, and these were omitted for the frequency counts discussed below. Therefore, only 8 texts were analyzed for ideophone frequency and co-ideophone gesture frequency and type. (1 instructional text, 1 life story, and 6 myths). Table 3 presents the frequency of ideophones in each of these texts.

Table 3: **Frequency of ideophones in Katuena**

Text	**Type**	**Total words**	**Ideophones**	**Percentage**
Kanawa Ritofo (Canoebuilding)	instructional	911	152	16.7%
Lifestory	life history	2756	195	7.1%
Kwahshari Ifikoymo (Flood & Inferno)	myth	3877	382	9.9%
Mashimashima (Daughter-in-law)	myth	3221	512	15.9%
Nuuñe (Moon)	myth	1190	141	11.8%
Sexuality Quest	myth	3508	519	14.8%
Taana (Sunhat)	myth	2911	306	10.5%
Waatafuru (Forest Monster)	myth	1208	317	26.2%
TOTAL		**19582**	**2524**	12.9%

Although ideophones are often thought to be more frequent in narrative texts, the instructional text used in this corpus contains an above-average number of ideophones. More texts would need to be analyzed in order to make a strong claim, however it seems that in Katuena, ideophones are not relegated to the realm of the narrative. One caveat to be mentioned here is that these texts are spoken by only two speakers. It may be that these particular speakers use more or less ideophones than the average speaker, however there is no reason to believe

that this is the case. Nevertheless, it seems that there are a large number of ideophones in Katuena, and that these are used fairly frequently.

The following chapters provide an analysis of the phonology and phonotactics of Katuena ideophones (Chapter 4), their morphological and syntactic characteristics (Chapters 5 and 6 respectively), and their meanings and uses (Chapter 7). Chapter 8 concludes with a summary of the preceding chapters, a discussion of results, and suggestions for further research.

4

PHONOLOGY OF KATUENA IDEOPHONES

4.1 PHONEME INVENTORY

As previously discussed in 3.2, the phoneme inventory of ideophones in a given language is either parallel to that of the rest of the lexicon, or includes segments that are not found in the rest of the system. Katuena is an example of the second type.

According to Hemmauer's (2009) analysis, Katuena has a phoneme inventory consisting of 14 consonants and 6 vowels (see Table 4 and Table 5). This phoneme inventory is extended for ideophones however. Specifically, the following two phonemes are only found in ideophones (see examples in (4.1)), and are not found in the rest of the lexicon:

- the voiceless bilabial plosive /p/
- the voiced velar nasal /ŋ/

(4.1) *kap* 'bite off'[1]
tuɸuŋ 'sunset'
ɸuŋ 'fall'

In addition, three implosive consonants, the voiced bilabial implosive /ɓ/, the voiced alveolar implosive /ɗ/, and the voiced palatal implosive /ʄ/ as well as the glottal stop /ʔ/ also occur as phonemes in ideophones (for examples, see (4.2), (4.3), (4.4), and (4.5), respectively). Hemmauer (2009) gives these consonants semi-phonological status, being the result of morphophonological conditioning, however in ideophones they appear to be fully phonemic, as indicated by the following minimal pairs:[2]

ɗaɨ	'bump'	~	*taɨ*	'chop'
ɗuɾu	'cover'	~	*suɾu*	'enter'
ɗow	'strike'	~	*sow*	'leaves'

1 Some ideophones have several meanings depending on the context, however in this work generally only one meaning is provided. Care has been taken to provide either the most common meaning for a particular ideophone, or a very general translation that encompasses most if not all of its possible meanings.

2 No minimal pairs were foun for the palatal implosive, however considering the general lack of morphological processes that apply to ideophones, it is unlikely that the word-initial palatal implosive in the ideophone depicting the action of jabbing (*taʔʄi*) is the result of morphophonemic processes. This sound is therefore still considered a phoneme in the current work, although further investigation is needed to confirm this.

toʔɗow	'pop open'	~	*toʔɓow*	'partly submerged'
tʃaʔ	'shoot'	~	*tʃaj*	'cut'

(4.2) **voiced bilabial implosive /ɓ/**

ɓo:	'swell'	*teɓe*	'glue'
tʃatɓi	'blink'	*sɓɛrɛ*	'smear'

(4.3) **voiced alveolar implosive /ɗ/**

ɗuɾu	'cover up'	*ɗam*	'close with a clap'
ɗow	'strike'	*ɗerej*	'sit on top'
ɸuʔɗow	'drop'	*ɗej*	'hit goal'
ɗoɾow	'canoe into water'	*ɗɨm*	'thud'
ɗaɨ	'bump'	*ɗu*	'impact'
ɗa	'open'		

(4.4) **voiced palatal implosive /ʄ/**

taʔʄi	'jab'

(4.5) **glottal stop /ʔ/**

suʔɓaj	'pull out'	*tʃaʔ*	'shoot'
ʃoʔɓow	'paddling'		

A final way in which the phoneme inventory of Katuena is extended is through the contrastive use of long vowels. Certain Katuena ideophones contain lexically-determined long vowels, as can be determined by the following minimal pairs:

ʃe:	'rain'	~	*ʃe*	'drool'
si:	'pain'	~	*si*	'walk fast'
tu:	'noise of water'	~	*tu*	'heavy step'

Ideophones have often been excluded from traditional linguistic analysis due to their 'exceptional' status. More recent investigations have recognized that ideophones are a significant feature of many languages however, and that they should not be considered as being outside of the language system. Hemmauer's (2009) original analysis of Katuena's phoneme inventory included 14 consonants and 6 vowels (see Tables 4 and 5 respectively). In line with this more holistic view of language which includes ideophones as more than simply narrative decoration, and considering the phonemic status of the sounds discussed above, I propose an analysis of Katuena as having a phoneme inventory consisting of 19 consonants and 9 vowels, as in Tables 6 and 7.

Katuena is clearly a language in which the phonemic inventory is extended by ideophones through additional phonemes that do not appear in the rest of the lexicon (i.e. /p/ and

Table 4: **Katuena consonant phonemes according to Hemmauer (2009)**

	labial	**alveolar**	**palatal**	**velar**
plosives		t	tʃ	k
fricatives	ɸ	s	ʃ	h
nasals	m	n	ɲ	
flaps		ɾ	ɾʲ	
glides	w		j	

Table 5: **Katuena vowel phonemes according to Hemmauer (2009)**

	front	**central**	**back**
high	i	ɨ	u
low	e	a	o

Table 6: **Katuena consonant phonemes**

	labial	**alveolar**	**palatal**	**velar**	**glottal**
plosives		t	tʃ	k	ʔ
implosives	ɓ	ɗ	ʄ		
fricatives	ɸ	s	ʃ	h	
nasals	m	n	ɲ	ŋ	
flaps		ɾ	ɾʲ		
glides	w		j		

Table 7: **Katuena vowel phonemes**

	front	**central**	**back**
high	i iː	ɨ	u uː
low	e eː	a	o

/ŋ/), by the attribution of phonemic status to sounds which only have semi-phonological status in the rest of the lexicon (i.e. the voiced bilabial implosive /ɓ/, the voiced alveolar implosive /ɗ/, the voiced palatal implosive /ʄ/ and the glottal stop /ʔ/), as well as through the contrastive use of vowel length.

4.2 DIPTHONGS

Apart from the appearance of unusual phonemes in Katuena ideophones, there is also a segment that is found in ideophones but not in the rest of the lexicon: the dipthong /aɨ/. According to Hemmauer (2009), there are no diphthongs in Katuena, at least at the phonological level. 'What may be heard as diphthongs phonetically is always a sequence of a vowel and a glide, either followed by a consonant or by a word-final homorganic high vowel' (Hemmauer, 2009). However, a number of ideophones were found that include the diphthong /aɨ/, and considering the following idephones forming minimal pairs, this segment can be considered phonemic in Katuena.

(4.6)	*ɗaɨ*	'bump'	~	*ɗa*	'open'
	kɾaɨ	'hang'	~	*kɾoː*	'snore'
	ɾaɨ	'wind up'	~	*ɾeː*	'protrude'
	taɨ	'chop'	~	*ti*	'footstep'

4.3 SYLLABLE STRUCTURE

Ideophones in Katuena, like in many other languages, deviate from the canonical syllable structure of the language. The most striking way in which this occurs is through the acceptance of closed (CVC) syllables, as well as syllables made up of two consonants (CC), which are not found in the rest of the lexicon. Hemmauer (2009) states that phonetically, closed syllables (usually ending in a nasal or a sibilant fricative) do occur utterance-finally or before a pause, but that these result from the final devoicing and loss of a final vowel. In the case of ideophones, it can be argued that this rule does not hold. It seems that syllable structure constraints are overridden by ideophones, perhaps due to the sound-symbolic nature of these words. The iconic nature of the words in question and the structure of the events which they depict indicate that the iconicity requirements of ideophones are responsible for this non-adherence to canonical syllable structure, rather than the loss of a final vowel. The first two examples below illustrate this well. The events depicted by *ɗam*, *ʃik*, *pom* and *sam* involve a focus on an endpoint, boundedness, or closure, as Dingemanse (2011, p.168) refers to it. Thus, the final consonant in these ideophones can be said to iconically represent a particular aspect of the event. The events depicted by ideophones with a word-final plosive (*ʃik* and *kap*) have a clear abrupt endpoint, whereas those ending in a nasal involve either a continuing endstate (e.g. *sam* 'bite down' and *ɗam*, 'close with a clap (and keep closed)'), or focus more on the boundedness of an object (in the case of*pom*, flames). It is interesting to note that

when producing the word-final nasal in *sam* 'bite down' and *ɗam* 'close with a clap,' the vocal apparatus actually imitates the event being depicted, since nasal stops require the lips to be in contact. Ideophones ending with a word- (and thus syllable-final) continuant /w/ often depict an event involving water (as in *ɗoɾow* 'canoe into water' and *koɸow* 'get into water'), however the meanings asociated with ideophones ending with this sound are more varied. A selection of ideophones containing word-final CVC syllables is provided below.

(4.7)	*ʃik*	'to grate'
	kap	'bite off'
	sam	'bite down'
	ɗam	'close with a clap (& keep closed)'
	pom	'flame'
	ɗɨm	'thud'
	ɗoɾow	'canoe into river'
	ɗow	'strike'
	koɸow	'get into water'
	how	'dog barking'
	kotow	'pop open'

There are some iconic structures in ideophones such as these which help to guide the imagination, but some correspondances are more abstract. For example, the flouting of canonical syllable structure is harder to attribute to iconicity in the following case, where the movement of a predatory fish is illustrated by an ideophone consisting of a geminate consonant. Informants described the movement depicted by this ideophone (which is usually reiterated) as short bursts, thus the representation of boundedness by a syllable-final consonant can still be said to be occurring here.

(4.8) *m:* 'piranha movement'

In sum, syllable types permitted in Katuena are the following: V, CV, CCV, CCCV (Hemmauer, 2009). Taking into account ideophones means adding CVC and CC syllables to this list. Thus, the phonotactics of Katuena ideophones appear to further stretch the phonotactic system applying to the rest of the lexicon, showing otherwise prohibited structures such as CVC and CC syllables.

4.4 FINAL SYLLABLE OR FINAL VOWEL ELISION

It is perhaps worth mentioning here the interesting process of final syllable or vowel elision which occurs in general in Katuena, and also in ideophones. Speakers often do not pronounce the final vowel or the final vowel of a word. This also occurs for some ideophones, and these therefore have two or more variants, as in the following examples:
ɸowu = *ɸow* 'go away'
ɸoku = *ɸok* 'go away / winding river'
sɓere = *sɓeː* 'smear'

This final example demonstrates compensatory lengthening of the final vowel, a morphophonemic process also observed in the rest of the Katuena lexicon (Hemmauer, 2009).

4.5 SUPRASEGMENTALS

4.5.1 *Vowel lengthening*

A common cross-linguistic feature of ideophones, expressive vowel lengthening also occurs in Katuena. Vowel length can be exploited in order to express the speed, duration, and distributive properties of that which is being depicted, or even a combination of these.

4.5.1.1 *Speed*

The first example below, in addition to expressing the speed of an action (and thus also its duration) through vowel length, also demonstrates how an ideophone referring to a very general concept such as shaking can refer to a very specific event. The meaning of this ideophone can only be grasped through an understanding of the context in which the ideophone occurs. In this case, the story involves a man playing a trick on a forest monster (*Waatafuru*) from the inside of a hut made of palm leaves. This occurrence of the ideophone is not the first, as the man has handed other things through the hut before, therefore the use of the ideophone as an independent clause (this use is discussed in section 6.1) does not impede understanding here.

(4.9) *suku* 'to shake'

Suːku.
suku
IDEO(shake)
Suku he slowly handed the spear through the palm leaves of his hut.

Pronouncing this ideophone as [suku] simply means that an object passed through palm leaves, producing a sound by shaking them. The presence of a long vowel stretches out the

word, iconically representing the stretching out of an event in time and indicating that the action was carried out slowly. Example 4.10 also shows vowel length being used to depict an action carried out slowly, and can be contrasted with example 4.11, in which the ideophone *suɾu* does not undergo vowel lengthening.

(4.10) *suɾu* 'enter house'

Nmokjaʃe	*haɾ*	*ha*	*tɨ*	*su:ɾu.*
n-moku-ja-ʃe	haɾ	ha	tɨ	suɾu
3s-come-IPF-DP:IPF	in.turn	SF	REP	IDEO(enter.house)

He came again and slipped slowly, *suuru*, into the house.

(4.11)

Suɾu	*Suɾu*	*akɾo*	*ɾo*	*tɨ*	*yɨmʃekɨtʰɨɾɨ*	*ntoje*
suɾu	suɾu	akɾo	ɾo	tɨ	y-mʃeki-tʰɨɾɨ	n-to-je
IDEO(enter.house)	IDEO(enter.house)	with	EMPH	REP	3-child-PAST	3s-go-DP:PF

suɾu.
suɾu
IDEO(enter.house)

His son went into the house with him, *suru suru*.

4.5.1.2 *Duration*

Although the depiction of speed necessarily involves some sort of reference to length of time, some ideophones undergo vowel lengthening with the sole purpose of indicating duration, as in the following examples.

(4.12) *tɨ* 'silent'

Tɨ:.	*Ejkuhɾa*	*tɨ*	*nehʃe*	*okwe.*
tɨ	ejku-hɾa	tɨ	n-eʃi-je	okwe
IDEO(silent)	answer-NEG	REP	3s-be-DP:PF	INTERJ(intense)

He kept silent. Alas, he didn't answer.

Tɨ:::::.	*Tu:na*	*tɨ*	*nitɨtbamu.*
tɨ	tu:na	tɨ	n-tɨ-ɸamu
IDEO(silent)	water	REP	3s-IDEO(silent)-INCH

There was silence. The rain was stopping.

Here the ideophone *tɨ*, indicating silence, is pronounced with a long vowel, stretching out the word in time, and showing how the event itself was stretched in time.

In the next example, vowel lengthening serves to illustrate the amount of rain that is falling. According to informants, at least in this case it is both the volume of rain and the length of time it falls that is being illustrated with this mechanism.

(4.13) *ʃiː* 'rain'

Tuːna	*tɨ*	*nmokjaʔɲe*	*ʃiːːːːː.*	*Jɨtɨtbamuhɾa*	*ɾo*	*makɨ*	*ha*
tuːna	tɨ	n-moku-ja-ʃe	ʃiː	j-tɨ-ɸamu-hra	ɾo	makɨ	ha
water	REP	3S-come-IPF-DP:IPF	IDEO(rain)	3-IDEO(silent)-INCH-NEG	EMPH	EXH	SF

ʃiːːːːː.
ʃiː
IDEO(rain)

Water was coming, *shii*. It just wasnt stopping, *shii*.

4.5.1.3 *Space*

Vowel length can also be manipulated to indicate the distributive properties of what is being referred to by an ideophone. In the following example, the expressive vowel lengthening in the ideophone *tuta* reflects the area of space which is flooded. The principle of Gestalt iconicity is at work here, with the structure of the word itself being adapted, or prolonged to be exact, in order to more precisely represent the disappearance of a large space under a flood.

(4.14) *tuta* 'everything'

Tutaː,	*jiminithiɾ*	*komo.*
tuta	j-mini-thiɾi	komo
IDEO(everything)	3-house-PAST	PL

Everything (was flooded) - (there were no more) houses.

In example (4.15) we can see the use of one ideophone with expressive lengthening and without. The extra-long vowels in the second and third occurrences of the ideophone *ɾeː* 'protrude,' emphasize the distance, or rather the extent to which the monster's teeth are overhanging. Examples (4.16) and (4.17) also employ this principle, their final vowel being prolonged to indicate height.

(4.15) *ɾeː* 'protrude'

ɾeː	*neɸataka*	*tɨ*	*Kwahʃaɾ*	*haɾ*	*ha*	*ɾeːːːːː*	*tanɨ*
ɾeː	n-eɸataka	tɨ	Kwahʃaɾɨ	haɾ	ha	ɾeː	tanɨ
IDEO(protrude)	3S-arrive	REP	Kwahshaɾɨ	in.turn	SF	IDEO(protrude)	here

jme	*haɾ*	*ha*	*tɨ*	*ɾeːːːːː.*
jme	haɾ	ha	tɨ	ɾeː
ADMIR	in.turn	SF	REP	IDEO(protrude)

Low and behold, *ɾee* the top of Kwahshaɾï appeared, sticking up out of the water, *ɾeeeee*.

(4.16) *wu* 'wind blowing close

Mokjaʃe	*tɨ*	*anaɾ*	*haɾ*	*ha*	*wu:::::*
moku-ja-ʃe	tɨ	anaɾɨ	haɾ	ha	wu
come-IPF-DP:IPF	REP	another	in.turn	SF	IDEO(wind.blowing.close)
koɸow		*wehtojmo*	*jme*	*ha*	*tɨ.*
koɸow		wehto-jmo	jme	ha	tɨ
IDEO(get.into.water)		fire-AUGM	ADMIR	SF	REP

The wind blew more fire towards the water, *wuuuuu koɸow*, lots of fire.

(4.17) *thu* 'wind blowing far'

Atʃwo	*waɾa*	*jme*	*tɨ*	*nmokjaʃe*	*thu:::::*
atʃwo	waɾa	jme	tɨ	n-moku-ja-ʃe	thu
wind	PP(like)	ADMIR	REP	3S-come-IPF-DP:IPF	IDEO(wind.blowing.far)

wu:::::.
wu
IDEO(wind.blowing.close)

It came like the wind, *thuuuuu*, closer and closer, *wuuuuu*.

4.5.1.4 *Duration & space*

The effect of expressive vowel lengthening in ideophones cannot always be easily pinned onto one single concept. For instance, the following examples demonstrate how both duration in time and the spatial pattern of an event are being iconically represented through vowel lengthening.

(4.18) *taɨ* 'stand up'

Taɨ:::::.
taɨ
IDEO(stand.up.straight)

Nuuñe ascended up to the sky, *taɨɨɨ*.

The ideophone *taɨ* is used to refer to the uprightness, or straight position of an object or person. Here, it is used to depict a man, Nuuñe, flying or floating up to the sky, in an upright position, to become the moon. It is unclear whether the vowel length depicts the length of time of the event or the length of the trajectory, or both however. Here again, the use of a conventionalized ideophone as an independent clause in a narrative does not hinder understanding on the part of listeners, as in context, any native speaker of Katuena will know exactly what event this ideophone refers to, despite it having a fairly general meaning of 'standing up straight.'

The lengthening of the vowel in the ideophone ɸuŋ ɗu in example 6.5 depicts the height fallen by a monster or the length of time of the fall before he hits the ground, or perhaps both. This can be contrasted with example 6.7, where a man drops fish to the ground from his hands, a much shorter height, and in which the ideophone does not undergo vowel lengthening.

(4.19) *ɸuŋ* 'fall'

A:	a:	a:	*ɸu:ŋ*	*ɗu.*
a:	a:	a:	ɸuŋ	ɗu
oh	oh	oh	IDEO(fall)	IDEO(impact)

"Ah, ah, ah!" (the monster cried), *ɸuŋ ɗu* (it dropped dead).

(4.20)

Kuɾej	*ɸuŋ*	*ɗu.*
kuɾej	ɸuŋ	ɗu
IDEO(appear)	IDEO(fall)	IDEO(impact)

He appeared *kuɾej*, and dropped (spider monkey) meat *ɸuŋ ɗu.*

As the above examples demonstrate, expressive vowel length in Katuena is used to create a more precise depiction of the speed, duration, and spatial characteristics of an event. For some ideophones, vowel lengthening may depict more than one of these concepts, and speakers themselves might not agree on whether vowel length emphasizes duration, space, or both, for example.

4.5.2 *Consonant gemination*

Katuena speakers also use another form of expressive lengthening in ideophones in order to 'bring to life' the event they wish to portray in language: consonant gemination. Although phonologically, clusters of two identical consonants are rare in Katuena (these are only found in ideophones), expressive consonant gemination does occur in ideophones, expressing duration, speed and/or to give more accurate distributive information about an event. In the following example, the final consonant gemination depicts the amount of rain falling, basically imitating, or replicating, the sound of heavy falling rain over a longer period of time. The same ideophone with no final consonant gemination would represent rain falling for a shorter period of time.

(4.21) *tʃitowiʃ* 'pouring rain'

Tʃitowiʃ:::::.
tʃitowiʃ
IDEO(pouring.rain)
The rain kept pouring down *tʃitowis:::::.*

The next example involves an ideophone depicting an arched movement, and the lengthening of the final consonant indicates an increased distance of movement.

(4.22) *wow* 'bend'

"A:ha	*aʔɗu."*	*Wow:.*	*"A:*	*ojafot^{h}o."*
a:ha	aʔɗu	wow	a:	oj-afo-t^{h}o
yes	grandfather(VOC)	IDEO(bend)	oh	1-arm-PAST:POSS

"Yes, grandfather." *Wow* (he lifted the dead monkeys arm). "Look, (here's) my arm!"

4.5.3 *Intonation*

Intonation is another expressive mechanism observed in ideophones which iconically represents particular details of the event being depicted. Some, but by no means all ideophones are uttered with iconic intonation. It must also be noted that the expressive use of intonation on ideophones is not consistent, and the ideophones provided as examples below are not always uttered with the mentioned intonation. These are simply patterns that have been found.

- **Rising tone**
  The rising intonation used in the following example iconically represents the rising of the sun. This is again an example of Gestalt iconicity, in which the structure of the word itself is iconic in regards to the event it refers to. Expressive vowel lengthening also occurs here, iconically representing the spread of light over a large space, as well as the temporal characteristics of such an event.

  (4.23)

↗ɸe:::::	*nenmahjaʃe*	*ti.*
ɸe:	n-enmaɸu-ja-ʃe	ti
IDEO(sunrise)	3S-dawn-IPF-DP:IPF	REP

  The sun rose, *ɸe:*, and the dawn came upon them, *ɸe:*.

- **Falling tone**
  In the following example, falling intonation can be said to add to the iconicity of the ideophones *ʃi:* and *↘ʃu:*, which depict rain and flowing water respectively. Many occurrences of this ideophone occur with falling intonation.

  (4.24)

Eɾo	*tɨ*	*nuɓaje.*	*↘ʃi:*	*↘ʃi:*	*↘ʃi:*
eɾo	tɨ	n-ɓa-je	ʃi:	ʃi:	ʃi:
ANAPH:INAN	REP	3S-become.flooded-DP:PF	IDEO(rain)	IDEO(rain)	IDEO(rain)

tuta	*kɾajɸe:.*
tuta	kɾajɸe:
IDEO(everything)	IDEO(clear.space)

  Those got flooded. It rained, *shii shii shii*, and everything was totally under water, *kɾajɸee*.

(4.25) *Tu:na ti nmokjafe haɾ ha ↘ʃu:.*
tu:na ti n-moku-ja-ɟe haɾ ha ʃu:
water REP 3S-come-IPF-DP:IPF in.turn SF IDEO(flowing.water)
The water was streaming down again, *shuu*.

koɸow is another ideophone that is often uttered with falling intonation on the second syllable. Considering that this ideophone depicts an event involving an entry into water, which generally involves a downward movement, this can also be considered an example of Gestalt iconicity.

(4.26) *Mokfae ti anaɾ haɾ ha wu*
moku-ja-ɟe ti anaɾi haɾ ha wu
come-IPF-DP:IPF REP another in.turn SF IDEO(wind.blowing.close)
ko↘ɸow wehtojmo jme ha ti.
koɸow wehtojmo jme ha ti
IDEO(get.into.water) fire-AUGM ADMIR SF REP
The wind blew more fire towards the water, *wuuuuu koɸow*, lots of fire.

4.6 PHONOSEMANTICS

There is one semantic domain that appears to be depicted through the use of phonaesthemes (sound symbolic phonemes or segments) in Katuena, at least in ideophones. The domain of water is well-represented in ideophones, with 3 ideophones depicting increasing intensities of rain and 4 more depicting events related to water or liquids. All 7 of these, which are listed below, contain either an alveolar or a postalveolar fricative.

ʃi:	'rain'
tʃitowiʃ	'pouring rain'
sa	'water'
ʃu:	'flowing water'
so	'water evaporating on fire'
ʃaj	'sizzle'
ʃo	'slurp'

There are also a couple of segments that appear in several ideophones and which impart into the meaning of the ideophone a particular idea or concept. *ɸuŋ*, indicates a movement through air (generally up or down), and *ɗow*, depicts an impact, and these can be used to form compounds with other ideophones. Since they occur as ideophones on their own and with a similar meaning, these are not considered phonaesthemses. These are discussed in 5.2.1.

In conclusion, Katuena ideophones expand the phoneme inventory of the language, flout canonical syllable structure, and make use of expressive vowel lengthening and consonant lengthening to indicate speed, duration and/or the spatial characteristics of the event being

depicted. The iconic use of intonation was also found to be used, however not in a completely consistent manner. Ideophones in Katuena are therefore like those in other language in that that they exhibit very particular phonological features.

5

MORPHOLOGY

Most descriptions of ideophones state that they carry little-to-no morphology; they are often not subject to the regular inflectional and derivational rules of the language in question. Indeed, in Katuena ideophones clearly form a syntactic category of their own and take little morphology. Only two morphological processes were found to apply to ideophones in Katuena: reduplication and compounding, discussed in sections discsussed in 5.1 and 5.2, respectively. There are some verbs formed by ideophones affixed with verbalizers and which are subject to the general rules of verbal morphology of the language, however these few verbs are lexicalized and behave like verbs, and are thus considered as such in the current work.
This chapter begins by describing ideophone reduplication as it occurs in Katuena, then moves on to the the ways in which ideophones can be compounded to create new ideophones. Finally, the few examples found of verbs possibly derived from ideophones through the affixation of verbalizers are discussed.

5.1 REDUPLICATION & REITERATION

Reduplication, which is a feature of ideophones in all languages reported to have them, is a morphological process in which a word or part of a word, is doubled (more than two repetitions is also possible) either entirely or partly. This can also occur with certain morphophonemic alterations, as in the English ideophone *ding dong*. As previously outlined in section 3.3.1, there are four broad types of reduplication which ideophones are subject to: inherent reduplication, full reduplication, partial reduplication, and modified reduplication. Two of these types, inherent reduplication and partial reduplication, occur in Katuena and will each be dealt with in turn.

5.1.1 *Inherent reduplication*

Inherent reduplication is common in ideophones that depict an event which inherently involves some sort of repetition, such as laughing or running. There are different patterns of inherent reduplication, and those found in Katuena are listed below. It must be noted that although these ideophones are inherently reduplicated, it does not prevent them from being

further reduplicated for expressive purposes, generally by the reduplication of the final syllable. Furthermore, one might argue that the morphological process of reduplication is not truly at work here (at least not anymore), since these 'reduplicated' forms are considered roots. Nevertheless, seven patterns of inherent reduplication were found in the Katuena data.

1. Pattern: AAA
   ɸuɸuɸu 'deer steps'
   hahaha 'laugh'
2. Pattern: A:AA
   ɾuːɾuɾu 'many crawling things'
3. Pattern: ABB
   kahaha 'laugh'
   ɸeːtutu 'walk tiredly'
4. Pattern: ABBB
   kiːɾiɾiɾi 'slide down'
5. Pattern: ABBBB
   seːɾereɾeɾe 'cut all around'
6. Pattern: ABBBBB
   ɸiɾiɾiɾiɾiɾi 'smoking'
7. Pattern: ABCC
   tukuɾuɾu 'engulf'

5.1.2 *Partial reduplication*

As mentioned above, expressive reduplication is a common process applied to ideophones, allowing a speaker to paint a clear and precise picture of the event they wish to depict. In Katuena, this generally takes the form of partial reduplication, or more precisely, reduplication of the final syllable, and serves to either indicate an increase in intensity of the event being referred to, or to indicate an increase in its duration.

An example of the intensifying effect of reduplication is the reduplication of the final syllable in the ideophone *meːɾuɾu*, meaning 'scattered.' *Meːɾuɾuɾu*, with an extra syllable, expresses the idea of 'teeming with,' illustrating a more dense concentration than the unreduplicated form. This reduplication can also be described as having the effect of intensifying the distributive pattern of the event in question. The final syllable can also be reduplicated more than just once, further increasing the intensity of the event being referred to.

Another example is *tʃiːkiɾi*, which depicts squeezing juice from fruit or sugarcane. The reduplication of the final syllable of this ideophone serves to indicate a longer duration for the action however: *tʃiːkiɾiɾiɾi*. The inherently reduplicated ideophone *hahaha* can also undergo

partial reduplication for durative purposes, with the final syllable repeated once or several times to depict a longer laugh (e.g. *hahahahaha*).

Thus, the patterns of partial reduplication in Katuena are ABBB or AAAA, and these patterns are the only one found to be employed in the expressive reduplication of ideophones in the language. They appears to be used for durative, distributive, or intensifying purposes. Furthermore, this morphological prcocess is unbounded, in the sense that there is no upper limit on the amount of reduplicated final syllables on ideophones. Although in some langauges, reduplication is also used to indicate repetition, in Katuena this concept is expressed through reiteration, which is described in the following section.

5.1.3 *Expressive reiteration*

Expressive reiteration appears to be possible with all Katuena ideophones. This process is mostly used to indicate repetition by one actor or the subsequent or simultaneous carrying out of one action by multiple actors, as in example 5.1. For some ideophones such as *ʃiː* 'rain' however, it is also used to indicate increased duration. As with reduplication, there is likewise no upper limit on the amount of reiterations of a particular ideophone, as long as the event being depicted calls for such.

(5.1)

Suɾu	*suɾu*	*akɾo*	*ɾo*	*tɨ*	*jɨmʃekɨthɨɾɨ*	*ntoje.*
suɾu	suɾu	akɾo	ɾo	tɨ	j-mʃeki-thɨɾɨ	n-to-je
IDEO(enter.house)	IDEO(enter.house)	with	EMPH	REP	3-child-PAST	3S-go-DP:PF

He went in the house with his son, *suɾu suɾu*.

5.2 DERIVATION

No morphological processes were found to derive ideophones from Katuena verbs, nouns, adjectives, adverbs, or other types of words, nor were any productive processes were found to derive verbs, nouns, adjectives, adverbs, etc. from ideophones. There are some verbalizers which appear to be affixed to ideophones, however verbs formed in this way are not common, and the process is not productive. These verbs are subject to all normal grammatical rules which apply to verbs in Katuena, and are therefore considered as such. These are discussed in 5.2.2.

There is one process which can be used to create a (limited) number of ideophones. This process is ideophone compounding, a process that does not appear to occur in other languages, as far as this author is aware. This process is discussed in the following paragraphs.

5.2.1 *Compounds*

Some Katuena ideophones can be combined to create new ideophones. For example, the ideophone *ɸuʔɗow*, depicting the dropping of something, appears to be derived from the

ideophone *ɸuŋ*, which depicts the movement of something through air, and the ideophone *ɗow*, depicting the impact of one object upon another. This particular compounded ideophone is now frozen in the language however. *ɸuŋ* actually appears in many ideophones that depict events having to do with a movement through space, whether it be an upward movement, or a falling movement, as can be seen from the examples listed below. When being used as a compound, this ideophone most commonly occurs before the second ideophone, depicting the movement of a person or object before he, she or it ends up in a final resting position.

Similarly, the ideophone *ɗow* 'strike' can also be used to create other ideophones. This ideophone, by way of contrast with *ɸʊŋ*, tends to be the second ideophone in the compound, depicting the impact aspect of an event. One final example is the ideophone *tohsaj* 'lift' which is made up of *tok* 'grab'[1] and *saj* 'rise.' Considering the general flouting of the general phonological structure of the language, and the relative lack of morphology on ideophones, it is interestig that when compounded, ideophones are still subject to certain regular morphophonemic processes. For example, the final /ŋ/ in *ɸuŋ* becomes a glottal stop [ʔ] before an implosive, and a voiceless glottal fricative before other consonants. Similarly, ideophone-final consonants become a glottal stop /ʔ/ when compounded with an ideophone beginning with an implosive such as *ɗow*.

- *ɸuŋ* 'movement through space'

  ɸuŋ + *ɗeɾej* 'put on top' = *ɸuʔɗeɾej* 'throw down from shoulder'
  ɸuŋ + *ɗow* 'strike' = *ɸuʔɗow* 'drop'
  ɸuŋ + *tutʃu* 'hit ground from height' = *ɸuhtutʃu* 'jump'
  ɸuŋ + *taj* 'upright' = *ɸuhtaj* 'climb'

- *ɗow* 'strike'
  tok 'grab' + *ɗow* = toʔɗow 'pop open'
  ɸuŋ + *ɗow* 'strike' = *ɸuʔɗow* 'drop'

- *saj* 'rise'
  tok 'grab' + *saj* 'rise' = *tohsaj* 'lift'

The examples provided here seem to be conventionalized and perhaps frozen, or lexicalized as ideophones and are used quite often, though it appears that the creation of new ideophones is not prohibited, with informants agreeing that depending on the event being depicted, it is possible to pair ideophones together, or even create entire new ones. Additional investigation is required to determine the exact rules of ideophone creation in Katuena however. Nevertheless, this is an interesting mechanism not commonly found cross-linguistically.

1 This ideophone is also found in several compounds.

5.2.2 *Verbalizers*

Although ideophones form a separate class of words in Katuena, it appears that some ideophones occur with one of 2 verbalizer suffixes, the inchoative *-ɸamu* and the transformative *-ma*. This process is no longer productive however, and speakers judged any attempt to derive verbs from ideophones with these suffixes as incorrect. Furthermore, these verbs then adhere to the regular system of verbal morphology and syntax of Katuena and therefore cannot be considered ideophones. Examples are nevertheless provided here to show the frozen, or lexicalized remains of what might have been a productive process in the past.

- Inchoative *-ɸamu*
  In the corpus used for this study, only one ideophone was found composed of an ideophone and the inchoative verbalizer *-ɸamu*. Interestingly, in two of these examples ((5.3) & (5.4)), the verb created with the root *tɨ*, the ideophone depicting silence is negated with the negative suffix *-hɾa*. This could be considered further evidence that these types of verbs are not ideophones, since ideophones are not usually negated.

  (5.2) *N-tɨ-ɸamu-je* *mhakɨ* *ha* *tɨ* *tɨ.*
  3S-IDEO(silent)-INCH-DP:PF in.the.end SF REP IDEO(silent)
  In the end he fell silent.

  (5.3) *Tuɸuŋ* *j-tɨ-ɸamu-hɾa* *ɾo* *makɨ* *ha* *tɨ.*
  IDEO(sunset) 3-IDEO(silent)-INCH-NEG EMPH EXH SF REP
  The sun set, *tuɸuŋ*, and it kept raining.

  (5.4) *Tu:na* *tɨ* *n-moku-ja-ʃe* *ʃi:* *j-tɨ-ɸamu-hɾa* *ɾo* *maki* *ha* *ʃi.*
  water REP 3S-come-IPF-DP:IPF IDEO(rain) 3-IDEO(silent)-INCH-NEG EMPH EXH SF IDEO(rain)
  Water was coming, *shii*. It just wasnt stopping, *shii*.

- Transformative *-ma*
  In the corpus unly one verb was found composed of an ideophone and the transformative verbalizer suffix *-ma*. This verb is fully lexicalized however, and no other verbs can be created in this way.

  (5.5) *Tʃaʃaʃaʃaʃa* *n-etʃahtʃa-ma-je* *marija=ke* *tʃa* *tʃa.*
  IDEO(trim) IDEO(trim) IDEO(trim) IDEO(trim) 3S-trim-TRANS-DP:PF knife=INSTR IDEO(trim) IDEO(trim)
  Tʃaʃaʃaʃa, he trimmed (its gums) with his knife, *tʃa tʃa.*

In conclusion, Katuena ideophones are most often used with no affixes, and can be said to undergo very few morphological processes except for reduplication for durative, spatial, or

intensifying purposes. Derivation of ideophones from other ideophones through compounding appears to be a productive mechanism, and the creation of entirely new ideophones is also accepted by speakers, although the rules governing these processes require further investigation.

6

SYNTAX

Ideophones in Katuena most often consititute clausal nuclei of their own and do not interact syntactically with other word classes. As will be discussed in the next chapter, some ideophones are very specific in meaning, while others are more general. When used as fully independent clauses, the specifics of the event referred to by ideophones, such as the agent, patient, location, etc. can be gleaned from the context. Syntactically independent ideophones are discussed in section 6.1. There are some collocations of particular verbs with particular ideophones occurring in no particular order however, such as the verb *to(m)* 'to go' with the ideophone *ɸoku* 'go away.' These collocations are discussed in section 6.2. Katuena ideophones can also occur in quotative constructions with the verb *ka* 'to say, act,' or the verb *iɾɨ*, 'to make' as discussed in section 6.3. Finally, ideophones are also found followed by the non-spatial equative postposition *waɾa*, to create positional expressions.

6.1 SYNTACTICALLY INDEPENDENT IDEOPHONES

All ideophones in Katuena can constitute clausal nuclei of their own, and this is the most common way ideophones are used in the language. This is a common syntactic feature of ideophones cross-linguistically, and some might even argue that this is (or should be) one of their defining features. As the following example demonstrates, used in this way, ideophones form a complete and grammatical utterance on their own, and thus have a sentence-like character.

(6.1)	*Teɾe.*	*"Anaɾɨ*	*ɾ*	*ha*	*anɨmko!"*
	teɾe	anaɾɨ	haɾ	ha	anmɨ-ko
	IDEO(put.down)	another	in.turn	SF	lift.up-IMP
	T*eɾe* (he put down the drink). "Pick up another!" he said.				

The ideophone *teɾe* here means 'put down,' though as will be seen in section 6.2, it can also mean 'sit down.' In this example the ideophone constitutes its own clause, but of course the context in which the ideophone appears with clausal status is crucial to a complete understanding of the event being depicted. For a complete understanding of the event (e.g. the actors involved and the location of the event), more context is required. This example is

taken from a story in which a man is serving drinks to imaginary people. Once the listener is equipped with this knowledge, the event depicted by the ideophone *teɾe* is understood in much more detail than can be glimpsed from its very general meaning of 'put down.'

The clausal status and high semantic load carried by ideophones in Katuena means that entire episodes in a narrative can be composed solely of one ideophone, as in example (6.2), or of many ideophones, as in example (6.3).

(6.2) *taɨ*

Taɨ:::::.
taɨ
IDEO(stand.up.straight)
Nuuñe ascended up to the sky, *taɨɨɨ*.

This example comes from a narrative in which Nuuñe flies or floats up into the sky and adheres himself to it, becoming the moon. This part of the story is illustrated with the one ideophone *taɨ*, meaning 'stand up' or depicting an upward movement in an upright position. Of course, the context of the story is necessary for listeners to fully grasp the meaning of this ideophone here, however in context, no other clause is necessary to refer to this particular episode in the story.

(6.3) *tuɾu* *tuɾu* *tuɾu*
IDEO(walk.fast.and.hastily) IDEO(walk.fast.and.hastily) IDEO(walk.fast.and.hastily)
tuɾu *tuɾu* *kofow*
IDEO(walk.fast.and.hastily) IDEO(walk.fast.and.hastily) IDEO(get.into.water)
saj *ɸe:tutu* *ɸe:tutu* *ɸe:tutu*
IDEO(upward.movement) IDEO(walk.tiredly) IDEO(walk.tiredly) IDEO(walk.tiredly)
ɸe:tutu *ɸe:tutu* *teɾe* *kanahtaka.*
IDEO(walk.tiredly) IDEO(walk.tiredly) IDEO(put.down) top.of.hill
They walked down quickly, *turu turu turu turu turu*, and got into the water to cross the creek, *kofow*. They went up the other bank, *saj*, and continued walking tiredly, *feetutu feetutu feetutu*. Then they sat down, *teɾe*, at the top of the hill.

Although this last example contains a word that is not an ideophone (*kanahtaka* 'on top of hill'), this is not a necessary component and only works as an adjunct to the ideophone *teɾe* 'put down' which precedes it. Here, the reiteration of ideophones serves to indicate the repetition of an event rather than the intensity of the event.

Thus, ideophones in Katuena can carry enough of a semantic load to constitute an independent clause on their own. They may therefore occur by themselves or together with other ideophones, and an entire episode in a narrative can be composed entirely of ideophones. The context of the narrative or of the discourse completes the picture of the event depicted by the ideophone(s) by providing information about the specifics such as the actors and the location of the event.

6.2 COLLOCATION

Some ideophones commonly collocate with particular verbs that have the same meaning, such as the verb *to(m)* 'to go,' which commonly collocates with the ideophone *ɸoku* 'go away,' as in example (6.4). In these cases, the verb (or the ideophone) may serve simply as emphasis, or it might be said that the ideophone functions as an illustrative narrative device, painting a picture of the event referred to by the verb.

(6.4) *Etaɾiso* *nteʃe* *ɸoku.*
etaɾi-so n-to-ja-ʃe ɸoku
stroll-PURP 3S-go-IPF-DP:IPF IDEO(go.away)
He went off for a walk. He left, *ɸoku*.

Other collocations involve verbs with a related meaning, such as the verb *wajɸɨ* 'to die' which often collocates with the ideophones *ɸuŋ ɗu* or the ideophone *ɸuʔɗow*, both meaning 'to drop,' as in examples (6.5) and (6.6). These two examples involve ideophones which are fairly general in meaning, in that they depict an entity dropping down and remaining in that 'dropped' state. They do not necessarily refer to the event of dying, but sometimes have the meaning of 'lying down' or 'falling asleep.' Their occurrence with the verb 'to die' emphasizes that this is the intended meaning. They can occur with this meaning without an accompanying verb however, as in example (6.7). In cases such as this, the precise meaning of the ideophone is understood through the context in which it appears. This particular example is taken from a story in which a monster is tricked into cutting himself open, and this ideophone occurs soon after he has started cutting himself, thus illustrating the monster's fall as it dies from its wounds.

(6.5) *ɸʊŋ* *ɗu* *ɸʊŋ* *ɗu* *nwajihtakatʃe* *tʰaka* *ha* *tɨ.*
ɸʊŋ ɗu ɸʊŋ ɗu n-wajɸɨ-taka-tʃe thaka ha tɨ
IDEO(fall) IDEO(impact) IDEO(fall) IDEO(impact) 3S-die-TOT-DP:PF:PL PITY SF REP
They all fell down dead, *ɸuŋ ɗu ɸuŋ ɗu.*

(6.6) *Jwana* *ɸen* *ha* *ɸuʔɗow* *nwajihje* *nka.*
jwana ɸenɨ ha ɸuʔɗow n-wajɸɨ-je n-ka
iguana CMPL SF IDEO(drop) 3S-die-DP:PF 3S-say
"The iguana dropped dead, *ɸuʔɗow*" he said.

(6.7) *A:* *a:* *a:* *ɸuŋ* *ɗu*
ah ah ah IDEO(fall) IDEO(impact)
Ah, ah, ah (the monster cried). Then it dropped dead, ɸuŋ ɗu.

Another common collocation is the ideophone *teɾe* 'put down' with the verb *eɾema* 'to sit,' as in example (6.8). Here again, the meaning of the ideophone is quite general as to the actors and/or objects involved, but both the context and the collocating verb 'to sit,' inflected for

person and tense, serve to illustrate precisely what is occurring. As with examples above, this ideophone can also have this meaning without the associated verb 'to sit.' Thus, the collocating verbs are not mandatory, and not crucial to a complete understanding of the event being depicted.

(6.8) *Kɾaj* *ti* *ti* *ti* *teɾe*
kɾaj ti ti ti teɾe
IDEO(release.contact) IDEO(footstep) IDEO(footstep) IDEO(footstep) IDEO(put.down)
katɸonaka *ntʃih* *tɨ* *neɾemeʃe* *teɾe*
katɸo-na-ka ntʃiki tɨ n-eɾema-ja-ʃe teɾe
daylight-SPC-DIR ATTEN REP 3S-sit-IPF-DP:IPF IDEO(put.down)
He stopped hitting him, *kraj*, and walked away, *ti ti ti*. He sat down outside, *teɾe*.

Finally, the ideophone *ɸe:*, which is most often used to refer to a sunrise but can also simply depict the spreading of light, often collocates with the verb *enmaɸu*, 'to dawn,' as in example (6.9). Similarly, the ideophone *tuɸuŋ*, which mostly depicts the sun setting, but is also used to depict the disappearance of light, collocates with the verb *koʔβamu*, meaning 'to dusk' (example (6.10)).

(6.9) *ɸe:* *nenmahje* *ha* *tɨ* *ɸe:.*
ɸe: n-enmaɸu-je ha tɨ ɸe:
IDEO(sunrise) 3S-dawn-DP:PF SF REP IDEO(sunrise)
The sun rose, *ɸe:*, and the dawn was upon them, *ɸe:*.

(6.10) *Tuɸuŋ* *koʔβamjaʃe* *har* *ha.*
tuɸuŋ koβamu-ja-ʃe har ha
IDEO(sunset) dusk-IPF-DP:IPF in.turn SF
The sun set again, *tuɸuŋ*.

In sum, certain ideophones in Katuena can collocate with verbs that have the same or a related meaning. When these verbs have the same meaning as the ideophone with which they collocate, they (or the ideophone) may serve as emphasis, but in other instances they serve to specify precisely the meaning of an ideophone with a fairly nonspecific meaning. This is in no way compulsory however, and the context of the utterance provides enough information for listeners to understand the precise event being depicted by a particular ideophone, even if it has a fairly general meaning such as *teɾe* 'put down.'

6.3 QUOTATIVE CONSTRUCTIONS

In Chapter 3, section 3.4 detailing the syntactic characeristics of ideophones, Type 3 ideophones were defined as those which collocate with an fully inflected auxiliary verb (often 'to say,' 'to do,' or 'to be,'). These are considered quotative constructions, and the auxiliary verb

used is selected by the particular ideophone. The ideophone carries the lexical meaning, and the grammatical elements of a verb form such as subject markers and tense are carried by the auxiliary. In Katuena, there are two possible auxiliary verbs to be selected: *ka* 'to say' and *iɾɨ* 'to make.'

6.3.1 *ka 'to say, act'*

Many ideophones are used in quotative constructions with the verb *ka* 'to say.' This type of construction occurs with ideophones that depict an event with a clear, audible and inherent sound, as in example (6.11). It can, however, also be used with ideophones depicting an event that might not be thought of as having a clear auditory component, such as *sɓe:* 'smear' (example (6.12)), or *ɸoku* 'go away' (example 6.13)

(6.11)

Ahtʃe	*katʃʰo*	*how*	*how*	*miːke?*
ahtʃeɸu	ka-toɸo	how	how	m-ka-ja
what	say-CIRC	IDEO(dogs.barking)	IDEO(dogs.barking)	2S-say-IPF

What are you barking at? (lit. What are you saying '*how how*' at?)

(6.12)

Owɨ	*mɨhjaɸamnohɾewu.*	*Ojewɾu*	*sɓe:*	*miːka*	*ha.*
owɨ	m-hja-ɸamu-noɸu-ɾe-o	o-ewu-ɾi	sbe:	m-ka	ha
1PRO	2S-shame-INCH-CAUS:INTR-CAUS-IP	1-eye-POSS	IDEO(smear)	2S-say	SF

You caused me shame. You smeared my eyes (with paint). (lit. You said *sɓe:* on my face.)

(6.13)

Waɾahɾa	*thaka*	*tɨ*	*ɸoku*	*nkaje.*
waɾa-hɾa	thaka	tɨ	ɸoku	n-ka-je
3:PP(like)-NEG	PITY	REP	IDEO(go.away)	3S-say-DP:PF

He didn't go off *ɸoku*, like him.

The first example of the quotative construction IDEOPHONE + *ka* above involves an animate agent (a dog) producing a sound *how*, 'speaking' so to speak, while examples (6.12) and (6.13) involve an animate agent (a person) carrying out an action that does not inherently have a sound (smearing paint or going away). This construction does not necessarily have to involve an animate agent, however. The following example demonstrates that the quotative construction IDEOPHONE + *ka* can be used to depict an event involving an inanimate entity that cannot be considered an agent, but which still functions as the subject of the verb *ka*, 'to say.'

(6.14)

A:	*oɸoñuɾu*	*toʔɓo*	*nka*	*ha.*
aː	o-ɸoñu-ɾɨ	toʔɓow	n-ka	ha
oh	1-navel-POSS	IDEO(partly.submerged)	3S-say	SF

"Oh my navel is (partly) submerged, *toʔɓow*" he said.

To sum up, in Katuena, the quotative construction IDEOPHONE + *ka*, 'to say,' can be used to refer to events involving sounds made by either animate or inanimate entities, and can be also be used to refer to events that do not inherently have an auditory component. This construction is considered a quotative construction, even though speaking is not generally involved. The next quotative construction involving ideophones uses the verb *iɾɨ* 'to make.' Although this is also a quotative construction, the meaning also does not involve any actual speech.

6.3.2 *iɾɨ 'to make'*

The construction *iɾɨ* + IDEOPHONE was only found to occur with one ideophone, *teɓe*. Any attempt to use another ideophone in this construction was considered incorrect.

(6.15)	*Tewantaw*	*niːrʲaɟe*	*teɓe*	*teɓe*	*teɓe.*
	t-ewanɨ-ta-wu	n-iɾɨ-ja-ɟe	teɓe	teɓe	teɓe
	3COR-breast-SC-LOC	3S-make-IPF-DP:IPF	IDEO(glue)	IDEO(glue)	IDEO(glue)

He went (made) *teɓe teɓe teɓe* (glueing butterflies) all over his chest.

This is most likely a frozen construction. Perhaps in the past the verb *iɾɨ* 'to make' could also be used with other ideophones, but nowadays the verb *ka* 'to say' is now the only verb with which all ideophones, save one can be put together to form quotative constructions.

6.4 POSTPOSITIONS

6.4.1 *Equative postposition* =*waɾa*

Ideophones can also be used in combination with the non-spatial equative postposition =*waɾa* 'like,' generally to form positional expressions such as *ɸuʔɗow waɾa* 'like dropped,' referring to something lying on the ground (see examples (6.16) and (6.17)).

(6.16)	*A:*	*ojosoʔɓiɾɨ*	*toʔɓow*	*waɾa.*
	aː	o-osoʔɓi-ɾɨ	toʔɓow	waɾa
	oh	1-knee-POSS	IDEO(partly.submerged)	PP(like)

Oh, the water is practically at the top of my knee.

(6.17) *Okjo* *tuːna* *tɨ* *ejehtoɸonhɨɾ* *komo* *iːɸɨ* *tɨ*
okjo tuːna tɨ ejeɸu-toɸo-n^{h}ɨɾɨ komo iːɸɨ tɨ
INTERJ(ouch) water REP bathe-CIRC-PAST PL hill REP
joɸononkaʃi *t^{h}aka* *mah* *tɨ* *nʃaʄe*
j-oɸo-no-ka-so t^{h}aka makɨ tɨ n-eʃi-ja-ʄe
LNK-more-REF-PRIV-PURP PITY EXH REP 3S-be-IPF-DP:IPF
tʃej *waɾa* *ha.*
tʃej waɾa ha
IDEO(stop.where.there.is.space) PP(like) SF
Yikes, the river where they always bathed was getting higher, the water was rising up to the riverbank, like *tʃej*.

The following example is an interesting use of the IDEOPHONE + *waɾa* construction, in that it is used in counting rather than to create a positional expression. The hand, or rather 'our hand' (*kamoɾɨ*) can be used to denote certain numbers, and the use of the ideophone *taɾa* 'finished' in the expression *taɾa waɾa kamoɾɨ*, literally translated as 'like our hands finished,' refers to all fingers, and thus the number ten.

(6.18) *Taɾa* *waɾa* *kamoɾɨ* *ntʃiʔ* *ɓah* *tɨ* *nesenkahtʃe*
taɾa waɾa k-amo-ɾɨ ntʃiki makɨ tɨ n-e-enkaɸu-tʃe
IDEO(finished) PP(like) 1+2-hand-POSS ATTEN EXH REP 3S-REFL-insert-DP:PF:PL
okwe.
okwe
INTERJ(intense)
Something like 10 people got in (the canoes).

To conclude this chapter, it seems that Katuena ideophones, which constitute a grammatical category of their own, can constitute clausal nuclei of their own and generally do not interact with other word classes. The sentence-like character of ideophones and their ability to be used in this way is common cross-linguistically, and is is the most common use of ideophones in Katuena.

There are some verb-ideophone collocations that commonly occur in the Katuena. Sometimes the collocating verb has the same meaning as the ideophone, in which case the ideophone (or the verb) serves as emphasis, or the ideophone is used more as an illustrative narrative device. In other cases, the verb serves to narrow down the meaning of an ideophone with a fairly general meaning. These collocations are in no way compulsory however, and the context of the narrative or the discourse provides sufficient information for the listener to fully understand the event being depicted by the ideophone on its own.

Ideophones can also occur in quotative constructions with the auxiliary verbs *ka* 'to say,' and one ideophone was also found in a quotative construction with the verb *iɾi* 'to make.'

Finally, ideophones are also used in combination with the non-spatial equative postposition *waɾa* 'like.' This construction results in positional expressions, though there is also an

idiomatic expression using this construction, more specifically the ideophone *tara* 'finished' with the equative postposition *wara* and the noun *kamori* 'our hand,' which refers to the number ten.

7

MEANINGS AND USE

The meanings of ideophones are to a certain extent tied to iconicity, and their sound symbolic nature is often cited as evidence against de Saussure's (1916, p.102) claim regarding the arbitrariness of the linguistic sign since unlike other words, there is a direct connection between the structural form of an ideophone and its meaning, particularly in the case of onomatopoeia. Nevertheless, the meanings of ideophones are notoriously difficult to pin down, and they present a great challenge for translation. As previously mentioned, some ideophones have a very general meaning, such as the Katuena ideophone *d*ow, which depicts to the impact of an object upon another but can be applied to range of events, from a person beating something or someone to a chicken flapping its wings, for example. Other ideophones have a very specific meaning, such as the ideophone *saratʃutʃu*, which depicts the landing of an airplane, or *tika*, which evokes the image of a fish floundering on dry land. Furthermore, although the link between ideophones and sensory perception has long been recognised, the categorisation of ideophones into the semantic domains of sensory perception necessarily results in some more or less arbitrary distinctions.

This chapter begins with a discussion of the types of iconicity at work in Katuena ideophones, and then investigates the different semantic domains in which Katuena ideophones are commonly found, with the aim of exposing the variety of meanings found in ideophones and the complexity of the relationship between an ideophone's form and the image it paints in sound. The final section looks at the aspect of performance as it relates to ideophones, with a focus on the gestures that are produced along with these depictive words and which further add to image-evoking properties.

7.1 ICONICITY

Although not above critique, the concept of the arbitrariness of the linguistic sign, or the idea that there is no direct connection between the form of a word and the shape of what it refers to, has been fundamental to modern linguistic theory. Results from recent scholarly interest in sound symbolism and sign languages have tempered this strong claim however (see Perniss et al., 2010 for a review). As we have seen, it cannot be said that the form of ideophones is completely arbitrary in relation to their meanings; there does seem to be some sort of connection, in that these words either approximate the sound they refer to or 'imitate' a soundless

event or concept. Ideophones are iconic, therefore, in that there is some resemblance between their form and the idea they convey. This does not mean that de Saussure was mistaken about the arbitrariness of language however. As he himself states, in the case of onomatopoeia and other types of sound symbolism, the form is still conventionalized, and is an approximation of the actual event, adjusted to the language system in which it occurs (de Saussure, 1916, p.104). Nevertheless, the forms of ideophones are not completely arbitrary in that they suggest their meaning, and they have a more complex relationship to the concepts and events they depict than purely referential words such as *cat* or *plate*.

Studies have shown that speakers are sensitive to iconic form-meaning mappings. A comprehensive review of the literature on this topic is outside the scope of the current study, however it is interesting to note that iconic words appear to provide an advantage in learning and processing both spoken and signed language. For example, Kovic et al. (2010) found that in a categorisation task, adults were quicker in identifying novel objects when the label-object mappings were sound symbolic. Moreover, they also found that iconic form-object mappings generated an early negative EEG (electroencephalography) waveform at about 200ms after stimulus onset, indicating that the processing of iconic words may involve a more general mechanism of auditory-visual feature integration, facilitating the mapping of auditory stimuli onto visual features. It seems that both adults and children speaking a variety of languages prefer to match nonsense words with round vowels (e.g. *maluma* or *bouba*) to round objects, and nonsense words with unrounded vowels (*kiki* or *takete*) with pointy objects (Holland and Wertheimer, 1964, Köhler, 1947, Maurer et al., 2006, Ramachandran and Hubbard, 2001 and Wertheimer, 1958). Several studies have also found that iconicity also plays a role in the processing of sign language (e.g. Ormel et al., 2009, Thompson et al., 2009 and Thompson et al., 2010), though as with spoken language, the exact mechanism by which iconicity affects language processing is still unclear. Evidence of cross-linguistic sensitivity to iconicity in language gathered from these studies and others have led some scholars to suggest that imitative sound and gesture mappings played an important role in the development of human language (Armstrong, 1983, cf. ; Tomasello, 2008).

Iconicity is not a singular concept however, as different types of form-meaning mappings are at work. For example reduplication, as we have seen, is a fairly transparent mechanism with which the aspectual structure of ideophones can be represented. On the other hand, a direct connection between the Katuena form *tʃuː* and the colour red is not quite so obvious. Perhaps the most conspicuous type of iconicity at work in ideophones is the imitation of a sound in speech, or onomatopoeia, a type of *imagic iconicity*. Another type of iconicity, referred to as *diagrammatic iconicity*, includes *Gestalt iconicity* (the structure of a word resembles the spatio-temporal structure of the event it refers to) and *relative iconicity* (the relationship between forms resembles the relationship between the concepts they refer to) (Dingemanse, 2011, pp.167-174). Often more than one type of iconicity will be at work in a given ideophone, as in the Katuena ideophone *ɸuɸuɸu*, which mimics the sound of a deer walking, not only through the particular sounds which constitute it (*imagic iconicity*) but also through the reduplication of short CV syllables, resembling the repetitive impact of hooves on the ground

(*diagrammatic iconicity*). Following Dingemanse (2011), I treat each of these three types of iconicity in turn, as they apply to Katuena ideophones.

7.1.1 *Imagic Iconicity*

Imagic iconicity, in which a word mimics a sound in the real world, is semiotically-speaking the simplest type of iconic form-meaning mapping. In terms of numbers, ideophones of this type are quite important in Katuena and include ideophones depicting different types of impact, such as *saɾatʃutʃu*, 'plane landing' and *ɸuhtʃow* 'throw on woodpile,' walking or running, as in *ti*, which evokes a footstep, and *tu*, which evokes a heavy step, as well as others which imitate sounds made by water or objects coming into contact with water, sounds made by humans such as laughing and swallowing, and of course, animal calls. Many examples of these are provided in section 7.2.1, which discusses sound-based ideophones.

7.1.2 *Diagrammatic Iconicity*

Diagrammatic iconicity refers to isomorphism between the structural characteristics of a sign and the structural characeristics of what it signifies. The first type of diagrammatic iconicity, Gestalt iconicity, involves the link between the structure of individual words and the structure of that which they refer to. Relative iconicity on the other hand, 'involves mapping a relation between forms onto a relation between meanings' (Dingemanse, 2011, p.170).

7.1.2.1 *Gestalt Iconicity*

This type of iconicity was mentioned in section 5.1 in reference to the iconicity of reduplicated ideophones. The reduplicated structure of an ideophone such as *ɸiːɸiɸi* 'running' is clearly a mapping of the reduplicated nature of the action onto the form of the word. The representation of closure or boundedness by closed syllables such as *sam* 'bite down,' (discussed in section 4.3), is another example of Gestalt iconicity. There are other examples of similarity between the morphological structure of an ideophone and the spatio-temporal characteristics of the event it depicts however. Vowel length is one way in which ideophones can show a resemblance to the event they evoke. For example, *kɾɨ*, an ideophone depicting an abrupt stop, has a short vowel while ideophones referring to flowing water such as *ʃuː*, often end in a long vowel, reflecting the aspectual nature of the event. Table 8 lists a few of the most important Gestalt form-meaning mappings found in Katuena ideophones. According to Dingemanse (2011, p.168), these mappings are also found in Siwu, however other types found in Siwu, such as the mapping *trisyllabic + reduplication* onto events that involve a complicated path[1] are not necessarily applicable to Katuena ideophones.

1 An example from Siwu is the ideophone *gbadara-gbadara*,'walk like a drunk' (Dingemanse, 2011, p.168)

Table 8: **Some Gestalt mappings in Katuena ideophones**

Word form	**Event**	**Examples**
monosyllabic	unitary	*ti* 'footstep,' *ʃo* 'slurp'
long vowel	durational or spatial extension	*ʃiː* 'rain,' *reː* 'protrude'
closed syllable	closure/boundedness	*sam* 'bite down,' *pom* 'flame'
reduplicated	distributive/iterative	*meːɾuɾu* 'scattered,' *ɸuɸuɸu* 'deer walking'

7.1.2.2 *Relative Iconicity*

Gasser et al. (2005, p.4) defines relative iconicity as 'the property of a set of words for which there is a correlation between form similarity and meaning similarity.' The most-cited example is probably the correlation in meaning between English words beginning with *gl-* such as *glitter, glimmer, glow, gleam* and *glint*. While diagrammatic iconicity focuses on the internal structure of a word and its relationship to the internal structure of its referent, relative iconicity focuses on the formal similarity of a group of words which also share similar meanings. Although the form-meaning relationship of these words may be arbitratry, the iconicity lies in the relationship between words with similar form and which have similar meanings. For example, Ohala's (1983) frequency code, which is based on the physical and physiological constraints of bodies, describes the cross-species tendency for size to be communicated through frequency. Thus high-pitched sounds are associated with smallness, and low frequencies are associated with largeness (Ohala, 1983, p.1). Briefly, high tones, vowels with high second formants, and high frequency consonants, tend to be associated with small sizes, sharpness, and rapid movement, whereas low tones and low frequency consonants and vowels are associated with large sizes, bluntness and slow movement, as well as softness and heaviness. Although Diffloth (1994) shows that some languages reverse the frequency code, in Katuena this relationship does seem to hold, as can be seen in the following example:

(7.1) *ti* 'footstep'
tu 'heavy step'

In this example, the ideophone containing a low vowel depict a bigger or more intense version of the event depicted by the ideophone with the high vowel.

Another example of relative iconicity in Katuena ideophones is the pair *ʃiː* 'heavy rain' and *ʃuː* 'flowing water.' The first depicts rain, composed of many drops of water, while the second, containing a low vowel, can also be used to refer to heavy rain, however this ideophone emphasizes a stream of water (which can be falling from the sky or flowing on

the ground), or in other words, a mass. *ʃiː*, with a high vowel, in contrast, emphasizes the non-mass nature of falling rain.

The different types of iconicity at work in Katuena ideophones and in Katuena more generally is another interesting area for further research. Further investigation of this topic could potentially contribute to the body of research on the effects of iconicity on language acquisition, as well as the role of sound symbolism in the evolution of language.

7.2 PERCEPTUAL DOMAINS

As previously mentioned, the meanings of ideophones are often tied to sensory perception. Although sound-based ideophones, or onomatopoeia, are the most well-known type, the meanings of ideophones in many languages go beyond the realm of sound, and ideophones can appear in a range of semantic domains, ranging from affective states to colour, and from taste to texture. There are many ways one can go about categorizing ideophones, all of which will be arbitrary to a certain extent. In Katuena, the two sensory domains into which most ideophones fall are sound and vision, and each of these categories can themselves be subdivided. Although some languages also have ideophones to depict taste, smell or texture, none were found in the corpus used for this study. Katuena does have an ideophone referring to an affective state: *siː*, which depicts a sharp pain such as from a cut or an insect bite or sting. As we will see, not all ideophones fit neatly into these perceptual categories however.

7.2.1 *Sound*

The majority of ideophones in Katuena are phonomimes, meaning that they recreate a sound. These include ideophones depicting the calls of animals, sounds made by the human vocal apparatus (such as laughing, chewing and snoring), sounds made by water or objects coming into contact with water, and other natural phenomena such as fire and wind, cutting, and different types of impact. One particularly interesting instance of a sound-based ideophone is the ideophone *tɨ* which depicts the absence of sound. One might argue that this is not in fact a phonomime, or a true instance of onomatopoeia, seeing as it involves the creation of sound in order to refer to a lack of sound. However, considering the fact that this word contains a short, central vowel and is never uttered in a loud voice, features which increase its iconic properties, I would argue that this is in fact, an approximation of a sound, or rather of a lack of sound. True silence in the form of a pause, whether in a narrative or in a conversation, would have a different meaning and would not convey the same idea as this conventionalised form.

- Animal calls
  As Klamer (2001, p.170) notes, animal names very often reflect audible of visible characteristics of the animal itself, as in the English *cuckoo*, whose name imitates the sound of its call. This was also found to be the case for the names of certain animals in Katuena,

as in the case of the *miːɾakwawkwaw*, a type of nightjar, whose call is depicted with the ideophone *miːɾakwawkwaw*. This is not always the case however. A rooster, for example, is called *kaɸikaɾa*, but the call it makes is *takaɾaɾeː*. Two more examples of animal calls are provided below.

toːkoɾo	'turukwari's call'
takaɾaɾi	'co:wi's call'

- Sounds produced by the human vocal apparatus
  The following are some examples of Katuena ideophones depicting sounds made by the human vocal apparatus.

ha	'chatting'
wi	'talking'
hahaha	'laugh'
kahaha	'laughing'
kap	'bite off'
sam	'bite down'
kɾaw	'chew'
soːkuɾu	'swallow'
koːwo	'whistle with lips'
ɸoː	'whistle with hand'
ɸuː	'blow'
kɾoː	'snore'
ʃo	'slurp'
ʃɸeː	'shaman blowing'

- Walking, running, and jumping
  There are many different Katuena ideophone for manner of walking of running, including heavy steps, walking tiredly, walking downhill (towards a creek), as well as ideophones for the sound of different animals walking.

ti	*ɸuɸuɸu*
tu	*waɾɨ*
tuɾu	*mː*
ɸeːtutu	
tʃuku	'footstep'
ɸiːɸiɸi	'heavy step'
seɾeɾeɾe	'walk fast and hastily'
ɸuhtutʃu	'walk tiredly'
ɸuhtaj	'walking with a walking stick'
	'running'

'descend to creek'	'tortoise walking'
'jump'	'piranha movement'
'climb'	
'deer walking'	

- Water
  There are many ideophones in Katuena to depict rain and other types of water-based events, including different objects coming into contact with water. As the examples below demonstrate, many of these forms include the sibilants /s/ and /ʃ/. In terms of iconicity, these are quite appropriate for the representation of the flow of liquids. Another observation to be made is the frequency of the low back vowel /o/, as well as the alveolar flap /ɾ/ and the continuant /w/ in ideophones depicting a disturbance of water.

saː	'water'
ʃeː	'rain'
ʃiː	'heavy rain'
tʃitowiʃ	'pouring rain'
taːɾʲaɾʲaɾʲa	'rain hitting a surface'
ʃuː	'flowing water'
so	'water evaporates on fire'
ʃaj	'sizzle'
ʃoʔβow	'paddling'
doɾow	'canoe into river'
koɸow	'arrive at water'
koɾo	'splashing action in water'
ɸoɾʲo	'boiling water bubbling'

- Other natural phenomena

wu	'wind blowing close'
thu	'wind blowing far'
tuɾuɾuɾu	'fire burning'

- Types of impact
  There are many different Katuena ideophones that depict different types of impact through an imitation of their associated sound.

ɗaɨ	'bump'
ɗam	'close and keep closed'
ɗej	'hit goal'[2]
ɗɨm	'thud'
ɗow	'strike' [3]
ɸuhtʃow	'throw on woodpile'
ɸuʔɗerej	'throw down from shoulder'
ɸuʔɗow	'drop'
saɾatʃutʃu	'plane landing'
taɨ	'chop'
taʔɟi	'jab'
teːɾene	'put down' (most often pronounced *teɾe*)
tok	'tap patient's body'
tow	'clap hands'
tʃaj	'cut'
tutʃu	'hit ground from height'
ɗerej	'sit on top'
krow	'jerk'
tʃuk	'penetrate'
ʃik	'grate'
tika	'fish floundering on land'

- Cutting

tʃaj	'cut'
tʃa	'trim'
kwaj	'cut out'
seː	'cut along'
seːɾereɾeɾe	'cut all around'
tanterej	'cut into pieces'

2 Like many others, this ideophone is used in a range of contexts including a monster hitting a tree, bones joining together, putting wooden planks together, etc.

3 This ideophone is also used in a wide range of contexts including a chicken flapping wings, a man killing butterflies, a man hitting another man, etc. It is also used to form ideophonic compounds such as *ɸuʔɗow*, with the meanings to drop, lie down, go to sleep and die, as discussed in 5.2.1.

- Others
  There are many other ideophones that appear to be onomatopoeic, but which do not fit neatly into the previous categories.

ʃaː	'grate'
ʃikɨ	'peel'
tosu	'tie up'
toʔɗow	'extinguish'
kɾaj	'pop open'
ɾaɨ	'release contact'
seː	'wind up'
kɾe	'bend bow'
toku	'scratch with nail'
sɓeː	'grab'
teɓe	'smear'
suku	'glue'
suɾu	'shaking/rustling'[4]
kɾʲowe	'enter house'
	'birth'

Another interesting category that begs for further investigation is ideophones used to depict the sounds of musical instruments, as a number of these were found in the corpus for this study. Different types of flutes appear to have their own particular ideophone imitating the type of sound they emit, for example. Furthermore, among many Amazonian peoples there is an intricate relationship between the sound a flute makes and a particular animal species. As Hill and Chaumeil (2011, pp.17-18) note, 'the elaboration of different aerophones - especially flutes, but also trumpets and clarinets - by indigenous peoples of Lowland South America is related to the great diversity of animal species and to which the instruments' sounds and meanings are verbally connected.' Unfortunately it was not possible to investigate this further, but this would certainly make for fascinating further work.

4 This ideophone approximates the sound of someone entering a hut made of thatched leaves. Here, it is interesting to note the similarity with the ideophone *suku*, which depicts shaking and can be used in reference to the rustling of leaves.

7.2.2 *Sight*

The other perceptual domain in which ideophones figure prominently in Katuena is sight. Many Katuena ideophones depict shape, position, distributive pattern, or colour and luminosity.

- Shape
  A few ideophones were found referring to shape. It is interesting to note that the ideophone *ɸoku*, which can be used to depict a winding river also means to go away, and in the corpus used for this study is more often found to be used with this second sense.[5]

ɸoku	'winding river'
wow	'curved'

- Position

kɾatʃi	'overhang'
ɾeː	'protrude'
taj	'upright'

- Distributive pattern

meːɾuɾu	'scattered'
ɾeɾej	'lying horizontally in succession'
kɾajɸeː	'clear space'
tuta	'everything'
tukuɾuɾu	'engulf'

- Colour & luminosity

tʃuː	'red'
tʃɨkɨnɨnɨ	'dark as night'
tuːku	'become dark'
tuɸuŋ	'sunset'[6]
ɸeː	'sunrise'[7]
ɸotow	'shine'

5 While most uses of an ideophone are related, there are a few that have seemingly unrelated uses. Due to space restrictions however, the sense relations between ideophones must be left for future research.

6 This ideophone can also be used to depict the extinguishing of light, though the sun setting is its most common meaning.

7 *ɸeː* can also be used to depict the spreading of light more generally, though it is most commonly used to depict a sunrise.

- Others
  Some ideophones appear to be evoking visual scenes, however categorizing them any further is not straightforward. For example, in Katuena there is an ideophone *ʃeː* which depicts drooling, another, kuɾej, which depicts appearing somewhere, and another, *tiːtɨk*, which depicts waking up. There are also several ideophones to depict different events involving stopping:

ɗu	'stop'
tʃej	'stop where there is space'
kɾɨ	'abrupt stop'
ʃeː	'drool'
ɸeɸe	'flash of lightning'
tʃatβi	'blink'
ɸɨkɨ	'wave about'
kuɾej	'appear'
kuɾu	'enter'
tiːtɨk	'wake up'
ɸoku	'go away'
tɨ	'look'
naɾi	'turn around'
suʔβaj	'pull out'

7.2.3 *Uncategorized*

While an ideophone depicting a colour for example, clearly involves visual perception, for some ideophones it is harder to determine which type of perception is involved in the depiction. A good example of this is the ideophone *op* 'time passing' as in example (7.2), which cannot be categorized as an audio, visual, textual or other type of perceptual depiction. Another exmple it *taɾa* 'of finishing an action.' In some cases this ideophone could be considered a visual depiction of the end a meal for example, and would thus evoke the associated scene, as in example 7.3. In example 7.4 however, we see that it can also be used to indicate that someone has asked everyone around a question, and there is no one else around to ask. Like other ideophones that have a very general meaning, the event depicted by *taɾa* can only be correctly interpreted with reference to the (implicit or explicit) event that precedes it.

(7.2)

Op	*fahkɨ*	*fahkɨ.*
op	fahkɨ	fahkɨ
IDEO(time.passing)	long.time	long.time

A lot of time passed.

(7.3)

Kaʃaɾa	*ha*	*teɾe.*	*Neseresβetkeñe.*	*Taɾa.*
kaʃaɾa	ha	teɾe	n-eseresβa-ja-tkeñe	taɾa
broth	SF	IDEO(put.down)	3S-dine-IPF-DP:IPF:PL	IDEO(finished)

She put down some broth, tere, and they ate. *Tara*, they finished.

(7.4)

Tara	*toto*	*nenahte.*
tara	toto	n-enati-je
IDEO(finished)	people	3S-end-DP:PF

There were no more people (he had asked everyone/checked everywhere).

7.3 GESTURE

Ideophones are often considered *verbal gestures*, in that they are a sort of performance of the event they are referring to (Voeltz and Kilian-Hatz, 2001, p.3). It might not be surprising then that they frequently occur with gestures, which are also a performance of a sort, particularly in the case of iconic gestures (Kunene, 1965, p.32, Dingemanse, 2011, p.347). In Katuena, gestures frequently co-occur with ideophones, and several different types of gestures were found to accompany these depictive words. The following first discusses the frequency of gestures co-occurring with ideophones and the types of texts in which this is found. This is then followed up with a discussion of the different types of gestures most often found to accompany ideophones.

7.3.1 *Frequency of co-ideophone gestures*

Table 9 below presents the number of gestures co-occurring with gestures in 5 Katuena texts. Unfortunately the video recording failed during two of these texts, and therefore only about half of the texts entitled *Mashimashima* and *Nuuñe* were able to be coded for gestures.

Table 9: **Frequency of co-ideophone gestures in Katuena**

Text	Type	Ideophones	Co-gestures	Percentage
Kanawa ritoɸo (Canoebuilding)	instructional	152	1	0.66%
Kwahʃari Iɸikojmo (Flood & Inferno)	myth	382	147	38.5%
Maʃimaʃima (Daughter-in-law)	myth	204	64	31.4%
Nuuñe (Moon)	myth	104	28	26.9%
Sexuality Quest	myth	519	267	52.8%
TOTAL		**1348**	**507**	37.6%

From the data in Table 9, it appears that gestures co-occur with ideophones quite frequently, with 37.6% of ideophones being accompanied by a gesture. Another limitation with the data available must be noted however. The instructional text about canoe building, which only contained one co-ideophone gesture, was provided by one speaker, Amakara, while the

remaining texts were spoken by another, Mišo. One might conclude that Mišo was perhaps a more animated speaker, producing more gestures generally, however a cursory investigation of video recordings of Amakara recounting stories involved many more co-speech gestures than occurred in the intructional text coded here. Therefore, it is more likely that the coupling of ideophones and gestures occurs more frequently in story-telling, and this is supported by the results of Dingemanse (2011, p.349), who found that in Siwu, gestures accompany ideophones more frequently in narrative contexts. Further analysis of video recordings of more speakers and other types of texts are necessary to truly determine if there is a significant difference in the coupling of gesture and ideophone in different types of discourse in Katuena. Another interesting area for future research would be to determine if there are more gestures co-occurring with ideophones than with other types of words.

7.3.2 *Types of gesture*

There are different types of gestures and many different categorization schemes devised for these. MacNeill (1992) distinguishes between imagistic gestures, which depict imagery, and non-imagistic gestures which do not. Each of these can be further subdivided into two categories:

- Imagistic gestures
  - Iconic gestures
    Iconic gestures are those which share formal characteristics with the semantic content of the accompanying speech. One example from the Katuena data is the gesture which frequently accompanies the ideophone *tere*, 'put down.' Speakers often pantomime the holding of an object and move one or two hands towards the ground when uttering this ideophone. Another example is the gesture in Figure 7.3.2, showing a speaker rubbing a fist on his hand, making a grating motion. This iconic gesture co-occurs with the ideophone *ʃik* 'to grate.'

Figure 2: Iconic gesture co-occurring with the ideophone *ʃik* 'to grate'

Other types of iconic gestures include tracing, where one's hands trace the object being referred to, either with a finger, or by cupping hands to refer to a bowl for example. One final type of iconic gesture that is included in this group, following Nyst (2007, p.173), are directionals. These seem like deictic gestures in that they involve pointing, however the movement of the body part selected for pointing is iconic of the event being referred to. An example of this last type from Katuena is the pointing of a finger up towards the sun, with the finger being moved down in an arc, a movement iconic of the setting of the sun. This movement was often found to acompany the ideophone *tuɸuŋ*, which can be used to depict the setting of the sun.

– Metaphoric gestures
Metaphoric gestures are those which also display an image, either through shape or movement, but the image presented is that of an abstract concept. For example, Katuena has an ideophone depicting the passage of time: *op*. This ideophone was

found accompanied by a gesture in which the speaker points up the the sky with his index finger and traces an imaginary line from one side to another, indicating the movement of the sun. THe starting and end points of this movement are shown in Figures 7.3.2 and **??** respectively. In contrast to this same gesture co-occurring with the ideophone *tuɸuŋ*, this is considered to metaphorically represent time passing, rather than being iconic of this concept.

Figure 3: Metaphoric gesture accompanying the ideophone *op* 'time passing'

- Non-imagistic gestures
  - Deictic gestures
    Deictic gestures involve 'pointing movements, which are prototypically performed with the pointing finger, although any extensible object or body part can be used, including the head, nose, or chin, as well as manipulated artifacts' (MacNeill, 1992, p.80). As will be shown below, these types of gestures only occasionally co-occur with ideophones in Katuena. An example of this type of gesture co-occurring with an ideophone is the pointing upwards (with the index finger) towards the sun but without any movement, which co-occurs with the ideophone *sɨɾɨ*, 'sinking,' in example 7.5. Figure 7.3.2 shows an image of the gesture accompanying this example.

(7.5)

Sɨɾɨ	*sɨɾɨ*	*kokoñe.*
sɨɾɨ	sɨɾɨ	kokoñe
IDEO(sink)	IDEO(sink)	afternoon

The sun was sinking (it was the afternoon).

Figure 4: Deictic gesture co-occurring with the ideophone *sɨɾɨ* 'sink'

– Beats
  Beats do not have a discernible meaning. They are simple rhythmic movements which punctuate or make reference to discourse structure. These types of gestures also only co-occur with ideophones a handful of times in the Katuena data. For example in one story, the narrator points his finger and makes two short beats in the air when uttering '*ɸoː ɸoː*,' which depicts someone whistling with their hands. Although the narrator could have produced an iconic gesture to accompany this ideophone, instead he emphasizes the reiteration of the action through the reiterated structure of his gesture.

Figure 5: Beat gesture co-occurring with the ideophone *ɸoː* 'whistling with hands'

One more type of gesture found in the video data used for this study is miming. On one particular occasion, the narrator tells of a man who picks up a piece of wood and holds it in front of him to protect himself from his son who is about to shoot him with a bow and arrow. At this moment, the narrator uses the ideophone *tohsaj*, 'lift up' and actually picks up a piece of wood that is at his feet. This is then followed by an iconic gesture in which he pokes the middle of the wood with his finger and utters the ideophone *dej*, thus iconically performing the event of 'hitting a goal' depicted in sound by the ideophone it accompanies. This actual performance of the event depicted by an ideophone, as well as the other types of gestures that often accompany ideophones highlight the performative nature of ideophones.

There are many fine-grained differences between gestures, and different categorization schemes have been devised for these. For the purposes of this study, which is to provide an

analysis of the features of Katuena ideophones, a rough four-way coding system (iconic gestures, metaphoric gestures, deictic gestures and beats) will suffice. Although 507 ideophone-gesture couplings were found in the corpus used for this analysis, 3 of these were mimes and were left out of the final analysis. Therefore, 504 gestures were coded for type, the frequencies of which are presented in Table 10.

Table 10: **Types of gestures co-occurring with ideophones**

Text	**Iconic**	**Metaphoric**	**Deictic**	**Beats**	**Total**
Kanawa ɾitoɸo (Canoebuilding)	1	0	0	0	1
Kwahʃaɾɨ Iɸikojmo (Flood & Inferno)	143	0	1	3	147
Maʃimaʃima (Daughter-in-law)	51	4	6	0	64
Nuuñe (Moon)	27	0	1	0	28
Sexuality Quest	243	8	1	15	267
TOTAL	**465**	**12**	**9**	18	504
Percentage of all tokens	92.26%	2.38	1.79%	3.57%	

It is clear to see that iconic gestures are by far the most common accompanying ideophones, a result also found by Dingemanse (2011, p.347) who suggests that the common coupling of ideophones and iconic, or 'depictive' gesture as he calls them, is due to two reasons: 'first, the fact that both ideophone and gesture form part of a single performative act; and second, the fact that both ideophone and gesture are holistic (though selective) depictions of complex states of affairs' (Dingemanse, 2011, p.352). Although iconic gestures clearly co-occur with ideophones very often, it is also interesting to note that they certainly do not occur with every utterance of an ideophone. The holistic and depictive nature of these words is clearly enough for listeners to grasp what event is taking place. The image evoked by an ideophone (in context) is sufficiently detailed, and therefore co-occurring gestures are not indispensable to understanding. The same might be said of certain gestures however. Certain gestures, such as moving a downward-facing palm up and down next to one's body, will (in context) be iconic enough for an interlocutor to understand the event being referred to by it is the dribbling of a ball, without an ideophone or other utterance being required. These parallels between ideophones and gestures, their depictive and holistic nature as well as their common co-occurrence, make the study of ideophones and gestures inseparable.

In conclusion, Katuena ideophones make use of imagic, Gestalt and relative iconicity to paint a picture in sound. They occur in a range of semantic domains, although some, such as *taɾa* 'of finishing an action,' might not neatly fit into the categories based on perception into which ideophones are traditionally divided. Katuena ideophones also very frequently co-occur with gestures, particularly of the iconic type.

8

CONCLUSION

The Katuena, an Amerindian people living in Suriname, Guyana and Brazil, have a language riddled with ideophones. There are only a few remaining speakers of the language however, and it is not being transmitted to the next generation. Further research is therefore urgently required in order to document Katuena and preserve the knowledge, culture, history and ways of perceiving the world that are locked in its words, grammatical structures and oral traditions. This study has gone a small way in attempting to document one pervasive feature of the Katuena language: ideophones, sound symbolic words evoking perceptual imagery. The following provides a brief overview and discussion of the preceding chapters, as well as a suggestions for further research.

8.1 SUMMARY AND DISCUSSION

Until very recently ideophones, expressive words depicting perceptual events, have been largely ignored by most investigators, despite being found in many (if not all) of the world's languages. This is partly due to their relatively minor role in the highly-studied Indo-European languages, but also because of their very particular characteristics which are often considered difficult to fit into a traditional analysis of language structure. Furthermore, their seemingly varied features cross-linguistically has led to great terminological confusion, with ideophones being referred to by a variety of different terms, and very different types of words being referred to as *ideophones*. Though a few common features are now generally agreed upon, a consensus as to the precise definition of ideophones has yet to be reached. These common features include their semantically marked status and their ability to evoke vivid perceptual imagery of events and states, as well as their special phonology, their general lack of morphology aside from reduplication, their deviance from normal syntactic patterns and their common co-occurrence with gestures, in particular of the depictive type. In Katuena, ideophones are very common and exhibit the same broad characeristics as ideophones in other languages, however they also present some interesting features that are not common cross-linguistically, such as their ability to form compounds.

8.1.1 *Phonology*

As for their phonology, ideophones often contain phonemes that either are not found or are quite uncommon in the rest of the lexicon. Investigators have traditionally not included these sounds in the phoneme inventory of the language under investigation, however considering the prevalence of ideophones in the languages of the world, and their high frequency in many of these, I argue that phonemes occurring in ideophones but which do not appear in the rest of the lexicon should nevertheless be included in a complete phoneme inventory of the language. Ideophones can no longer be left on the sidelines and should be given their proper place as an important part of language.

Katuena ideophones certainly have some special phonological features. Taking into account ideophones adds 2 phonemes to the phoneme inventory of the language: the voiceless bilabial plosive /p/ and the voiced velar nasal /ŋ/. Furthermore, three implosive consonants, the voiced bilabial implosive /ɓ/, the voiced alveolar implosive /ɗ/, and the voiced palatal implosive /ʄ/ as well as the glottal stop /ʔ/ are phonemic in Katuena ideophones, whereas in the rest of the lexicon they are the result of morphonological processes and can be considered semi-phonological.

In addition, Katuena ideophones have lexically-determined long vowels and a phonemic diphthong /ai̯/, segments which are not phonemic in the rest of the lexicon. Syllable structure is another area where ideophones tend to flaunt the general rules of a language, and Katuena is no exception, with the syllable types CVC and CC occurring only in ideophones.

Another feature of ideophones is their use of expressive phonology. In Katuena, ideophones are subject to expressive vowel lengthening in order to specify the speed, duration, and spatial characteristics of an event. Consonant gemination is also used to indicate duration.

8.1.2 *Morphology*

The morphology of ideophones is generally quite limited, with reduplication being the only cross-linguistically common (perhaps universal) process at work. In Katuena, ideophones are not subject to regular morphological processes, but we do find inherently reduplicated ideophones which depict an event characterized by inherent repetition, such as laughing or running. Partial reduplcation for expressive purposes also occurs in Katuena ideophones. This involves the reduplication of the final syllable of the ideophone, and serves to either indicate an increase in intensity of the event being referred to, or to indicate an increase in its duration. Expressive reiteration of ideophones also occurs frequenty, indicating repetition by one actor or the subsequent or simultaneous carrying out of one action by multiple actors.

No productive processes were found to derive ideophones from other words or vice versa, however the derivation of ideophones from the compounding of other ideophones was found to be at work in Katuena. This is a very interesting mechanism that does not appear in the literature on ideophones, but the possiblity of which researchers investigating ideophones in other languages should be aware of. One ideophone was found with the inchoative verbalizer

-ɸamu and one with the transformative verbalizer *-ma*, however no other ideophones can be used in this way, and therefore this does not appear to be a productive process.

8.1.3 *Syntax*

Generally, ideophones do not fully conform to the general syntactic rules of a language. In some languages, ideophones are anyalzed as being a subcategory of an existing part of speech or as being sprinkled across several different word classes, in which case they have certain (or all) of the syntactic characteristics of other words of the category to which they belong. In other languages however, ideophones constitute a separate grammatical class, and this is the case with Katuena. In Katuena, ideophones mostly occur as syntactically independent clauses and in context they carry such a high semantic load that an entire episode of a narrative can be constituted only of ideophones. There are some common verb-ideophone collocations that occur in Katuena however. The verb collocating with an ideophone is often related in meaning, and the ideophone provides an image in sound of the event referred to by the verb.

Ideophones in many languages occur in quotative constructions, and this is also found in Katuena. In these constructions, the ideophone carries the lexical meaning, and the grammatical elements of a verb form such as subject markers and tense are carried by the auxiliary. The construction IDEOPHONE + *ka* 'to say' can not only be used with ideophones depicting an event with a clear, audible and inherent sound, but also with ideophones depicting events that do not have an inherent auditory component. It is used to depict events involving an animate agent, but also events involving only inanimate entities. The quotative construtions with the verb *iɾi* 'to make' was only found to occur with one ideophone, *teβe* 'glue', and can be considered a frozen, idiomatic construction.

Ideophones can also be used in combination with the non-spatial equative postposition *=waɾa* 'like,' generally to form positional expressions.

8.1.4 *Meanings and Uses*

Ideophones are sound symbolic words either imitating a the sound of an event (phonomimes), or 'imitating' soundless states or events (phenomimes and psychomimes). They exhibit different types of iconicity, both in their phonoloy and their morphology. More specifically, ideophones make use of imagic iconicity, in which a word mimics a sound in the real world, as well as *diagrammatic iconicity*, which includes *Gestalt iconicity* (the structure of a word resembles the spatio-temporal structure of the event it refers to) and *relative iconicity* (the relationship between forms resembles the relationship between the concepts they refer to).

The meanings of ideophones cover a range of perceptual domains from sound to affective states, and from colour to taste. In Katuena however, most ideophones belong to the domains of sound (including ideophones depicting the calls of animals, sounds made by the human vocal apparatus, sounds made by water or objects coming into contact with water, and other natural phenomena such as fire and wind, cutting, and different types of impact) and sight

(shape, position, distributive pattern, or colour and luminosity). There are also some ideophones that are harder to categorize in terms of perceptual domain, such as *tara* 'of finishing an action,' and *op* 'time passing.'

Ideophones are also known to frequently co-occur with gestures. In a subset of the Katuena texts used in this study, it was found that gestures accompanied 37.1% of ideophones. The majority of the gestures accompnying ideophones appear to be iconic in nature. These types of gestures which are performative in nature, are a good match for ideophones, words which allow the speaker to perform the event being referred to through speech.

8.2 AVENUES FOR FUTURE RESEARCH

Not only is there much more space for work to be done on Katuena ideophones, but perhaps more importantly, the Katuena language itself is in desperate need of full documentation. Very few speakers remain, and the language holds not only botanical, zoological, agricultral and medicinal knowledge, but also oral history and myths, as well as important cultural knowledge - all facets of a people and culture that are of interest to science.

As previously mentioned, ideophones have generally been relegated to the fringes of linguistic description and investigation more generally (at least until recently) and these also offer many opportunities for study, not only by linguists undertaking language description, but also by those investigating first and second language acquisition, language production and processing, as well as sound symbolism and iconicity more generally.

There is some interesting work being done on the neuro- and psycholinguistics of iconicity in general and sound symbolism in particular. These studies investigate how iconicity is processed in the brain and the ways in which it may help children and second language learners acquire langauge. Due to space and time constraints, these topics cannot be dealt with here, and no psycholinguistic tests were performed in the field with Katuena speakers. Any further research should look into the way ideophones are processed in the brain and the implications of this for language acquisition and for theories on the evolution of language.

The ways in which ideophones can be created, whether through complete innovation or throgh compounding is another area that deserves further attention, and considering the recent surge in interest in the study of gestures and sign language, no investigation of ideophones can ignore the importance of the gestures which commonly accompany ideophones.

This leaves a lot of work for the future, but for now, as the Katuena would say, '*tara*,' I'm finished.

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APPENDIX - LIST OF KATUENA IDEOPHONES USED IN THIS THESIS

kɾɨ	abrupt stop
kuɾej	appear
wow	bend
sam	bite down
kap	bite off
tʃatβi	blink
ɗaɨ	bump
ɗoɾow	canoe into water
taɨ	chop
kɾajɸeː	clear space
ɸuhtaj	climb
ɗam	close with a clap(and keep closed)
ɗuɾu	cover
tʃaj	cut
seːɾeɾeɾeɾe	cut all around
ɸuɸuɸu	deer steps
how	dog barking
ʃe	drool
ɸuʔɗow	drop
tukuɾuɾu	engulf
suɾu	enter house
tuta	everything
ɸuŋ	fall
taɾa	finished
pom	flames
ʃuː	flowing water
ti	footstep
koɸow	get into water
teβe	glue
ɸoku	go away / winding river
ɸowu	go away
tok	grab
ʃik	grate
kɾaɨ	hang
ʃiː	heavy rain

tu	heavy step
ɗej	hit goal
ɗu	impact
taʔʃi	jab
ɸuhtutʃu	jump
hahaha	laugh
kahaha	laugh
sow	leaves / wing flapping
tohsaj	lift
ɾuːɾuɾu	many crawling things
mɨɾakwawkwaw	mɨɾakwawkwaw's call
tuː	noise of water
ɗa	open
ʃoʔɓow	paddling
siː	pain
toʔɓow	partly submerged
mː	piranha movement
saɾatʃutʃu	plane landing
kotow	pop open
tʃitowiʃ	pouring rain
ɾeː	protrude
suʔɓaj	pull out
teɾe	put down
ʃeː	rain
tʃu	red
kɾaj	releast contact
saj	rise
ɸiːɸiɸi	running
meːɾuɾu	scattered
suku	shake
tʃaʔ	shoot
tɨ	silent
ɗeɾej	sit on top
ʃaj	sizzle
kɨːɾɨɾɨɾɨ	slide down
ʃo	slurp
sɓeɾe	smear
ɸiɾɨɾɨɾɨɾɨ	smoking
kɾoː	snore
tʃɨːkɨɾɨ	squeeze juice
taɨ	stand up straight

tʃej	stop where there is space
ɗow	strike
ɸeː	sunrise
tuɸuŋ	sunset
ɓoː	swell
ɸuʔɗerej	throw down from shoulder
ɸuhtʃow	throw on woodpile
ɗɨm	thud
tʃa	trim
si	walk fast
turu	walk fast and hastily
ɸeːtutu	walk tiredly
sa	water
so	water evaporating on fire
wu	wind blowing close
thu	wind blowing far
ɾaɨ	wind up