2016-12-01

The Onomatopoeic Ideophone-Gesture Relationship in Pastaza Quichua

Sarah Ann Hatton
Brigham Young University

The Onomatopoeic Ideophone-Gesture Relationship in Pastaza Quichua

Sarah Ann Hatton

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Arts

Janis B. Nuckolls, Chair
Cynthia L. Hallen
William G. Eggington

Department of Linguistics and English Language

Brigham Young University

ABSTRACT

The Onomatopoeic Ideophone-Gesture Relationship in Pastaza Quichua

Sarah Ann Hatton
Department of Linguistics and English Language, BYU
Master of Arts

The relationship between ideophones and gestures has only recently been studied and is not yet completely understood. The topic has been specifically addressed by Kita (1993), Klassen (1998), Dingemanse (2013), Mihas (2013), and Reiter (2013). Yet there has been little focus on onomatopoeic ideophones. Onomatopoeic ideophones have been set aside as different by many previous researchers (Klassen, 1998, pp. 28-31; Kilian-Hatz, 2001, pp. 161-163; Dingemanse, 2011, pp. 131, 165-167; Mihas, 2012, pp. 327-329; Reiter, 2013, pp. 9-10, 308). Being stigmatized as simple, they have been labeled as "sound mimicking words" (McGregor, 2002, p. 341), "non-linguistic sounds" (Güldemann, 2008, p. 283), or "imitative sounds" (Hinton et al., 1994, §2.1).

This thesis specifically addresses the relationship between onomatopoeic ideophones and gestures in Pastaza Quichua (PQ). My data acquired from primary and secondary sources, consists of 69 interactions, comprising eight hours of video recordings collected in Tena, Ecuador. These recordings include traditional narratives, personal experience tellings, elicited descriptions of nature, short didactic explanations, and folksongs. My methodology consists of close examination, classification, and tagging of 435 ideophones in the PQ data for sensory class and gestural accompaniment, using McNeill's (1992) typology.

This thesis demonstrates that onomatopoeic ideophones do not have the same relationship with gestures that synesthetic ideophones do. Synesthetic ideophones are consistently accompanied by gestures (94.4% of the time) while onomatopoeic ideophones are much less likely to be accompanied by gestures (27.0% of the time). The lack of gestures occurring with onomatopoeic ideophones is striking given that PQ speakers seem to be constantly gesturing during speech. The PQ data supports previous observations that most gestures accompanying ideophones are iconic (Kunene, 1965; Dingemanse, 2013; Reiter, 2013; Mihas, 2013; Kita, 1993). The data also supports McNeill's (2007, p. 11) statement that gestures are used to make an image more real and that repetition can lead to fading gestures. However, it challenges his prediction that a minimal departure from context is the cause of a conspicuous lack of gesture. Sensory type, that is whether an ideophone is onomatopoeic or not, seems to be the most important factor in predicting gestural behavior. This paper also contributes to a better understanding of the relationship between ideophones and gestures and, ultimately, between language and gesture.

Keywords: Quichua, Quechua, Ideophones, Gesture, Onomatopoeia, Mimetics, Iconicity

ACKNOWLEDGEMENTS

My family deserves my earnest gratitude for supporting my goals and ambitions. They have been endlessly encouraging and patient during my time in school. My mother knowingly gave me hope in my discouragement. My father, in boundless optimism, encouraged me to reach ever higher. And my sisters continually inspired me with their outstanding examples of hard work and determination.

The remarkably talented professors at BYU made this project possible. I am especially grateful for the inspiring tutelage of Janis Nuckolls. She actively sought out opportunities for me to improve my academic skills and get real-world experience. She patiently led me through the pitfalls of undertaking large projects and encouraged my progress. Her passion for learning more about the Quichua language and people was contagious. I also owe particular thanks to Cynthia Hallen, whose ever-cheerful outlook granted me hope and fortitude in my development as a researcher. As a philologist and gifted writer, she has opened my eyes to the potential beauty of the written word. I also wish to give a special thanks to Bill Eggington and Don Chapman, whose good advice and cheery examples of lifelong learning have made me a better linguist.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABBREVIATIONS AND SYMBOLS

ACC	Accusative case
ADV	Adverb
AG	Agentive
CAUS	Causative
CIR	Circumventive
CIS	Cislocative
COMP	Comparative
CNDL	Conditional
COR	Coreference
DAT	Dative case
DUB	Dubitative
DUR	Durative aspect
EV	Evidential
EXCL	Exclamative
FUT	Future
FINF	Future infinitive
IMP	Imperative
ICH	Inchoative
INCL	Inclusive
INST	Instrumental case
LIM	Limitative
LOC	Locative case
NOM	Nominalizer
PERF	Perfect aspect/tense
PL	Plural
POSS	Possessive
QN	Question
RCP	Reciprocal
SUB	Subjunctive
SWRF	Switch reference
TOP	Topic
TRSLC	Translocative
XPRO	Exclusive pronoun
1	First person
2	Second person
3	Third person

Chapter 1: Introduction to the Research Problem

On a hot day near the bank of the Napo River in Ecuador, I sat under a thatched pavilion with ten other students. We were in a Quichua language class taught by Janis Nuckolls, Luisa Cadena, and her sister Elodia. That day, we were learning to ask questions in Quichua. One of the students asked what a tapir sounds like. As is common among Quichua speakers, Luisa decided to answer the question with a story. She described an event she witnessed one day when she was gathering fruit: While in a tree high above the forest floor, Luisa saw a tapir come running through the undergrowth crying, "shing! shing! shing!" "This is how it sounds if a jaguar is chasing it," she said. As soon as the tapir had passed, a large, light-colored jaguar came racing through the vegetation after it, its teeth clashing together as it ran sounding like "talax, talax." It pounced on the poor animal ("tux"), broke its neck with a bite ("tus"), and drank its blood ("tuglu, tuglu").

Even as a new learner of Quichua, I could see that some of her ideophones such as *talax*, *tux*, and *tus* were illustrated by her hand and body gestures. For example, while performing the last ideophone of her story, *tuglu*, Luisa grabbed her throat. In her depictive gesture, Luisa was both the hunter and the prey. Her hand depicted the mouth of the jaguar, and her throat stood in for the throat of the tapir.

Luisa very effectively engaged her audience in a vivid, sensory experience by evoking a physical sensation of the depicted event. Ideophones that were accompanied by gesture (ideophone-gesture composites) were remarkable resources in this effort. However, as Luisa

performed the onomatopoeic ideophone, *shing*, she stopped gesturing. This lack of gesture stood out in contrast to the rest of her story since she had been gesturing constantly as she spoke. For some reason, even during dramatic moments in her story, Luisa decided not to gesture with certain ideophones.

Ideophones and gestures share a unique relationship due to their depictive and performative natures. This relationship has only recently been studied and is not yet completely understood. In this thesis, I will demonstrate that onomatopoeic ideophones are not as simple as previously assumed and that they do not have the same relationship with gestures that other ideophones do. Sensory type, that is whether an ideophone is onomatopoeic or not, seems to be the most important factor in predicting gestural behavior.

Table 1 shows the distribution of the gestural accompaniment of synesthetic and onomatopoeic ideophones in the Pastaza Quichua (PQ) corpus. This corpus consists of 69 interactions with PQ speakers comprising 8 hours of video recordings including traditional narratives, personal experience tellings, elicited descriptions of nature, short didactic explanations, and folksongs.

Table 1: Distribution of ideophones and gesture (synesthetic vs. onomatopoeic).

Sensory Class	**With Gesture**	**Without Gesture**	**Total**
Synesthetic	236 (94.4%)	14 (5.6%)	250 (100%)
Onomatopoeic	50 (27%)	135 (73%)	185 (100%)
All ideophones	286 (65.7%)	149 (34.3%)	435 (100%)

Synesthetic ideophones, those that represent phenomena in sensory domains other than the auditory one (Tedlock, 1999, p. 118), are consistently accompanied by gestures (94.4% of the time). While onomatopoeic ideophones, those that represent only sound, are much less likely to be accompanied by gestures (27.0% of the time). Of the 435 ideophones in the data, 185 (42.5%)

are onomatopoeic ideophones. I will refer to ideophones and their synchronized gestures as 'ideophone-gesture composites' (Mihas, 2013, p. 29).

1.1 Introduction to Ideophones

Ideophones are sound-symbolic utterances that depict visual, auditory, and tactile sensations. In this thesis, I will be using the term 'depict' as Streeck defined it: "to depict a phenomenon means to analyze and represent it in the terms that the given medium, communicative modality, or symbol system provides" (2008, p. 286). These depictions may also be called iconic or directly representational forms. However, Streeck points out that it is often not direct iconicity that allows an interlocutor to understand what is being depicted. Rather, interlocutors draw on the social repertoire of common depiction practices to make logical connections between the form of the depiction and its target reference. The term 'depictive' includes a range of obviously iconic forms as well as more abstract and metaphoric forms. It also points to the intent of the speaker and what they want to depict rather than the actual form they use to do it. 'Depictive' will be used in contrast to 'descriptive'. The normal lexicon or 'prosaic speech' is mainly descriptive while ideophones are depictive.

Ideophones depict a great deal of information in a single word through sound-meaning correlations, creating "a vivid representation" of an event (Doke, 1935, p. 118). Nuckolls (1993, p. 249) notes that the performance is "simultaneously expressive, explicit, and precise." Distinct from the surrounding words and syntax, ideophones are foregrounded by differences in volume, pitch, length, and repetition. They have an expanded phonology (Nuckolls et al., 2016), complex semantics, and unique structural and discourse properties. These unique features set an ideophone apart as a performance, and at the same time, add "additional layers of expressivity and meaning" (Klassen, 1998, p. 8).

In this thesis, I will be illustrating my discussion of ideophones and gestures with examples from the PQ data. These examples will be accompanied by pictures and links to the online versions of the video data. The link will start the video one to two seconds before the quote beneath it. This method of data presentation is especially useful in this thesis as I am focusing on performative features, which are best understood within the performance context. In example 1.1, the ideophone *putun* depicts the sound of hard fruit hitting the ground. The first syllable, *pu-* (or *pa-*), is commonly used in PQ ideophones to depict something flying through the air. The second syllable, *-tun* (or *-tan*) depicts the reverberating sound of impact, much like the English "thunk." Also, the repetition of *putun* indicates the repetitive nature of the depicted event. This is information expressed only in the ideophone.

Example 1.1 Depiction using sound-symbolism.
Video 10—1:27 https://youtu.be/itnoeKhEU6o?t=1m25s

Figure 1 *putun*

Ay	putun	putun-mi	icha-chi-n-ma
EXCL	IDEO	IDEO-EV	throw-CAUS-3-CNDL
Ay	putun	putun	it makes me throw

'Ay, *putun putun*, it makes me throw it away!'

Each example will be written as an orthographic transcription, then labeled and translated directly within the quotation table. A free translation is given below the table. The table format allows me to present the translation in a clear and informative manner.

1.2 Introduction to Ideophone-Gesture Composites

When an ideophone is used in narrative discourse, the speaker is not only narrating the event but is also taking on the role of an actor who re-creates or dramatizes an event for the audience. This ideophone may be accompanied by a simultaneous imitation in the form of a gesture. Ideophones and gestures complement, expand, or narrow each other's meaning (Childs, 1994, p. 196). As Dingemanse (2011, p. 351) remarks, both the ideophone and the gesture are "enriched by their co-occurrence." This is illustrated by the following example:

Example 1.2 Luisa becomes the floodwaters.
Video 26—6:26 https://youtu.be/6Nk9G-hqKWk?t=6m23s

Figure 2 *tsaxxx (1)*

Figure 3 *tsaxxx (2)*

Yaku	pacha	tsaxxx
Water	just	IDEO
The water	just	tsaxxx

'And the water just (went) *tsaxxx.'*

In example 1.2, Luisa is telling the story of Noah's flood. At the point where the floodwaters come crashing through the village, Luisa reaches out behind her and sweeps her hand in front of her to the other side. At the same time, she is verbally imitating the crashing water with the ideophone *tsaxxx*. Her large, dramatic gesture complements her intense ideophone and further illustrates the scene. In this moment, she takes on the role of an actress, becoming the floodwaters.

In the PQ data, ideophones are often accompanied by gesture. It is unsurprising since the two expressive devices are similar in many ways. Ideophones have even been called 'verbal gestures' (Nuckolls, 2001, p. 273). Both are depictive rather than descriptive (Streeck, 2008, p. 286), both foreground important information, and both engage the audience in a sensory experience. While the prosaic lexicon is made up of sequential syntactic parts, both gestures and ideophones can express whole phrases at once, complementing and enriching the rest of the utterance. The use of such nonlinguistic features further enables the listener to vicariously experience events by intensifying the dramatic effect and evoking a physical sensation of the depicted event (Moshi, 1993, p. 190; Reiter, 2012, p. 413; Kilian-Hatz, 2001, p. 155; Nuckolls, 1996, p. 11).

1.3 Introduction to Onomatopoeic Ideophones

Klassen (1998, p. 8) and Moshi (1993, pp. 201-202) observe that ideophones are incomplete without their accompanying gesture. In the PQ data, this holds true for the synesthetic ideophones which were consistently accompanied by gesture. In fact, 236 of 250 synesthetic ideophones (94.4%) are accompanied with gesture while only fourteen (5.6%) are unaccompanied. However, this consistent behavior contrasts significantly with the gestural accompaniment of onomatopoeic ideophones in the PQ data which are only accompanied by gesture 27% of the time. Onomatopoeic ideophones have been set aside as different by many researchers (Klassen, 1998, pp. 28-31; Kilian-Hatz, 2001, pp. 161-163; Dingemanse, 2011, pp. 131, 165-167; Mihas, 2012, pp. 327-329; Reiter, 2013, pp. 9-10, 308). This paper gives evidence to support that division. Reiter (2013, p. 280) notes that "the two types of ideophones differ from each other with regard to their correlations with gesture", but only expounds on the synesthetic ideophone-gesture relationship in her extensive dissertation.

In past research, onomatopoeic ideophones have been stigmatized as simple. Some have even excluded them from the class of ideophones and grouped them with sound imitation despite the fact that they follow the phonological and syntactic systems of the ideophone class. In fact, onomatopoeic and synesthetic ideophones are primarily distinguishable by semantic criteria (Reiter, 2013, p. 280). McGregor (2002, p. 341) labeled them as "sound mimicking words" rather than "proper ideophones." They have also been called "non-linguistic sounds" (Güldemann, 2008, p. 283) and "imitative sounds" (Hinton et al., 1994, p. 3). In the PQ data, onomatopoeic ideophones are performed and treated like other ideophones in all ways except gestural accompaniment. For them, gestural accompaniment is not simple or easy to predict, but it is principled. In the next example, I illustrate the distinct gestural behaviors associated with synesthetic and onomatopoeic ideophones.

Example 1.3 Synesthetic and onomatopoeic ideophones.
Video 26—3:38 https://youtu.be/9WBoORq9SYc?t=3m37s

Figure 4 *tak*

Figure 5 *tandangar*

Tak tak tak tak tak tak	tandangarrrr	kuti	tak tak tak tak tak tak	tandangarrr
IDEO	IDEO	again	IDEO	IDEO
Tak tak tak tak tak tak	tandangarrrr	again	tak tak tak tak tak tak	tandangarrr

'(It pecked) *Tak tak tak tak tak tak tandangarrrr*, and again *tak tak tak tak tak tak tandangarrr.'*

In example 1.3, Luisa is telling the story of how Noah's people regained fire after the flood. In figure 4, she is gesturing while performing the ideophone *tak*, depicting a giant

woodpecker pecking the wood of a hard tree which will shower the ground with sparks. *Tak* depicts the instant of contact. Her gesture depicts the beak hitting the wood. The next ideophone, however, is not accompanied by gesture. As she performs *tandangar*, she drops her hand and does not gesture. This lack of gesture is conspicuous. Throughout the story, her hands have been moving, yet as she comes to *tandangar*—an ideophone performed at the climax of the story—she becomes still. *Tandangar* is an onomatopoeic ideophone depicting the sound of extremely rapid pecking resonating across the land. This performance is repeated several times in her story and the pattern of gestural accompaniment remains the same. She is specifically not gesturing as she performs *tandangar*.

In the PQ data, 73% of onomatopoeic ideophones were not accompanied by gesture. When gestures did accompany onomatopoeic ideophones, they were usually added on after a first unaccompanied performance when the ideophone was repeated later in the same story. This implies that the gesture is not intrinsically linked to the ideophone but added on to elaborate the physical scene. This pattern occurs with *kukuli* in examples 1.4 and 1.5, which are taken from the same story.

Example 1.4 Kukuli *performed without gesture.*
Video 2—0:08 https://youtu.be/6QrT2t9HguU?t=6s

Figure 6 *kukuli (1)*

Kukuliii kukuliii kukuliii	ni-g	a-n-ya	chi-ta
IDEO	say-AG	be-3-EMP	that-ACC
Kukuliii kukuliii kukuliii	a say-er	it is	that

‘“*Kukuliii kukuliii kukuliii*,” that’s what it says.’

Example 1.5 Kukuli *performed with gesture.*
Video 2—0:48 https://youtu.be/6QrT2t9HguU?t=46s

Figure 7 *kukuli (2)*

Kukuliii kukuliii kukuliii	kanta-g	a-n	lyaki-lya
IDEO	sing-AG	be-3	sadly-LIM
Kukuliii kukuliii kukuliii	a singer	it is	sadly

‘It sings sadly “*kukuliii kukuliii kukuliii.*”’

In example 1.4, Eloudia depicts the lonely cry of the kukuli bird. With the first two performances (only the first one is quoted here) she does not gesture. Then later, in example 1.5, she does gesture, showing the path of the kukuli bird flying through the air. It appears that the path gesture is not an intrinsic part of this ideophone since it can be performed without it in the same context.

The lack of gestures with onomatopoeic ideophones is even more striking given that PQ speakers seem to be constantly gesturing during all parts of speech. As a narrator introduces an onomatopoeic ideophone into a story, her busily gesturing hands will drop to her lap as she focuses solely on the sound qualities of the ideophone. Only two other situations demonstrate

this consistent lack of gesture in PQ: direct reported speech and song. This behavior stands out in stark contrast to the rest of the story, drawing focus. An analysis of the PQ data suggests that onomatopoeic ideophones have a different relationship to gesture than other ideophones do. This will be supported by evidence from gesture use and non-use with onomatopoeic ideophones.

In order to combine two fields of study (ideophones and gesture) and discuss the research that has been accomplished at their intersection, I will have three chapters outlining the basic principles of ideophones, gestures, and ideophone-gesture composites as described in previous research. I will use examples from my own data to illustrate these principles. In the next chapter, I describe the context of the data collection and the methods used to analyze it. In chapter 3, a brief cross-linguistic summary of the properties, functions, and uses of ideophones is provided. It is followed by a summary of the properties, functions, and uses of gesture in chapter 4. The utility of ideophone-gesture composites is then discussed in chapter 5. This is followed by a discussion of the PQ data, which focuses primarily on onomatopoeic ideophones in chapter 6.

Chapter 2: Methods and Data

2.1 Fieldwork Setting

My data is composed of 69 interactions that were recorded at the Andes and Amazon Field School. The field school is located in a rural area on the banks of the Napo River near Tena, Ecuador. Students from various universities live on-site during the summer months and learn with native Quichua speakers. Classes in Quichua and ethnobotany are taught by visiting professors with the help of local Quichua residents who live at the school for most of the two-month semester.

2.2 Participants

The recorded interactions include nine Quichua informants whose ages range from 40 to 80 years. They are Luisa, Elodia, Delicia, Eulodia Daua, Clara, Narcisa, Carmen, Pedro, and Daniel. All of the informants live in rural areas near Tena, Ecuador. The dialects they speak are known specifically as Pastaza, Napo, and Tena Quichua. The divisions between the dialects are geographically based; however, these dialects are similar enough that, in this thesis, I will not distinguish between them and will be referring to all of them as Pastaza Quichua (PQ).

2.3 Video Recording

A corpus of 69 video recordings, comprising over 8 hours of video, was recorded at the field school. In order to compile the data, I collected (with permission) all available videos of interviews recently recorded at the field school. These were contributed by myself, fellow students of the 2013 fieldwork, Christina Callicott (PhD candidate: University of Florida), Janis

Nuckolls (Brigham Young University), and Tod Swanson (Arizona State University). A few of these interviews have been translated into English by Dr. Swanson and his students. Dr. Nuckolls and myself executed the other English translations used in this paper.

The informants were interviewed during and after classes (on campus and out in the forest) on topics such as local ecology, cultural norms, Quichua language, and traditional folklore. The corpus consists of traditional narratives, personal experience tellings, elicited descriptions of nature, short didactic explanations, and folksongs.

The purpose of each of these interviews differed according to the interviewers, who were examining different aspects of the Quichua language and culture. Christina's videos focused on the culture of shamanism in lowland Ecuador. Dr. Swanson's interviews focused on ethnobotany, or the relationship between Quichua people and the plants and animals around them. In two of the interviews, Dr. Swanson invited an ornithologist, David Pearson, to contribute to discussions on avian behavior. The interviews by Dr. Nuckolls and her students focused on specific features of the Quichua language.

Due to the nature of recorded interviews, the data does not represent the casual speech of day to day discourse among PQ speakers. Instead, the interviews represent the slightly more formal discourse of teaching non-Quichua learners in front of a camera. This situation may have lead our informants to explain more clearly and use more gestures than they would if they had been speaking to other PQ speakers.

In the data, Dr. Swanson occasionally asked the informants to relate origin stories and other narratives. For example, he asked three informants to tell the story of Noah's flood in order to compare their narrative techniques. Most interview questions did not specifically require a narrative; nevertheless, the data contains a great deal of narrative discourse since PQ speakers

tend to teach and explain with stories. The data as a whole does not represent the natural distribution of sensory classes among ideophones as many of the interviews include elicited descriptions of wildlife (particularly birds). It is therefore weighted to onomatopoeic ideophones.

2.4 Data Analysis

This analysis draws on both qualitative and quantitative methods. My methodology consists of close examination, classification, and tagging of 435 ideophones in the PQ data for sensory class and gestural accompaniment, using McNeill's (1992) typology. I reviewed the video data and noted the occurrence of each ideophone performance in an Excel sheet. This allowed me to mark individual ideophones with certain features, as well as make notes regarding important background information. With this tool, I was able to sort my data by features. I marked each performance with a video number, time stamp, number of iterations, sensory class, co-occurrence of gestures, gesture description, gesture type, context or translation, speaker, and the presence of path elements in the gesture. The features that are most important to my thesis are the semantic type of the ideophone, the co-occurrence of gestures, and the gesture type.

I found 435 ideophone performances in the 8 hours of interviews. Occasionally, more than one ideophone was used to depict different aspects of a complex event. Repetitions and reduplications of an ideophone were counted as a single performance, yet multi-ideophone performances are divided by ideophone and are counted as one performance per ideophone. If ideophones repeated in individual performances were counted separately, there would be 1000 ideophone tokens in the data. The data also includes 16 folksongs that are sung without instrumental accompaniment.

As defined in section 4.4, I will be using McNeill's (1992) gesture classification. McNeill distinguishes between imagistic and non-imagistic gestures. Each of these classes can be further

subdivided into categories: imagistic gestures include iconic and metaphoric gestures, while non-imagistic gestures include deictic, beat, and cohesive gestures. The divisions between these categories is not always clear. Some of the gestures in my data can fit into more than one. I endeavored to take communicative intent and utterance context into the assignment of categories. The utterances are orthographically and not phonetically transcribed since individual allophones are not relevant to this thesis.

The gestures considered in this analysis are called gesticulations. Haviland (2005, p. 4) characterizes gesticulations as "well-formed but non-conventionalized or spontaneous movements of the body, apparently closely synchronized with talk, and seemingly linked expressively to what speakers are saying." However, Kendon (2004, p. 106) notes that gestures associated with speech may very well be conventionalized. The conventionalization of gestures will be discussed in section 4.5, and the conventionalization ideophone-gesture composites will be discussed in section 5.4.

For a gesture to be considered as co-occurring with an ideophone in my data, the 'stroke' of a gesture has to be synchronized and linked expressively with the ideophone. Kendon (2004, p. 112) defines the term 'stroke' as the "phase of the movement excursion closest to its apex." The stroke of the gesture is the point at which meaning is expressed. The other phases are the 'preparation' and 'recovery' phases that come before and after the stroke of the gesture. This is discussed in section 4.2.

In my analysis, I also noted what I call a "conspicuous lack of gesture." McNeill (2007, p. 1) notes the "conspicuous absence" of gesture and postulates on its meaning, which I discuss in section 6.2. PQ speakers gesture very frequently, especially during dramatic or significant utterances. Sometimes, an informant will conspicuously stop moving their hands and perform an

ideophone. The lack of gesture is defined as a stillness of hands and body. When a speaker stops gesturing, their hands usually return to a neutral position. However, a speaker may maintain a hand position from a previous gesture if they plan to gesture immediately after a pause. This hand position is not synchronized or expressively linked with the ideophone and is therefore marked as a lack of gesture.

Each ideophone in the data was marked according to its sensory class. For the purposes of this thesis, I used only four categories: **sound**, **sound and motion**, **motion**, and **other**. The 'sound' category includes ideophones that only depict audio phenomena. These will also be referred to as onomatopoeic ideophones. The 'sound and motion' category includes ideophones that depict both the audio and motion aspects of an event. For example, *patak*, is an ideophone that depicts the motion of "flying through the air" with the syllable *pa-* as well as the sound of "the moment of impact" with the syllable *–tak.* The 'motion' category includes ideophones that only depict motion information (motion ideophones may also depict manner). For example, *dararara* is an ideophone that means "flutter." The 'other' category includes ideophones that depict an abstract idea such as "completiveness" (*win*). It also includes visual ideophones like *shaka*, meaning "pale" or "white", as well as other difficult-to-classify perceptions (like *chun*, the sensation of silence). The lines between these categories were, at times, difficult to draw. I often referred to the classification of PQ ideophones in Nuckolls (1996), as well as her list of commonly associated verbs, to make these distinctions. Reiter notes that synesthetic and onomatopoeic ideophones are primarily distinguishable by semantic criteria (2013, p. 280). Therefore, I endeavored to take utterance context into the sensory class assignment.

The Excel sheet of my data is displayed in Appendix 1. The list of videos referenced in the first column of data follows immediately afterward in Appendix 2. It contains the videos'

length, the names of the speakers, and links to the YouTube versions of the 69 interviews. The examples I use in my data are all accompanied by a link that directs the reader to the YouTube video they are taken from. I provide the timestamp of the quotation next to the link, but the link is already set to the moment one or two seconds before the quotation, for convenience. This method of data presentation is especially useful in this thesis as I am focusing on performative features, which are best understood within the performance context. Each transcription will be labeled and translated directly within the quotation table. A free translation is given below the table. The table format allows me to present the translation in a clear and informative manner. In the next chapter, I will be discussing the features of ideophones in more detail.

Chapter 3: Cross-Linguistic Investigations of Ideophones

"[An ideophone is] a vivid representation of an idea in sound. A word, often onomatopoeic, which describes a predicate, qualificative, or adverb in respect to manner, colour, smell, action, state, or intensity." (Doke, 1935, p. 118)

Ideophones are depictive imitations of sensory events. Distinct from the surrounding words and syntax, they are foregrounded by differences in volume, pitch, length, and repetition. They occur in many languages, yet typically appear only in oral discourse and are difficult to transcribe. They have an expanded phonology (Nuckolls et al., 2016), complex semantics, and unique structural and discourse properties. They also tend to disappear in languages with a long written tradition where, in modern dialects, they seem childish and are undervalued linguistically (Reiter, 2013, pp. 1-2). This stigma is due, in part, to the fact that they are not fully arbitrary (contrary to Saussure's arbitrariness principle, 1916, p. 102). It is also due to their performative and emotionally-expressive natures which may seem out of place in the somewhat formal tone of written discourse. Max Müller claimed that "they are playthings, not the tools of language" (1899, p. 366). However, current investigations into the functions of ideophones have proven otherwise.

In this chapter, I will outline the characteristics of ideophones and how they are created and conventionalized within the dialect. I will briefly discuss how they differ semiotically from the prosaic lexicon. I will also discuss the emotional load and rhetorical functions of ideophones.

3.1 Characteristics of Ideophones

Ideophones are defined by a set of characteristics that are mostly consistent across the various languages that have them. These features have been noted by linguists as far back as the mid-19th century; however, the majority of ideophonic research has been accomplished in the last fifty years. As noted by Dingemanse (2012), they have been approached from a few different angles such as the typological perspective (Blench, 2010; Childs, 1994; Diffloth, 1972; Güldemann, 2008; Kilian-Hatz, 2001; Kulemeka, 1995; Samarin, 1971; Watson, 2001; Reiter, 2013) and the sound-symbolism and iconicity perspective (Ahlner and Zlatev, 2010; Hinton et al., 1994; Jakobson and Waugh, 1979; Nuckolls, 1999; Perniss et al., 2010). Nuckolls (1996), Klassen (1998), and others have focused on the discourse function of ideophones. Kita (1993, 1997, 2001) emphasizes their semantic and cognitive aspects.

The defining characteristics of ideophones in most languages are these:

> • 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; they are usually isolated by syntax structure, prosodic elaboration, and intonational breaks.
>
> • Ideophones are often subject to processes of repetition or reduplication that encodes progressive or continuative action.
>
> • Ideophones are often only used in oral language and tend to have a special dramaturgic effect that highlights salient scenes.
>
> (Nuckolls, 1993, p. 250; Voeltz and Kilian-Hatz, 2001 p. 2; Mihas, 2013, p. 5-6)

While the basic characteristics of ideophones are consistent across languages, defining the meanings of specific ideophones has always been difficult. They depict perceptually rich experiences that are difficult to define with precision since each ideophone has a certain semantic latitude that can be applied to a variety of events. Polysemy in ideophones deals with "a variety of situations which at first glance seem to be quite different but share a common core which could be defined as a cluster of elementary sensations" (Diffloth 1976:257). Or as Mihas puts it, “multiple senses of the same ideophone can be explained by the diachronic development of metaphoric extensions from its basic sense” (Mihas, 2012, p. 323). For example, the PQ ideophone *tak* describes contact between a container and what fills it; yet *tak* also denotes swelling throughout a body part (Nuckolls 1996:179).

Ideophones can encode sight, sound, and touch as well as other difficult-to-classify perceptions (Nuckolls, 1993, p. 250; Reiter, 2013, pp. 6, 403, 576-9; Mihas, 2013, p. 28). They may depict only one of these perceptions or they may exhibit multiple aspects of an event from more than one sensory class (Nuckolls et al., 2017). Ideophones may also be combined with other ideophones and performative elements to depict events that are more complex. As Klassen notes, “Their meaning may vary from context to context, and so no dictionary of ideophones or commonly used gestures can predict which aspect of their character a narrator-gesturer may choose to emphasize in a particular performance” (1998, p. 37). Nuckolls et al. (forthcoming) present a method of using video data in an online dictionary to aid in ideophone lexicography. This dictionary allows the lexicographer to include non-textual elements, taken directly from the specific performance context, which greatly affect the meaning of the ideophone.

This balance of semantic latitude and precision is demonstrated by *palay*, a common PQ ideophone. Nuckolls (1996, pp. 219-222) describes the sensorial experience depicted by *palay* as

"the rapid falling of a group of objects or entities from a relatively high vantage point." This information is conveyed by the phonological features and syllabic structure of the ideophone. "The disyllabic structure provides a frame for the vocal gesturing of a falling motion" (1996, p. 220). In other words, the two syllables may depict the up-to-down movement of the object. As mentioned in Chapter 1, *pa-* depicts an object flying through the air. Whereas, with the lateral liquid /l/, the open syllable *-lay* depicts the lack of turbulence and obstruction as the small objects fall. An example of *palay* from the PQ video corpus is shown below.

Example 3.1 Semantic latitude and precision.
Video 11—1:57 https://youtu.be/8aF02E9rbYo?t=1m57s

Figure 8 *palay*

Chi-ga	karan	maki-ma	kasna	palay palay palay palay	palay palay palay palay	palay palay palay palay-shi	upi-naun
Then-TOP	each	hand-DAT	like	IDEO	IDEO	IDEO-EV	drink-3PL
Then	each	hand	like	palay palay palay palay	palay palay palay palay	palay palay palay palay	they drink

'Then on every side like *palay palay palay palay, palay palay palay palay, palay palay palay palay* they drink.'

In example 3.1, Eulodia uses the ideophone *palay* to depict many birds flying through the air and landing on a tree. Her hands sweep around while she repeatedly performs *palay*, depicting the somewhat random path of flying birds. *Palay* is performatively foregrounded here by its multiple repetitions, by the fast-paced rhythm, and by the rise and fall in volume that starts

loud and fades with each set of four. Multiple repetitions of the ideophone, in this case, depicts the image of many birds. The fast pace of the repetitions depicts the speed of the birds. The rise and fall in volume may depict the birds flocking close to the observer and then flying away. The variation in volume is also a performative technique that makes the performance more interesting. As noted by Nuckolls regarding another example of a repetitive performance of *palay,* the change in pitch "relieves their monotony, at the same time that it foregrounds them from the utterance" (Nuckolls, 1996, pp. 220-1). All of this information contributes to a precise and vivid image.

Yet, taken out of this context, *palay* could apply to many different situations. Nuckolls records 14 verbs commonly associated with *palay*. Some of the events which *palay* can depict include: objects falling peltingly, raining, gushing out, and many small objects (like seeds) being thrown (Nuckolls, 1996, pp. 220-1). While the prosaic lexicon is ideally context independent, ideophones are context dependent—each carries a certain semantic load that is then applied to specific events.

3.2 Grammatical Significance of Ideophones

Ideophones are most often classified as a type of adverb, since they usually occur in a preverbal slot (Doke, 1935, p. 118; Nuckolls, 1996, p. 152). They may, however, occur without any finite verb and take over the communicative functions of a predicate. Childs suggests that ideophones do not all fit neatly into one grammatical category. Rather, they are in a prototype category with a core of good members. Ideophones become less prototypical as they radiate out from this core, becoming more verb-like in one dimension or departing into paralinguistics in another. "In some cases they represent the epitome of content words in showing almost pure content and no syntax" (1994, p. 181).

Ideophones are also aspectually significant. Aspect is the temporal contour of an event, establishing information such as durativity and perfectivity. Ideophones express aspect iconically with morphological and phonosemantic features (Nuckolls, 1996, p. 62). The spatial and perceptual information known as aspect falls easily within the depictive domain of ideophones. A short, sharply defined ideophone like *tak* represents a single moment of contact, while a drawn out performance of *dzir* represents the friction of something being dragged across another surface. PQ speakers often rely on ideophones to communicate this aspectual information and may not describe it anywhere else in the utterance (Nuckolls, 1996, p. 62).

3.3 Creation of Ideophones

Ideophones belong to a very open class and can be created in the moment to meet the needs of a specific depiction. These new ideophones may enter the general lexicon of the dialect and become 'conventionalized' if they are used often enough. Reiter (2013, p. 379) defines the term 'conventionalized' as being "invariantly used by different speakers in the same contexts and also identified without a context" (Reiter, 2013, p. 403). This means that ideophones can be placed on a gradient scale of creative to conventionalized within their dialect.

In PQ, most ideophones are conventionalized, meaning that they are recognized by all speakers of the dialect. The basic semantic features of conventionalized ideophones are understood throughout the community. Newly created ideophones are not spontaneously produced, as is the case for sound imitation. Instead, they follow the phonetic rules of the ideophone class and usually use the phonemes that are common in other ideophones of the same semantic class. Thus new percussive ideophones often sound like other percussive ideophones (*chak, tak, tan, tong, putun*), and new splashing-water ideophones sound like other splashing-

water ideophones (*tsupu, tupu, tux, tu*) (Nuckolls, 1996, 2010a). In the next example, Luisa creates an ideophone that sounds like another, semantically related ideophone.

Example 3.2 A creative ideophone.
Video 13—4:37 https://youtu.be/blgFC8SFEYA?t=4m36s

Figure 9 *turuk*

Turuk turuk turuk	ni-shka	washa
IDEO	say-PERF	after
Turuk turuk turuk	said	after

'After going "*turuk turuk turuk . . .*"'

In example 3.2, Luisa creates a new ideophone, *turuk*, as she is relating an experience in which she was walking through the forest alone at night. As she is walking, she starts to hear several noises that scare her. Here, *turuk* depicts the sound of someone moving through the underbrush. This ideophone is not a common conventionalized ideophone of the PQ dialect, but it does sound like another one, *taras*, which is conventionalized. *Turuk* has the same syllable structure as *taras*. It also has the same initial and second consonants. Even the last consonant shares the feature of being a voiceless obstruent. *Taras* is the sound of someone walking through dry grass. In this example, Luisa draws on the common features of ideophones that are semantically related to this situation and creates a new ideophone that more closely depicts the sound she heard that day.

There are several sound-meaning correspondences apparent in ideophones based on individual phonemes, phoneme clusters, and syllable structures. In contrast to the prosaic lexicon, ideophones represent perceptions of the natural world articulated by the physical sensations of the mouth and throat (Nuckolls 2010b, p. 354). Childs (1994, p. 191) uses the term "synesthesia" to describe the pairing of certain words with non-auditory sensations by the metaphorical extension of onomatopoeia. Güldemann (2008, §4.4) notes that both speaker and hearer experience a sensory perception rather than a mental representation during an ideophone performance.

PQ speakers may also adapt words from the prosaic lexicon into ideophones. In doing so, they change it to match the phonological and structural patterns of the ideophonic class. The ideophone class differs from the prosaic lexicon in phonology and syllable structure. Nuckolls et al. (2016) describe these differences in detail. The syllable structure of the prosaic lexicon consists of the following: V, VC, CV, CVC, CCV, and CVCC. The last three are less common. Ideophones exhibit greater use of the CVC and monosyllabic CV structure. The CVC syllables are unusual in word-final position in the prosaic lexicon, but the ideophone class does not exhibit that restriction. The ideophone class expands the phonological inventory of the language by the increased use of otherwise restricted sounds and structures, as well as the addition of new sounds (Nuckolls et al., 2016, pp. 104, 110).

PQ speakers also draw on their interactions with other languages to create new ideophones. There are three major influences on the PQ dialect: Achuar and Zaparoan languages (spoken in the Amazonian basin) and the Spanish language. Nuckolls et al. (2016) argue that PQ speakers have integrated phonological features from these languages into their ideophones. In particular, they have likely absorbed palatalized consonants from the Amazonian languages and

the vowel /o/ from Spanish (Nuckolls et al., 2016, p. 114). Words from these languages have also entered into the prosaic and ideophonic lexicons. For example, the Spanish borrowing *tieso* (stiff, erect, straight) has been adapted into the ideophone *tis*. *Tis* depicts the stiffness of a dead body affected by rigor mortis (Nuckolls et al., 2016, p. 98).

3.4 Ideophones Differ Semiotically from the Prosaic Lexicon

The previous sections outlined the general characteristics of ideophones. In this section, I will briefly discuss the semiotic framework that is applied in ideophone research to describe *how* ideophones communicate what they do. Being iconic rather than symbolic, ideophones are non-abstract. They represent the physical sensations of an event. They are imitative of sounds, rhythms, visual patterns, and even psychophysical sensations (Nuckolls, 1996).

Ideophones exhibit iconicity in their phonology and morphology. They are semiotically distinct from prosaic language because they iconically simulate the most salient features of an event in real time. In ideophonic performances, speech event and narrated event are one (Nuckolls, 1996, p. 12). Rhythm, speed, pitch, volume, lengthening, reduplication, and tone have semantic meaning in ideophone performances. They are all used iconically to show intensity, manner, and duration. For example, the unusual repetition of an ideophone indicates the extended duration of the event being depicted as well as the specific characteristics of the motion event (Reiter, 2013, p. 447).

Linguists often employ Charles Peirce's 'Theory of Signs' to define the semiotics of language. This is the division of signs into icons, indexes, and symbols (Peirce, 1955, p. 105). It is used to analyze the symbolism, iconicity, and metaphorical significance of words. The three semiotic modes for language are iconic (ideophones and direct sound imitations), indexical (deictic references), and symbolic (the arbitrary words which constitute most of the lexicon).

Streeck uses the term ‘depiction’ to describe the iconic representations of phenomena. In relation to gesture, he says that it is incorrect to assume that ‘iconic’ gestures uniformly function by way of actual resemblance. Instead we should understand that “depiction by gesture is achieved with a heterogeneous set of practices, some of which rely on relations of contiguity or indexicality to evoke commonly known objects or scenes” (Streeck, 2008, p. 285). The same principles can be applied to ideophones. Iconic words may be called depictive language while indexical and symbolic words may be called descriptive language.

The semantic domain of ideophones is sensory imagery. Ideophones perform the event itself and so their meaning seems self-evident to their speakers (Dingemanse, 2013, p. 146). Those who use ideophones in their native language prefer to use an ostensive definition when explaining them. Speakers may repeat the ideophone more clearly and emphatically if their interlocutor asks for a definition. Sometimes they use a companion verb or another ideophone to help define it, but they are more likely to retell the narrative in which the ideophone was used. They also use gestures and facial expressions to explain them (Mihas, 2013, pp. 5-6; Klassen, 1998, p. 196; Diffloth, 1972, p. 441). The next example illustrates how ideophones are used to iconically depict an event.

Example 3.3 Iconic depiction.
Video 25—1:42 https://youtu.be/3dnaxjIinaE?t=1m40s

Figure 10 *tyam*

Payna	imina	ra-sha	chi-ta	kishpi-g	a-naw-ra	tyam tyam tyam
They	however	do-COR	that-ACC	escape-AG	be-3PL-PAST	IDEO
They	however	doing	that	escapers	were	tyam tyam tyam

tyam tyam-shi	kumal	angu-ta	hapi-sha-ga	boltyari-sha	ri-g	a-naw-ra
IDEO-EV	potato	vine-ACC	grab-COR-TOP	turn-COR	go-AG	be-3PL-PAST
tyam tyam	potato	vine	grabbing	turning	goers	were

'They escaped in whatever way they could, the sweet potato vines grabbing and wrapping (them) around their hands, *tyam tyam tyam tyam tyam* they would go.'

In example 3.3, Delicia is the telling the story of Noah's flood. Before the people escaped to the boat, they grabbed the plants they needed to feed themselves after the flood. Delicia shows the way people wrapped sweet potato vines around their hands with the ideophone *tyam*, which depicts a complete revolution of movement. She repeats the ideophone several times to indicate that they were wrapping up long vines. At the same time, she depicts this event with gestures.

Ideophones share and verify information—some information is only given in the ideophone while other information conveyed in the ideophone has already been given in the rest of the utterance. In this example, the verbs for grabbing and wrapping are used to describe the motion event, but Delicia also uses an ideophone-gesture performance that adds to the sensory experience of the story.

Ideophones have been called “verbal gestures” because, like gestures, they are depictive performances of the events referred to in the rest of the utterance (Nuckolls, 2001, pp. 273, 277; Voeltz and Kilian-Hatz, 2001, p. 3; Moshi, 1993, p. 201-202; Güldemann, 2008, p. 280; Schlegel, 1857, p. 114). The meanings of both ideophones and gestures are primarily represented in an affecto-imagistic dimension “in which language has direct contact with sensory, motor, and affective information” (Kita, 1997, p. 380). These modes of definition point to the depictive and dramatic nature of ideophones. The central effect of ideophones in speech is dramatization—which is also true of gestures. And, like gestures, some ideophones can be creatively produced while others have lexical content which is understood throughout the dialect (Moshi, 1993, pp. 201-202). Though this may be frustrating for a lexicographer, the subtleties of language are best learned in context—defining an ideophone with a story may be the most relevant and memorable form of instruction.

3.5 Emotional Load and Rhetorical Function of Ideophones

> *“One aspect of ideophones that makes them so versatile is that they capture what is aesthetically salient and absolutely true, and what is emotionally riveting and objectively factual” (Nuckolls, 2010, p. 354).*

Emotional experiences are included in the sensory imagery of ideophones and, according to the PQ data, are particularly evident in onomatopoeic ideophones. I have already discussed how ideophones are depictive, but it should be explained here that ‘depictive language’ has also been referred to as ‘expressive language’ in previous literature. ‘Expressive morphology’ is a term that applies to the playful additive word formation processes like reduplication and lengthening (Zwicky and Pullum, 1987). Descriptive morphology (using a string of words) is more arbitrary and objective than expressive morphology.

Expressive morphology can pack multiple semantic layers into a single word using the vocally performative elements mentioned above as well as the visual element of gesture. This

mode of communication requires speakers to convey their stance on a narrated event since they are acting it out in real-time. As a result, it can be more emotive (Nuckolls, 1996, p. 115) and the speaker's performance engages the audience more directly and intimately (Kock, 1985, p. 52). Speakers perceive ideophones as having extraordinary rhetorical impact, so they are added to utterances which have already stated the event in prosaic language (or even replace prosaic language) in order to add "spice" and "get to the point" (Klassen, 1998, p. 70).

Ideophones dramatize, express, intensify, and highlight the major parts of an event (Moshi, 1993, pp. 201-2; Nuckolls, 1996, p. 4). "The most important cross-linguistic feature of ideophones is their 'expressivity' or performative quality and their connected discourse-pragmatic function of foregrounding or highlighting information" (Reiter, 2013, p. 576). Ideophones participate in and direct attention to the event, the performance, the narrator, and the cultural memory implicit in a performance. Each one creates its own mini-drama of sound and movement within the story (Klassen, 1998, p. 254). They are syntactically foregrounded when the "self-evidently meaningful" element (the ideophone) represents the whole proposition (Nuckolls, 1996, p. 152). When one performative word depicts an entire scene, it stands out from the common descriptive language surrounding it, foregrounding and highlighting information.

Pastaza Quichua people often engage in performative speech when telling a story and are more interested in the aesthetic and vivid version of their experiences. As Nuckolls has pointed out, they do not distinguish between "truths" and "vivid truths." They are extremely preoccupied with the aesthetic and emotional significance of their experience, rather than with the merely verifiable facts (Nuckolls, 1993, p. 236, 249-50, 253). Their lively and performative speech is enhanced by ideophones which Dingemanse describes as "marked words that vividly depict

sensory events" (2009, p. 83). They have also been called "poetry in ordinary language" (Evans-Pritchard, 1962, p. 145).

Laughing ideophones are an excellent example of the emotional expression of ideophones. In these ideophones, the sound of laughter is adapted into an ideophone form. *Hihihi* and *hahaha* are used to describe the jovial emotional state of a character even when that character is not human. *Waa*, *wahaii*, and *hahay* are the sounds of human revelry. In the following interview, Luisa interprets the sound of thunder as both grumbling and laughter. In example 3.3, she says that when the thunder-man gets upset, his wife picks hot chili peppers for him. *Hihihi* is the sound he makes when he is grumbling about wanting peppers. It is also the sound he makes when he is happily eating them.

Example 3.4 Emotional expression of ideophones.
Video 12—0:43 https://youtu.be/05L7PCW2TSs?t=40s

Figure 11 *hihihi*

Uchu-ta	muna-sha-shi	chasna	pinari-sha	tiya-w-n	hihihihi
Pepper-ACC	want-COR-EV	like that	anger-COR	be-DUR-3	IDEO
Pepper	wanting	like that	angering	it is	hihihihi

'Wanting hot peppers, like that angering, it is (going*) hihihihihi.*'

Other examples of emotion expressed in ideophones include depictions of animal calls like *mema* (the sound of a crying baby sloth), *kukuli* and *ilʸucucu* (the mournful cries of lonely

birds), and *pis* (the sound of a furious hummingbird). Even the sound of a falling tree (*gyawn*) is performed with emotion, depicting how the tree feels as it dies. Ideophones in PQ are used to give all life a voice. The use of ideophones is enmeshed with the speakers' animistic worldview that gives agency and voice to non-human life forms (Lenaerts, 2006; Nuckolls, 2010).

In relation to the presence of emotional ideophones in PQ, Dingemanse proposes the following cross-linguistic theory of an implicational hierarchy within ideophone systems:

"SOUND < MOVEMENT < VISUAL PATTERNS < OTHER SENSORY PERCEPTIONS < INNER FEELINGS AND COGNITIVE STATES

> …If a language has ideophones at all it will have at least ideophones for sound (i.e. onomatopoeia). If a language has ideophones for movement it will also have ideophones for sounds. If a language has ideophones for visual patterns (e.g. spatial configuration or surface appearance), it will also have ideophones for movements and sounds, et cetera. Conversely, a language that does not have ideophones for sounds or movements will not have ideophones for cognitive states…. Importantly, all states naturally follow from each other, and the latter are not likely to arise without the former being in place – the hallmark of an implicational hierarchy" (Dingemanse, 2012, pp. 663-664)

The PQ data does not completely support this theory. As I stated in 3.1, ideophones may exhibit more than one sensory class (Nuckolls et al., 2017), but Dingemanse's theory does not account for this. In contrast to his theory, the PQ data contains onomatopoeic ideophones which express emotion and emotional ideophones with are used onomatopoeically. Examples of onomatopoeic ideophones that express emotion are shown above. An example an emotional ideophone being used onomatopoeically is found in example 6.15. In it, Luisa tells of her first experience in an elevator. She performs the ideophone *dzin*, which depicts the sound of the elevator coming to a new floor. *Dzin* is also used to depict a sudden awareness (Nuckolls, 1996, pp. 250-52). It seems

that the sound and the inner feeling are being depicted at the same time with *dzin*. I suggest that the actual system for the constitution of an ideophone class is not quite as simple as a hierarchy, or at least, it is not a universally applicable hierarchy. I will not discuss the historical development of the PQ ideophone class in this thesis, but rather, I will return to the topic of the rhetorical functions of ideophones for the duration of this chapter.

Ideophones are used to achieve empathy and better engage the audience. Mihas observed that when ideophones are used the hearer's face will light up, often accompanied by a grin and comments of understanding and involvement in the conversation (Mihas, 2012, p. 26). Gomi (1989, pp. 243-44) explains that ideophones are "at least as important to the Japanese language as traditional classical art forms such as kabuki and bunraku are to Japanese culture." Engaging stories serve the purpose of sharing experiences and strengthening community spirit. Dingemanse observes that ideophones stimulate intimacy in everyday social interactions and maintain "a sense of communality—a communal ethos" (2011, p. 325).

Storytellers in all cultures have a vested interest in creating memorable and aesthetically pleasing performances. Klassen (1998, p. 29) notes that ideophones are an integral aspect of storytelling in many African societies. She reports that Shona speakers believe folktales train children's imagination, moral sense, emotional development, and command of the language. Teaching folktales and the art of storytelling also helps children develop a keener sense of memory. As depictions, ideophones "enable others to experience what it is like to perceive the scene depicted" (Dingemanse, 2011, p. 358). They invite the listener to take part in imagining the visual and physical sensations; they make myths more real and memorable as the audience becomes more intimately engaged. (Nuckolls, 1996, p. 106).

Despite the many fascinating aspects of PQ ideophones as a whole, I will be focusing primarily on onomatopoeic ideophones in this thesis. These ideophones primarily depict sound rather than visual or haptic experiences. Onomatopoeic ideophones have been separated from synesthetic ideophones in previous research based on their semantic content. This paper will demonstrate that onomatopoeic ideophones are different by examining their relationship with gesture. They do not have the same relationship with gestures that synesthetic ideophones do. Sensory type, that is whether an ideophone is onomatopoeic or not, seems to be the most important predictor of whether or not an ideophone is accompanied by gesture.

The claims I am making in this thesis are supported almost entirely on the evidence found in the gestural behavior of the PQ speakers. It is, therefore, important to review what is known about gestures. In chapter 4, I will discuss the basic characteristics of gestures and how they are associated with speech in general. In chapter 5, I will discuss how gestures are used with ideophones, specifically.

Chapter 4: Gesture

In the previous chapter, I outlined the defining characteristics of ideophones and their function in language. In this chapter, I will briefly discuss the definition and classification of gestures in recent research, as well as their function in language. Like ideophones, gestures can be placed on a scale of conventionalization in addition to a scale of iconicity. On the scale of conventionalization, the lower end is populated by gestures that are created on the spot. Many do not convey information in themselves, but punctuate and emphasize discourse structure. The more conventionalized end of the scale contains 'emblems'—gestures which are so commonly used that their meanings are recognized by interlocutors even without context, such as the "thumbs-up" sign. These emblems are recognizable within a speaker community and are not universal. The middle of the scale is populated by 'gesticulations'. These gestures are imagistic but not as highly conventionalized as emblems. They are therefore understood only in the context of an utterance (Kendon, 1997, p. 118). Almost all of the gestures in my data fall into this middle category. McNeill (2007, p. 1) notes that most gesture is gesticulation.

Many researchers also classify gestures by the level of iconicity they exhibit. They place gestures on a scale of iconicity based on how much the gesture "looks" like the target reference. However, Streeck states that gestural depiction is not always directly iconic. It is grounded in the *interpretation* of actions and things rather than visual similarity. Hands do not mirror but analyze an object. Interlocutors use a knowledge of how the hands behave in the real world and the common practices of gestural depiction to draw meaning from gestures (Streeck, 2008, p. 285).

In discourse, gestures help illustrate (or depict) what is being said by representing complex ideas with abbreviated, simplified, and generic forms.

Gestures are so commonplace in face-to-face discourse that the actual hands fade into the background of our consciousness as we "see through them" to the imaginary object they depict—just as glasses on someone's face disappear in the mind through daily use (Streeck, 2008, p. 286). Streeck calls this 'twofoldness'—when we see a bit of the world in the actions of someone's hand. The form itself fades behind the image we see through it. This is enabled by our cultural repertoire of gesture (2008, p. 286).

Gestures and speech work together to create understanding. In this chapter, I will outline the specific functions of gesture and how it interacts with speech. I will also discuss the process of conventionalization. While gestures can become so precise and systemized as to form a sign language, I will be focusing only on those gestures which accompany spoken language.

4.1 Functions of gesture

Gestures are symbols based on iconic meaning rather than a standard system of forms like speech (McNeill, 2007, p. 2). Representational (depictive) gestures are defined as "controlled and mostly spontaneous kinetic signs of the human body which illustrate, supplement, or even exclusively establish mimetically the representation of a context-specific state-of-affairs" (Güldemann, 2008, p. 278). Gesticulation falls into the category of representational gestures.

Gesture can augment and organize what is available to the senses or give structure to the imagination (Streeck, 2010, p. 232). It interacts with a virtual or conceptual environment either imaginarily projected onto the physical world, directly incorporating real-world objects, or pointing at something visible (Haviland, 2005, p.6). A speaker can use gesture as a resource to

clarify speech in an ambiguous situation (if important), or to emphasize certain critical information (Holler and Beattie, 2003, p. 114). Gestures can visually repeat, restrict, or expand information communicated verbally. Kendon considers gestures as much a part of an utterance as speech, in their contribution to meaning. Gestures and speech "interact with one another to create precise and vivid understanding" (Kendon, 2004, p. 174). He gives a list of the functions of gestures:

> 1. They provide a parallel expression to the meaning which is conveyed verbally.
> 2. They refine, qualify or restrict the meaning conveyed by words.
> 3. They provide aspects of reference which are not present in the verbal components, e.g. spatial and orientational information.
> 4. They create an image of an object that is the topic of the spoken component.
> 5. They provide a dimension of visual animation to an account to convey a much richer sensory experience to the interlocutor.
>
> (Kendon, 2004, p. 161)

The following example illustrates gestures that add to the visual scene described in an utterance. These gestures are context dependent. When used with these utterances, they depict specific and complex images. Yet they could be used in another story to depict very different images.

Example 4.1 Interacting with a conceptual environment.
Video 27—0:00-0:13 https://www.youtube.com/watch?v=9WBoORq9SYc

Figure 12 Gesture from Video 27—0:05

Figure 13 Gesture from Video 27—0:08

Figure 14 Gesture from Video 27—0:10

Figure 15 Gesture from Video 27—0:12

Kay	silu	imayna-ta	rikuri-n	chasna	chi	siriri-ra
This	sky	how-INT	look-3	like that	there	lay-PAST
This	sky	just how	it looks	like that	there	it laid

'This sky (fig. 12), just how did it appear, like that there it laid.'

Ña	ima	napu-was	ilya-k	ima	chinda-was	ilya-k
Now	what	dirt-INCL	empty-AG	what	branches- INCL	empty-AG
Now	what	ground	nothing	what	branches	nothing

'Now there (fig. 13) was nothing of anything. No branches (or growth) (fig. 14) anywhere.'

Pay	chari	mai-bi	ima-ta	apa-ra
He	perhaps	where-LOC	what-INT	take-PAST
He	perhaps	where-ever	what	taken

'He perhaps, (saying) wherever (fig 15) and what all was taken?'

In example 4.1, Luisa depicts the new world that appears after Noah's flood dissipates. It is empty and muddy. All of the houses and trees have been washed away. She uses wide, sweeping gestures to paint the dramatic scene in the imagination of her audience. Luisa's

gestures give structure to the image she describes. She is interacting with a conceptual environment projected onto the physical world. In figure 12, she compares the sky she sees to the storm-free sky of the story. As she sweeps her hands out above her, she engages a real-world image and incorporates it into the imaginary image of the post-flood world. In figure 13, she stretches her hands out as far as she can—even lowering her head in the effort. This is done to support the verbal utterance describing the emptiness that has replaced a forest. This gesture depicts the image of an empty plain stretching as far as the eye can see.

Figures 14 and 15 illustrate how a simple gesture can depict a complex mental image. In figure 14, she looks up to where the branches of the old forest used to be and swipes her hands across the imaginary image, saying that the branches and plant life are gone now. The moment captured in figure 14 is an interesting example of an imaginary image within an imaginary image. It is a complex situation that is easily depicted with a brief, illustrative gesture. In figure 15, Luisa sweeps her hand out to the side, saying that perhaps Noah is wondering where it all went. This gesture is also depicting a complex stacking of imaginary images. In this one, Luisa is depicting an image of Noah who is visualizing all of the houses and trees being swept away. In figure 15, she again employs images from the real world as she sweeps her hand along the path of the river she is sitting next to. She is incorporating the rushing waters of the Napo River into the image of debris being washed away by the flood.

The gestures in example 4.1 illustrate Kendon's five functions of gesture, listed earlier. These gestures paralleled the information that was conveyed in the utterance, as in figure 12, when she gestures to the sky (function 1). They also refined and restricted the meaning of the verbal utterance (function 2): In figure 14, Luisa looks up and sweeps her hands at imaginary missing trees; this gesture refines the word "branches" to mean the tall trees of the forest. The

gesture in figure 13 adds the feature of ‘flatness’ to the post-flood scene which is not directly stated in the verbal utterance (function 3). In figure 15, Luisa depicts the image of everything being washed away in the river (function 4). This is an image that occurred in the imagination of the main character and is described from his point of view. This gesture added vividness to an idea that was somewhat abstract and, at the same time, smoothed the transition between omniscient and third-person narration. All of these gestures, while achieving other functions, also provided a dimension of visual animation that created a richer sensory experience for the interlocutors (function 5).

Gesture and speech serve different complementary roles. Spoken words on their own are inherently ambiguous and must be understood within the context of the utterance. Gesture can help provide the context which makes the meaning of words more precise and complete. Gestures display aspects of pragmatics that can change how the listener interprets what is said. Since gestures are used in conjunction with speech they can be used to create additional layers of meaning, overcoming limitations of temporally linear speech. For example, gestures can be used to display higher-order semantic units that can only be described verbally bit by bit—such as the stacking of imaginary images found in example 4.1. Kendon (2000, p. 50) argues that it is through the partnership between gesture and speech that utterance meaning is achieved.

4.2 Synchrony of Speech and Gesture

The details of how gesture and speech are combined, including timing, can be explained as aspects of the speaker’s thought process. McNeill finds that the stroke of a gesture is planned to coincide with whatever is contrastive in context. He suggests that the new, important information is the mental source of the utterance called the ‘growth point’ (McNeill, 2007, pp. 7-

8). In this section, I will illustrate how the stroke of a gesture is synchronized with the main idea (the growth point) of an utterance.

Kendon (2004, p. 112) divides gestures into three stages: preparation, stroke, and recovery. To illustrate this structure, I will return to the first gesture of example 4.1 (figure 12) which I have broken down into three parts in example 4.2. In this example, figure 16 is the preparation stage of the gesture, figure 17 is the stroke, and figure 18 is the recovery (and, in this case, the preparation for the next gesture shown in figure 13 in example 4.1).

Example 4.2 Stages of a gesture: preparation, stroke, and recovery.
Video 27 https://www.youtube.com/watch?v=9WBoORq9SYc

Figure 16 Preparation Video 27—0:00

Figure 17 Stroke Video 27—0:05

Figure 18 Recovery Video 27—0:07

The stroke of a gesture is the part closest to the gesture's apex. It synchronizes with the utterance at the point where speech and gesture embody a single underlying meaning. This point is the main idea. In example 4.2, the word that synchronizes with the stroke of the gesture is *silu*, a borrowing from the Spanish word *cielo*, meaning "sky."

McNeill (2007, pp. 1, 5) notes that while 'unpacking' this idea, the speaker may pause to make sure it all comes together properly, and may start over if it gets too slow. In example 4.2, Luisa starts the preparation for this gesture almost four seconds before she says the word *silu*. During this time, she holds her hands in the preparation position, waiting for the moment of synchronization. This pause during the preparation stage is not very common. In this case, it seems that she began thinking about describing the sky but then added the facts that the houses, earth, and trees were gone. Then, when she did finally describe the sky, her gesture was synchronized with the word *silu*.

The synchrony of speech and gesture is not disrupted by non-fluid speech. In fact, gesturing helps prevent stuttering. It also helps to propel thought and provide imagery (McNeill, 2007, p. 5). Kendon (1997, p. 114) also found that gestures help the speaker—perhaps aiding in verbal formulation (such as holding complex concepts in mind and lexical retrieval).

Thought is an imagistic whole with two performative modes: speech and gesture. This is illustrated by McNeill's discovery that when utterances are recalled, information learned from gestures may be reported in speech and vice-versa (2007, p. 5). In other words, a thought is formed as an image that is then translated into the dual forms of speech and gesture for the sake of communication. The interlocutor then interprets the information as a single image, even though it was communicated using two modes. Speech and gesture must be regarded as two aspects of a single cognitive process (Kendon, 2004, p. 76).

In face-to-face conversation, gestures may embody several parts of the immediate context: for example, a responsive gesture embodies the statement to which it is responding. It also embodies the relationship and behavior between the interlocutors as well as the wider social context of that relationship. If it is a conventionalized gesture, it references the conventions of gesture use in the larger speech community (Streeck 2010, p. 239). "Interaction…is never about just one level of context….Rather, it is simultaneously about all of the scales of embodied context the participants bring to bear during the interaction. Embodied action (including speech) always contributes to the sustaining of multiple nested contexts at once" (Streeck & Jordan 2009:454).

Contrasting with this concept of a unified mental process is the idea of 'leakage' in gesture—that gestures betray hidden thoughts or feelings. This idea springs from Descartian dualism, which separates the body from the mind and the biological from the social. This philosophy underlies the western tradition in which the mind and body are two separate things that struggle against each other (Haviland 2005:15; Klassen, 1998, p. 35). Yet, as Streeck points out, we should view the body and mind as a single entity since "the human mind is embodied" and works with the body as a cognitive whole (2010, p. 237).

4.3 Idea Units

In the previous section, I stated that the stroke of the gesture coincides with the main idea of an utterance and that this idea can be communicated by both speech and gesture. This main idea, the 'imagistic whole' mentioned in the last section, is also called an 'idea unit' (Kendon, 1975, p. 355).

Gestures affiliate with idea units rather than with specific words. It is important to analyze a gesture using idea units rather than clausal units. Contextual information is important to the interpretation of a gesture even if it lies outside of the clause that accompanies it (Holler and Beattie 2003, p. 84). Gestures may visibly exhibit a single idea unit that extends throughout the course of a spoken utterance, or even after it (Klassen, 1998, p. 58; Kendon, 1975, p. 355). One gesture can depict an idea that requires several words to describe. All content words have an underlying idea but not all ideas have a corresponding content word. There is often not a single lexical affiliate for a gesture (Dingemanse, 2013, p. 154). To illustrate this concept, I turn to an interview in which Luisa relates a vision she experienced under the influence of ayahuasca (a hallucinogenic drug used in Amazonian healing practices). In this vision, she sees an anaconda approach her (or boa constrictor; both are called *amarun*).

Example 4.3 Gestures affiliate with idea units rather than words.
Video 28—11:56 https://youtu.be/9wQ4tFGMPu4?t=11m55s

Figure 19 *amarun* Figure 20 *ling* (1) Figure 21 *ling* (2) Figure 22 *ling* (3)

Amarun	ruku	shamu-ra	kalyu	ling ling ling ling ling ling ling ling ling ling ling ling
Anaconda	big	come-PAST	tongue	IDEO
Anaconda	big	came	tongue	ling ling ling ling ling ling ling ling ling ling ling ling

'A big anaconda (fig 19) came, its tongue (going) *ling ling ling* (fig 20) *ling ling ling* (fig 21) *ling ling ling* (fig 22) *ling ling ling.*'

The gestures in figures 19-22 coincide with the idea unit of "a big anaconda came." In figure 19, she reaches out both hands in front of her face, about two feet apart, and brings them down close to her lap. Then she elaborates on this experience with another gesture and the ideophone *ling.* In figures 20-22, one hand moves forward, around in a loop, and then sweeps inward again. She makes this gesture while repeating the ideophone *ling* several times. The gesture illustrates the smooth, winding path (and form) of the snake as it comes closer. This idea unit is depicted in one gesture, yet would require more than one word to describe. In this case, Luisa does not state this information verbally, but communicates it only in gesture. *Ling*, the utterance which does accompany the gesture, is an ideophone that depicts insertion or penetration; in this case, it depicts the repeated flicking-out of the snake's tongue.

Gestures are also used to illustrate discourse structure. Different types of gestures (defined in the next section) are used in specific discourse levels (McNeil, 1992, p. 15). McNeil suggests that gestures change as the narrator switches between the main story line and metanarration—iconic gestures are used in the main story, metaphoric gestures are used with comments on the narrative, and no gestures or deictic gestures are used with comments about the speaker's experience watching the stimulus. Beat gestures often mark a move between these levels. Beats can mark 'new' and 'given' information and cohesive gestures indicate logical connections. They can also mark the contrast between the advancing narration and background information (McNeil, 1992, p. 15).

4.4 Classification of Gesture

There are many ways to classify gestures for the purpose of analysis. They range from simple divisions based on the presence of one feature to complex systems that incorporate several features. For the purposes of this analysis, I will be using McNeill's (1992) classification. McNeill distinguishes between imagistic and non-imagistic gestures. Each of these classes can be further subdivided into categories:

- Imagistic gestures
    - Iconic gestures: display an image, through either shape or movement, which share characteristics with the semantic content of the accompanying utterance.
    - Metaphoric gestures: also display an image, through either shape or movement, but the image presented is that of an abstract concept. This is accomplished by using metaphor.
- Non-imagistic gestures
    - Deictic gestures: use 'pointing' movements.
    - Beat gestures: have no discernible meaning. They are simple rhythmic movements that punctuate or refer to discourse structure.
    - Cohesives gestures: tie thematically related parts of the story together by reusing a gesture in the same gesture space.

    (McNeill, 1992, p. 80)

Iconic (depictive) gestures are tightly organized and firmly supported by linguistic units ("like this") and visually attended by both speaker and recipient. They depict what the spoken utterance describes (Streeck, 2010, p. 230). **Metaphoric** gestures may be pictorial but

demonstrate abstract processes as dynamic patterns. They represent the idea that parallels the utterance. **Deictics** are pointing gestures referring to physical or imagined objects. **Beats** happen in a reoccurring rhythmic pattern. They illustrate the speaker's perception of the discourse structure and can emphasize a word to show that it is significant or that it is new information. **Cohesives** are gestures that tie thematically related parts of the story together by reusing a gesture in the same gesture space, as if to say, "Now, coming back to this theme here."

These categories point to the role of gestures in illuminating and structuring the narrative (Klassen, 1998, p. 57). Gestures help establish context. While context reflects the physical, social, and linguistic environment, it is also a mental construction. The speaker constructs a representation of context in order to make the intended contrast (of the new information) meaningful within it (McNeill, 2007, p. 6).

These gestures differ semiotically in how they communicate meaning. Iconic gestures may directly depict the most salient feature of an idea unit; yet, metaphoric gestures must add a referential step by depicting a feature that metaphorically represents an abstract idea. A detailed discussion of semiotics is outside of the scope of this thesis. It is enough to note the key semiotic features of the communication modes involved—i.e. prosaic speech, gesture, and ideophonic performance. In this section, I will illustrate the five categories of gestures McNeill uses in his typology with examples from my data, starting with iconic gestures.

Example 4.4 Iconic gesture.
Video 45—7:17 https://youtu.be/wxaz_NrUY-4?t=7m15s

Figure 23 *tian* (1)

Figure 24 *tian* (2)

Uma-i-ga	tyan	kuti	tyan
Head-LOC-TOP	IDEO	again	IDEO
In the head	tyan	again	tyan

'In the head (they hit it) *tyan*! And again *tyan*!'

In example 4.4, Luisa uses an iconic gesture. She is telling the story of a vampire-like creature that has three forms: human, bat, and invincible beast. In this example, the people of the village are attacking the giant beast with metal weapons, but find that the beast is as hard as stone. This gesture is iconic because it directly mimics the way the people in her story held their weapons as they struck the beast. The ideophone also iconically depicts the high-pitched ringing sound of metal striking something hard. Luisa could have successfully depicted this image with alternative forms. For example, she could have held up one hand and made a chopping motion, depicting the weapon rather than the hands that held it. Yet, Luisa decided to use the gesture she did, throwing her entire upper body into the performance. Perhaps this gesture increases the dramatic experience by emphasizing the perspective of the character rather than the observer (see McNeill, 1992, p. 118). I note the use of this perspective in chapters 5 and 6 and call the gestures that use it 'speaker-internal perspective' gestures, a subset of iconic gestures.

To illustrate the use of metaphoric gestures, I return to Luisa's flood story. While describing the magnitude of the flood's destruction, Luisa uses the ideophone *win* meaning "everything" or "complete." This is an abstract idea and she uses a metaphoric gesture to help depict it.

Example 4.5 Metaphoric gesture.
Video 26—6:46 https://youtu.be/6Nk9G-hqKWk?t=6m45s

Figure 24 *win* (1)

Win	wasi-ta	shita-pa-ra	ña
IDEO	house-TOP	throw-HON-PAST	now
Win (everything)	house	it threw	now

'Everything; the houses it threw.'

The gesture she uses in figure 24 to depict the abstract idea of "everything" is a wide circle above her head. This circle metaphorically encompasses everything. The fact that she is reaching as far out as she can and that she is reaching above herself suggests the infinite scope of the circle. This metaphor is the extra referential step needed to refer to an abstract idea—the circle parallels the idea of everything. *Win* is a widely used ideophone. Of the 435 ideophone performances in my data 50 (11.5%) are instances of *win*. In the PQ data, almost all

performances of this ideophone are associated with some kind of circular or sweeping completive gesture.

The use of deictic gestures is illustrated in example 4.6. In it, Carmen is lecturing on the medicinal properties of a particular tree. Since the tree is the topic of conversation, she frequently indicates it with deictic gestures. At times, she even lays her hand on the tree as she talks about its bark. In figure 26, she is explaining the tradition of nicely asking the tree's permission to take its bark to make medicine.

Example 4.6 Deictic gesture.
Video 55—1:56 https://youtu.be/jmN-tb9Z45o?t=1m54s

Figure 26 Indicating a tree

Asta-lya-y	apa-nga	ra-u-nchi
Until-just-LOC	take-FINF	do-PROG-1PL
Just until	will take	we do

'We will just take what we need (fig 26).'

Deictic gestures are rather straightforward in their meaning. Unlike iconic and metaphoric gestures, deictic gestures are non-imagistic. Rather than depicting an image, they direct the attention of the interlocutor to something. The gesture might be indicating an object within the interlocutors' field of vision, or the direction of an unseen object or location mentioned earlier in the utterance. Deictic gestures can also reference imaginary scenes that have been set up earlier in the conversation.

Beat gestures, unlike the previous types of gestures, have no discernible meaning. In example 4.7, Luisa offers us an example of one of the few beat gestures that accompany ideophones. She is depicting the cry of a baby sloth, which happens to sound a lot like a human baby.

Example 4.7 Beat gesture.
Video 14—0:56 https://youtu.be/8ZkzQ1zHVxk?t=55s

Figure 27 *mema*

Mema mema mema	waka-n-ga		shuk	puri-u-n	uyak-pi
IDEO	cry-3-FUT		one	walk-DUR-3	ear-LOC
Mema mema mema	it will cry		one	walking	hear

'*Mema mema mema* it will cry and be heard by someone walking'

Luisa uses both hands for this beat gesture. She raises and lowers them in time to the syllables of *mema.* She uses the beat gesture to emphasize the repetitive and emphatic nature of the baby sloth's cries. Beats happen in a reoccurring rhythmic pattern in prosaic speech as well, illustrating discourse structure or emphasizing important points.

Cohesive gestures are, in a way, deictic. When describing a scene, a speaker may outline an area in the gesture space and then place objects and people within that area to be referred to throughout the conversation. This is similar to what happens with cohesive gestures, except that when cohesives are used, the people and objects are not necessarily placed in spatial relation to

each other. The speaker will choose a place in her gesture space to keep an idea. Later, she will gesture to that spot to reference the idea. In example 4.8, Luisa is setting up her gesture space in the Noah story. As she introduces characters, locations, and objects, she places them in her gesture space.

Example 4.8 Cohesive gestures: setting up locations in gesture space.
Video 26 https://youtu.be/6Nk9G-hqKWk?t=1m25s

Figure 28 Downriver (Video 26—1:24)

Figure 29 Upriver (Video 26—1:25)

Figure 30 Sky (Video 26—1:41)

Figure 31 Agricultural field (Video 26—3:08)

In figures 28-31, Luisa establishes locations in her gesture space. She places Noah and his wife downstream in figure 28 and places the drunk and disorderly people upstream in figure 29. I believe she is referencing the geography of the Napo valley when she makes this arrangement. Obviously, she is using the locations of upstream and downstream where they actually are in relation to her. But she is also referencing the locations of urban and rural populations. The town (Tena) is upstream, while rural neighborhoods are located downstream.

The town is where people gather in bars and party. Home is where people work hard and grow food for their families. In figure 30, the sky, of course, is placed above her. She is talking about how it is going to explode soon and she references it several times throughout the story. It is also the location of the voice of God speaking to Noah. In figure 31, Luisa points out to the forest to indicate the location of Noah's agricultural field. Quichua people often have a field away from home in the forest where trees are felled to make room for manioc plants.

Example 4.8.1 Locating prepared food in the gesture space.

Figure 32 Jug of water (2:19) Figure 33 Jug of aswa (2:24) Figure 34 Dried food (2:30)

In figures 32-34, she places the food storage that Noah is preparing directly in front of her. She is depicting the image of large jars and pallets of drying food surrounding her as she sits in her chair. Luisa gesturally refers to these food stores multiple times as she describes Noah's preparation for the flood. This is also the location of the boat he builds later in the story.

Example 4.8.2 Referring back to locations in gesture space.

Figure 35 Tell them (1:53) Figure 36 Go to the forest (3:55) Figure 37 See my house (5:47)

In figures 35-37, Luisa references the spots she had previously set aside to signify the locations of certain things. In figure 35, God tells Noah to warn the people, so Luisa points upstream where she has placed the partying people. In figure 36, Noah is told to go to the forest to gather balsa wood for his boat. Luisa indicates the same location as the agricultural field

which is presumably out in the forest. In figure 37, Noah asks the people to come see the preparations he is making at his house, so Luisa points downstream where she had placed Noah's home earlier.

Cohesive gestures visually unite themes in a narrative. They allow the narrator to visually communicate her mental organization of the locations and people involved. These gesture space decisions may also subtly imply information not stated in the utterance—like the location of the drunk partiers being placed in the general direction of Tena.

A highly systemized example of cohesive gestures is found in American Sign Language. Tokens may be assigned locations in an ASL signer's gesture space. These locations are then gestured to throughout the conversation as pronouns. This is called a referent locus system. As many as eight loci can be set up before the interlocutors start to feel overloaded. (Liddell, 2003, pp.190-221; see also Perniss, 2007).

McNeill's classification with iconic, metaphoric, deictic, beat, and cohesive gestures will be sufficient for the purposes of my thesis. These gestures illuminate and structure the narrative (Klassen, 1998, p. 57) as well as help establish context. As shown in example 4.8, gestures can communicate the physical and social context of a narration. Gestures may also offer some insight into how a speaker mentally organizes information. As we speak, we can create meaningful gestures without even paying attention to them because we are fluent in the cultural conventions of gestural communication. In the next section, I will discuss the processes of creating and conventionalizing gestures in a speech community.

4.5 Creation and Conventionalization of Gesture

All conventionalized gestures were born as creative gestures. Creative gestures convey meaning with varying degrees of iconicity—a perceived resemblance between form and

meaning. Iconicity can come across in several aspects of gesture including hand shape, direction of movement, time, and location (Haviland, 2005, pp. 10-11). Each conventionalized gesture went through a process of schematization, stylization, abstraction, and simplification (Poggi, 2008, p. 56; Haviland, 2005, p. 6). When a speech community uses an iconic gesture more and more it becomes conventionalized and can then lose its iconicity to become stylized and abstract. It can only lose its iconicity when it no longer needs it to be understood. An arbitrary gesture must necessarily be conventionalized, while a creative one must necessarily be iconic to be understood (Poggi, 2008, pp. 51, 55). Conventionalized and non-conventionalized gestures are on two ends of a gradient scale. Conventionalized gestures, such as emblems (language-like signs), are more or less consistent across a community while beat gestures and those created on the spot are on the non-conventionalized end of the scale.

With regard to the process of creating gestures, Poggi (2008) postulates that our first recourse is to identify our referent deictically. If this is not possible, the features we represent iconically are chosen based on both our goals and our communicative resources; "we represent those beliefs that are, at the same time, most distinctive of the referent, and possible and easy to be represented by hands" (2008, p. 52). Gestures are shaped by "the body's practical acquaintance" with the physical environment that it has "explored and lived in" (Streeck, 2009, p. 150). When these methods do not work, we need to resort to a 'medium referent' (representable with hand movements) that links to the 'target referent'. This is called a metaphoric gesture—bridging the gap between concrete representation and abstract meaning. The "circle" gesture in example 4.5 is a medium referent that links to the target referent of "everything." No idea is impossible to represent gesturally (Poggi, 2008, p. 55). It is possible to

have abstract meanings in gesture by employing metaphor (McNeill, 2007, p. 2; Haviland, 2005, p. 11).

In the next chapter, I will discuss the relationship between ideophones and gesture. Few researchers have yet to study this topic in depth, but those who have offer excellent insights into this complex issue. In order to discuss ideophone-gesture composites, I have outlined the principle features of both ideophones and gestures in the last two chapters. Now I will discuss what has been discovered about their relationship in recent research and how it relates to my analysis of the Pastaza Quichua data.

Chapter 5: Ideophone-Gesture Composites

In previous chapters, I have noted that ideophones are often accompanied by gestures. In chapter 3, I described the basic characteristics of ideophones and how they function in language. In chapter 4, I described the basic characteristics of gestures and how they interact with speech. In this chapter, I will discuss the unique relationship between ideophones and gestures. An ideophone and its accompanying gesture form one performative act which is called an 'ideophone-gesture composite' (Mihas, 2013, p. 29) or IG composite. I will be using this term in chapters 5 and 6.

The co-occurrence of ideophones and gestures has been noted since the middle of the 19th century (Schlegel, 1857, p. 114; Steinen, 1894, p. 71). Yet, the study of ideophone-gesture composites has only recently become more feasible due to the relative ease of collecting and analyzing video data. In a guide for conducting linguistic field research, Dingemanse (2010, p. 25) emphasized the need to record the gestures that accompany ideophones as their importance has long been noted but not adequately studied. In this chapter, I will discuss the functions of IG composites and how their use in the Pastaza Quichua data reinforces what is already known. Previous research has analyzed their capacity for conveying information and their use as rhetorical devices. I will also elaborate on the idea of 'speaker-internal' and 'speaker-external' perspectives and their relevance for IG composites, first discussed in Nuckolls et al. (2015) and Nuckolls et al. (forthcoming).

5.1 Introduction to the Ideophone-Gesture Relationship

In ideophone-gesture composites, the ideophone is closely synchronized with the stroke of the accompanying gesture. As noted in the previous chapter, gestures tend to coincide with the new and important information—the mental source of the utterance called the 'growth point' (McNeill, 2007, pp. 7-8). It is interesting, then, that when there is an ideophone in an utterance the accompanying gesture coincides with the ideophone (Kita, 1997, p. 392). When a verb is combined with an ideophone, only the ideophone is co-articulated with a gesture. But when the ideophone is not present, the verb usually gets the gesture (Kita, 2001, p. 426; Mihas, 2013, p. 46; Reiter, 2012, p. 419).

Kita (1997, p. 392) found an overwhelming correlation between ideophones and gesture and suggested that whenever a language has ideophones, they will be synchronized with the gesture strokes of an utterance. He says that a gesture will coincide with the prosodic peak of an utterance—which tends to fall on the ideophone. However, Güldemann (2008, p. 277) says that ideophones and gestures are both mimetic signs which can, but need not be, performed together. Dingemanse agrees with Güldemann's interpretation, suggesting that ideophones and iconic gestures do not necessarily co-occur but often do because they are "two aspects of a depictive performance, and as such will tend to coincide temporally within an utterance" (2013, p. 156).

Ideophones may be expressed by, dependent on, and sometimes entirely replaced by gestures (Kunene, 1965, p. 21). Some researchers have gone so far as to say that ideophones are incomplete without their accompanying gestures (Moshi, 1993, pp. 201-202; Klassen 1998, p. 8). Zondo notes that "gesture and body movement are of vital importance to the overall semantic import of an ideophone" (1982, p. 123). Klassen's research on Shona ideophones led her to agree with Zondo in that gestural proficiency is required for competence in using ideophones. Even

though much of the previous research on African storytelling had ignored their function, Klassen argued that both the acoustic and kinesthetic dimensions of ideophone performances are required for complete understanding (Klassen, 1998, p. vii).

The relationship between the two expressive devices may be explained by the fact that they are similar in many ways. Both are depictive rather than referential (Streeck, 2008, p. 285), both foreground important information, and both engage the audience in a sensory experience. While prosaic utterances are made up of sequential syntactic parts, ideophones and gestures can express an entire phrase all at once, complementing and enriching the rest of the utterance. Ideophones and gestures are both complete (and selective) depictions of complex states of affairs (Kunene, 1965, p. 32; Dingemanse, 2011, p. 352; Kita, 1997, p. 392). Güldemann (2008, p. 277) places both ideophones and gestures under the category of 'mimetic signs' along with direct reported speech and sound imitation. Kita (1997, p. 409) calls this the 'affecto-imagistic' mode of meaning.

Previous research has suggested reasons why an ideophone that is clear enough in context would be co-depicted by a gesture. Kita suggests that it may be due to the inherent imagery in the ideophone (Kita, 2001, pp. 427-8). Reiter (2013, p. 413) and Dingemanse (2013, p. 153) suggest that they may simply increase the dramatizing effect of the performance—that speakers use all available means to produce a single, richly multimodal act of depiction. It is also possible that a gesture helps the transition from description to depiction as the speaker turns actor (Kunene, 1965, p. 36; Klassen, 1998, p. 156; Dingemanse, 2013, p. 145). These suggestions are supported by the fact that IG composites most often appear at clause edge, showing prosodic foregrounding and expressive morphology (extra length, volume, etc).

When IG composites are used in narrative discourse, the speaker is not only narrating the event but is also taking on the role of an actor who re-creates or dramatizes an event for his or her audience. This re-creation is done by combining an ideophone (the linguistic feature) with a gesture (the extralinguistic feature), simultaneously depicting the event in two modalities. The use of such extralinguistic features further enables the listener to vicariously experience events by intensifying the dramatizing effect and evoking a physical sensation (Moshi, 1993, p. 190; Reiter, 2012, p. 413; Kilian-Hatz, 2001, p. 155; Nuckolls, 1996, p. 11). Klassen (1998, p. 193) notes that IG composites are always reserved for the most dramatic moments of multi-generic performance. The dramatic capacity of IG composites is apparent in example 5.1:

Example 5.1 Dramatic capacity of ideophone-gesture composites.
Video 30—16:26 https://youtu.be/CPDwno3Czvg?t=16m20s

Figure 38 *tuglu*

Rawai-ta	tuglu tuglu tuglu
Blood-TOP	IDEO
The blood	tuglu tuglu tuglu

'The blood *tuglu tuglu tuglu*.'

In example 5.1, Luisa describes an event that she witnessed while picking fruit high in a tree. She saw a tapir running from a jaguar in the forest below. The jaguar pounced on the tapir, broke its neck with a bite, drank its blood, and carried it off to find a better place to eat it. In this example, Luisa graphically depicts the jaguar drinking the tapir's blood with the ideophone *tuglu* and a neck-pinching gesture. *Tuglu* depicts the sound of drinking and can be compared to the English "glug-glug."

In this depictive gesture, Luisa is both the hunter and the prey. Her hand depicts the mouth of the jaguar and her throat stands in for the throat of the tapir. The ideophone is onomatopoeic—depicting the sound of the event. Though, one could make a case for its inclusion in the synesthetic ideophone class: It may also depict the physical sensations of swallowing by the use of back vowels, a voiced velar stop, and the tongue movement of the liquid /l/. In this IG composite, Luisa is taking on the role of an actor re-creating an event. She is very effectively engaging her audience in a vivid, sensory experience—evoking a physical sensation of the depicted event. IG composites are remarkable resources in this effort. Both the ideophone and the gesture are conveying information that would take several words to say. They complement and enrich each other as well as the utterance.

In the next example, which takes place a few moments later, Luisa is explaining the meaning of *tuglu* with another ideophone, *tus*, and its gesture. *Tus* is a synesthetic ideophone that depicts a juicy moment of bursting, like squishing a grape.

Example 5.2 Further dramatization of the same event.
Video 30—16:48 https://youtu.be/CPDwno3Czvg?t=16m47s

Figure 39 *tus* (1)

Figure 40 *tus* (2)

Tus	kan-iu-n	kai-bi
IDEO	bite-DUR-3	there-LOC
Tus	it is biting	there

'*Tus*! It is biting there.'

In example 5.2, *tus* depicts the bursting of the tapir's skin. This IG composite relates information that is not included in the utterance. In the utterance, she states that the jaguar is biting. In the IG composite, she depicts the additional information of the location of the bite and the bursting of the neck skin.

The relationship between ideophones and gestures is a complex intersection between two depictive modes. At times, one is dependent on the other for context, which is required for understanding. In other instances, they convey the same information and seem to co-occur only for dramatic impact. In still more instances, they convey completely different information, perhaps to efficiently depict a complex scene. In this chapter, I will focus mainly on their capacity for conveying information and their use as rhetorical devices. In the next section, I will discuss the educational utility of IG composites.

5.2 Educational Utility of Ideophone-Gesture Composites

In learning and apprenticeship situations, ideophone-gesture composites serve the unique function of facilitating learning. They serve as teaching tools *par excellence* drawn from the repertoires of traditional knowledge of how one does things with hands (Mihas, 2013, p. 29). They are culturally-specific, concise, and complete depictions of the practice that is being taught. Since ideophones and the gestures that go along with them draw attention to themselves, they are used liberally to achieve the speakers' educational goals. This rich texture allows for additional layers of expressivity and meaning (Klassen, 1998, p. 8; Mihas, 2013, p. 29).

Several IG composites are conventionalized and widely distributed in teacher-learner discourse; they are recognized and used throughout the larger community (Mihas, 2013, p. 56). These composites are particularly useful in passing on knowledge because of the heavy load of information they are capable of conveying. "Composite utterances appear to constitute a conventionalized inventory of holistically-packaged knowledge structures, grounded in the speakers' sensory experiences with the world" (Mihas, 2013, p. 56). They can precisely illustrate many things all at once and abstract from the actual action only the relevant features. Ideophones and gestures combine to give a vivid audio-visual display that catches the attention of the learner and is easily remembered (Mihas, 2013, p. 37).

In the PQ data, there are several good examples of teacher-learner instruction. In example 5.3, Elodia is teaching a group of students how to make medicine for inflamed joints. She uses a gesture that mimics the movement of a knife as it scrapes across the flesh of a cannonball fruit. The gesture occurs with the ideophone *wisu*, meaning "to scrape" or "to sweep."

Example 5.3 Elodia demonstrates how to make medicine.
Figure 41: Video 20—4:32 https://youtu.be/MWYLK83bqII?t=4m31s
Figure 42: Video 65—4:25 https://youtu.be/Vd2y9Y2ly6c?t=4m25s

Figure 41 *wisu* (1)

Figure 42 *wisu* (2)

Wisu wisu wisu wisu
IDEO
Wisu wisu wisu wisu

'*Wisu wisu wisu wisu.*'

In figure 41, Elodia tells the students what needs to be done, then in figure 42, actually demonstrates the process. The IG composite in figure 41 effectively exhibits the most relevant features of the practice she is trying to teach. The composite depicts a repetitive scraping across the surface of the flesh that will produce the desired poultice. The visual aid catches the students' attention as all eyes turn to the demonstration. IG composites are especially capable of capturing the undivided attention of the learner and getting information across (Mihas, 2013, p. 29).

Ideophone-gesture composites are also useful teaching tools in the less-direct methods of education, like storytelling. Klassen (1998, p. 7) notes that Shona storytellers have a vested interest in creating memorable and aesthetically pleasing performances. Stories are told for various reasons aside from their entertainment value. Folktales train children's imagination, moral sense, emotional development, and command of the language. Teaching not only folktales,

but also the art of storytelling, helps children develop a keener sense of memory. Experienced storytellers have a sense of how to create balance among expressive elements to make an impressive performance. As the narrative progresses, the speaker's use of ideophones increases; so much so that the third person narration almost disappears at the climax. This increase correlates with an increase in gesturing (Klassen, 1998, p. 254).

5.3 Viewpoint Expressed in Ideophone-Gesture Composites

Ideophones and gestures may express 'viewpoint' in narration. The hands may perform the action being described (the perspective of the protagonist) or serve as proxies for what is seen (the perspective of the observer) (Haviland, 2005, pp. 10-11). McNeill (1992, pp. 188-206) found that iconic gestures are used when the speaker is narrating from the character's viewpoint and that deictic gestures are used when narrating from an observer's viewpoint. Klassen also reports that the use of ideophones may distinguish between voices. In her data, the narrator does not use ideophones in direct reported speech but they are plentiful in third person narrative. Sometimes the ideophone speaks for the character while the gesture shows their actions (Klassen, 1998, p. 202). Nuckolls et al. (2015) noticed that, in the PQ data, the level of iconicity in IG composites seems to coincide with the 'closeness' of the referent in the conceptual scene. This perspective is apparent only in the gesture's manner of depiction. The most iconically depictive gestures seem to have a speaker-internal perspective built within them. While, on the other hand, the least iconic gestures seem to be from a more distant observer's perspective (speaker-external).

This principle of perspective is illustrated in the next three examples of *polang*, a PQ ideophone that simulates the idea of buoyancy (Nuckolls, 1996, pp. 155-158). In these examples, *polang* is depictive of a gliding movement from underwater to the surface. The gesture in

example 5.4 is depicted from a participant's perspective, which I will be calling 'speaker-internal perspective' (Nuckolls et al., 2015; Nuckolls et al., forthcoming). This term captures the idea that, for a moment, the speaker *becomes* the thing he or she is depicting. The next two examples, 5.5 and 5.6, exhibit the observer's perspective (speaker-external perspective) with two different levels of iconicity. The more iconic gesture in example 5.5 seems to be from a closer perspective than the one in 5.6. This 'closeness' is not necessarily physical closeness, but mental closeness. As discussed in section 4.4 and illustrated in examples 4.7 and 4.8, the speaker places objects and locations in his or her gesture space—creating a mental stage that can be referred to throughout the story. It seems that gestural iconicity increases with proximity to the speaker on this mental stage.

In example 5.4, Luisa describes a scene in which she is traveling with others across a pond. One of her companions points out a manatee in the water and tells Luisa to look at it. When she does, the manatee defecates and a large amount of excrement floats to the top of the water. Luisa was quite surprised.

Example 5.4 Speaker-internal perspective.
Video 29—19:35 https://youtu.be/jfBIY2AcubM?t=19m30s

Figure 43 *polang* (1)

Figure 44 *polang* (2)

Figure 45 *polang* (3)

Baka	marina	riku-ngi	ni-ra	chi	kucha-y	chi-ga	wagra
Cow	sea	look-2	say-PAST	that	pond-LOC	that-TOP	cow
Cow	sea	look	they said	that	in the pond	that	cow

‘“Look at the sea cow,” they said, “in the pond, that cow.”

Shina	polang	isma-ra	ña	wagra	isma
Like	IDEO	poop-PAST	now	cow	poop
Like	polang	it pooped	now	cow	poop

It was like *polang,* it pooped! It was cow poop!’

In figures 43-45, Luisa is looking up as her hands, cupped around the imaginary object, shoot up. Interestingly, Luisa depicts the poop from the poop’s perspective. This is the speaker-internal perspective. For a moment, she becomes the poop as it travels to the surface of the water. The high level of iconicity seems to be warranted by the closeness of the perspective and the drama of the event.

In example 5.5, Luisa depicts Noah and his family being lifted up on their boat by the floodwaters with the ideophone *polang*. This ideophone performance is less dramatic than the one that immediately preceded it: *tsax* (example 1.2 in chapter 1), during which she becomes the floodwaters and fiercely depicts their destructive force. The gesture that accompanies *tsax* is performed from a speaker-internal perspective while the gesture shown in example 5.5 is performed from a speaker-external perspective. This may be due to the ebbing dramatic profile of the scene. In example 5.5, the rising of the boat is depicted from a close speaker-external perspective.

Example 5.5 Close speaker-external perspective.
Video 26—6:28 https://youtu.be/6Nk9G-hqKWk?t=6m27s

Figure 46 *polang* (4)

Figure 47 *polang* (5)

Balsa-ga	polang
Balsa-TOP	IDEO
Balsa	polang

'The balsa boat (rose up) *polang*.'

Throughout this story, Luisa has depicted the building of the boat with gestures that suggested the boat was sitting at her feet. Now, as it rises, her hands depict the large mental image of the closely situated boat floating up in front of her.

In example 5.6, Luisa depicts the same moment as example 5.5, repeating herself. Repeated information is not as dramatic as new information. Ideophones and gestures that depict previously known information are subject to fading (see section 5.6; Reiter, 2012, p. 415).

Example 5.6 Distant speaker-external perspective.
Video 26—6:51 https://youtu.be/6Nk9G-hqKWk?t=6m51s

Figure 48 *polang* (6)

Figure 49 *polang* (7)

Figure 50 *polang* (8)

Kanoa-ga	polang	chay-bi-shi	waka-sha
Canoe-TOP	IDEO	that-LOC-EV	cry-COR
The canoe	polang	in that	crying

'The canoe (rose up) *polang* and with that (they were) crying.'

In this less iconic gesture, Luisa only uses one hand to depict the boat as it rises on the flood waters. This action is depicted from a more distant speaker-external perspective. It is clear that Luisa visualizes herself as farther away from the object she is depicting in example 5.6 than the object she is depicting in example 5.4.

Ideophones and gestures work together to create a vivid image. Gestures can provide information on a speaker's perspective of this image, which is a part of the performance context. This perspective seems to be related to the level of iconicity exhibited in the gestures. If a speaker imagines an object is closely situated to him or her on the mental stage, it may have a higher level of iconicity than an object that is imagined as being farther away. In the next section, I will discuss other ways gestures provide context and clarification in ideophone performances.

5.4 Gestures Clarify the Meanings of Ideophones

Ideophone-gesture composites are an excellent example of "multimodality"—when different kinds of signs are combined in a way that allows them to elaborate each other, they make a whole that is greater than the sum of its parts (Mihas, 2013, p. 28). Far from being 'paralinguistic' or 'superfluous,' the gestures associated with ideophones should be taken as a co-production of the speech (Kendon, 2004; McNeill, 1992; Dingemanse, 2011).

Ideophones are best examined and understood within a performance context (Klassen, 1998, p. vii). Even within the same performance, an ideophone can have several shades of meaning. Gestures can contribute significantly to these meanings. Klassen notes that a storyteller may use the same ideophone several times in the same story, yet perform it with different

gestures. This variation shows that, even in the same performance, an ideophone may have several shades of meaning, and that the gestures that accompany it contribute significantly to these meanings. The meanings of ideophones go well beyond either referential meaning or even a single sound-symbolic meaning and must be interpreted in context (Klassen, 1998, p. 37).

The same principle is seen in example 5.7. Luisa uses the semantically-flexible ideophone *tak* on several occasions in her Noah story. *Tak* depicts a moment of contact, but can also depict a sense of "complete contact" or fullness (Nuckolls, 1996, pp. 178-186). In this example, Luisa performs *tak* with three different gestures in the same story.

Example 5.7 Luisa uses different gestures with tak.
Figure 51: Video 26—2:21 https://youtu.be/6Nk9G-hqKWk?t=2m19s
Figure 52: Video 27—2:28 https://youtu.be/9WBoORq9SYc?t=2m28s
Figure 53: Video 27—3:03 https://youtu.be/9WBoORq9SYc?t=3m2s

Figure 51 Jug filled to the top Figure 52 Bird lands Figure 53 Bird pecks

The gestures in figures 51-53 are accompanied by *tak*. In figure 51, Luisa depicts a large jug being filled to the top. This gesture indicates the level of the food at the top of the jar. In figure 52, a giant woodpecker lands on a tall, dead tree. Her cupped hands come together dramatically over her head as Noah's people watch the bird land in the tree. In figure 53, Luisa depicts the repeated tapping movement as the woodpecker pecks the tree with its beak. With each peck, she repeats the ideophone. These three IG composites depict different events. The specific meaning

of the ideophone in each event is dependent on the context—which is partially provided by the accompanying gesture.

Example 5.8 is another illustration of how a gesture can clarify the specific image depicted by an ideophone. In it, Eulodia co-depicts the meaning of the ideophone *polang* in its accompanying gesture. She is describing the behavior of animals in sunny and rainy weather. She uses *polang* to depict the way fish will lazily roll up to the surface of the water to enjoy the warmth of the sun. Earlier in this chapter, Luisa performs this ideophone with three different gestures (see examples 5.4, 5.5, 5.6).

Example 5.8 Eulodia co-depicts polang in gesture.
Video 7—0:25 https://youtu.be/RUQE-SnPM1Q?t=20s

Figure 54 *polang* (9)

Figure 55 *polang* (10)

Yaku-y	tia-k	aicha-was	kushi-ya-sha	kasna	polaang polaang
Water-LOC	live-AG	meat-INCL	happy-INCH-COR	like	IDEO
In water	dweller	fish	becoming happy	like	polaang polaang

'The water-dwelling fish become happy like this *polang polang*.'

Eulodia uses both hands in this gesture. She starts with her hands curled in toward her. Then she rolls them up and out until her palms are flat. *Polang* is performed slowly and mildly to depict the calm and lazy behavior of fish on a sunny day. This "buoyancy" image associated with *polang* can, of course, refer to anything that is moving in water. In example 5.4, Luisa uses it to

describe the movement of manatee excrement in water. In examples 5.5 and 5.6, she uses it to describe the movement of Noah's boat as floodwaters lift it. The context of the story certainly leads us to the general image depicted by *polang*, but the gesture makes the image much more specific. This gesture depicts in the visual-spatial modality what *polang* depicts in the auditory modality. They work together as a single performance to create a precise and detailed image.

As their meanings may vary according to context, no dictionary of ideophones or commonly used gestures can predict which aspect a narrator will be emphasizing in a particular performance. A single IG composite can be combined with various action verbs and contexts. They must be interpreted within their performance-generated meaning (Nuckolls, 1996; Klassen, 1998; Gomi, 1989). Nuckolls et al. (forthcoming) present a method of using video data in an online dictionary to aid in ideophone lexicography. This dictionary allows the lexicographer to include important, non-textual elements, like gesture, which greatly affect the meaning of the ideophone. Klassen (1998) presented part of her analysis as seventeen mini-essays on ideophones as these issues are best understood by exploring specific ideophones within their cultural and performance contexts. This is similar to how I will be analyzing my results in chapter 6.

5.5 Conventionalization of Ideophone-Gesture Composites

Gestures can enter into fixed relationships with ideophones forming stable pairs. Several ideophone-gesture composites are highly conventionalized both in and out of narratives (Reiter, 2012, p. 451-3, Mihas, 2013, p. 56). Dingemanse notes that the "depictive gestures that come with ideophones can be highly consistent", and that there are many cases of a "high similarity" of depictive gestures across speakers (2011, p. 223). Mihas found that in both food and medicine preparation, many IG composites were the same across all of her sources. Conventionalized

gestures are useful in a speech community when they enter into stable ideophone-gesture relationships. They are readily retrieved from the mental lexicon by the speaker and are easily interpreted by the hearer (Mihas, 2013, p. 37).

This principle is illustrated in example 5.9, in which three speakers use the ideophone *tai*. *Tai* depicts a lack of movement (Nuckolls, 1996, pp. 255-259). In these examples, it is apparent that this IG composite is, at least, somewhat conventionalized. The hand positions vary a little among the ladies, but all three seem to be conveying the image of 'stillness' in the same way.

Example 5.9 Three speakers use the same gesture for tai.
Figure 55: Eulodia in Video 7—2:24 https://youtu.be/RUQE-SnPM1Q?t=2m20s
Figure 56: Luisa in Video 26—8:07 https://youtu.be/6Nk9G-hqKWk?t=8m6s
Figure 57: Delicia in Video 25—1:28 https://youtu.be/3dnaxjIinaE?t=1m27s

Figure 56 *tai* (1)

Figure 57 *tai* (2)

Figure 58 *tai* (3)

In figure 56, Eulodia is depicting the way monkeys huddle tightly in trees as they wait for the rain to stop. The gesture in this figure actually occurs a second after the ideophone *tai*; she is holding her knees when she performs *tai* but then decides to illustrate the ideophone with a gesture, saying the equivalent of "like this." In figure 57, Luisa depicts the stillness of a pregnant jaguar that climbed onto Noah's boat and did not attack anyone. In figure 58, Delicia depicts the faithful people of Noah who are quietly praying rather than partying.

Dingemanse suggests two reasons for conventionalization: either the gestures are similar because they depict similar things (conceptual commonality) or because of a social convention (communicative convention) (2013, p. 159). The two are not mutually exclusive; frequently repeated gestures can turn into convention by sheer force of habit (Mihas, 2013, p. 56; Dingemanse, 2013, p. 160).

5.6 Syntactic Integration of the Ideophone Affects Gestural Behavior

The type of gestures which accompany ideophones is influenced by their syntactic integration and their prominence in the discourse (Reiter, 2013, pp. 406-8). Normally, ideophones are prosodically foregrounded and are often found at the edge of a clause. However, ideophones may be used within the structure of the sentence and become much more like prosaic speech. These are called 'embedded' ideophones. When ideophones are syntactically embedded, they may lose their prosodic markedness and thus their status as ideophones (Reiter, 2013, pp. 576-9). This process is called lexicalization and occurs gradually. Ideophones become grammatically and prosodically like prosaic speech, but may retain some of the performative features of ideophones. In terms of gesture, they are treated like verbs. Gestures are less likely to accompany ideophones that are deeply embedded in utterances. Reiter postulates that if a gesture accompanying an ideophone is not well-defined it is either because the ideophone is grammatically integrated or it has a low level of importance in the discourse (Reiter, 2013, pp. 297, 428-32). This is illustrated by Luisa's use of *win* in the next example:

Example 5.10 Embedded and non-embedded instances of win.
Video 4—0:15 and 0:19 https://youtu.be/C2-NIoFglIs?t=14s

Figure 59 *win* (2)

Figure 60 *win* (3)

Chi	washa	win	surku-shka	washa	putu	shita-nawn
Then	after	all	remove-PERF	after	pod	throw-3
Then	after	all	removed	after	the pod	they throw

'After removing everything, they throw away the pod (fig 59).'

Ukuy	tia-g	kara	randi	win	anchuri
Inside	dwell-AG	skin	instead	IDEO	gotten out
Inside	dwelling	skin	instead	win	is gotten out

'Then the inner skin, instead, *win* is removed (fig 60).'

In example 5.10, Luisa uses the ideophone *win* twice, within a few seconds of each other. One is embedded and the other is not. The first *win* is spoken with only a slight emphasis and no gesture. The second *win* is set apart from the utterance with a higher volume and an expansive gesture that commonly accompanies *win*.

Win is an ideophone that is entering the prosaic lexicon and may be interpreted as "all." In this example, Luisa is emphasizing the difficulty of the peeling processes of a particular fruit. The different uses of *win* may be explained by the developing dramatic profile of her explanation. The first *win* is used as a normal word in the prosaic lexicon. It is not set apart from

the rest of the utterance by the performative techniques usually applied to ideophones and can therefore be called embedded. The second *win* is performative and is not embedded. This difference is also apparent in gestural accompaniment. Embedded ideophones are less likely to be accompanied by gestures.

Ideophones-gesture composites are also affected by information structure. They tend to be more precise when providing new information and less so when depicting given information. With each repetition, they become less defined, shortened, and finally only alluded to in order to evoke the same scene (Reiter, 2013, p. 415).

In Chapter 5, I discussed the function of ideophone-gesture composites as teaching tools and rhetorical devices. They are used frequently, especially in narrative discourse. Yet in the PQ data, I noticed that onomatopoeic ideophones are much less likely to be accompanied by gestures. I also noticed a complete lack of gesture in 15 of the 16 songs in our data. In Chapter 6, I will be exploring some of the reasons this conspicuous lack of gesture may occur. I will also be discussing the gestures which did accompany the onomatopoeic ideophones. Like many other researchers in this field, I will be analyzing my data in a series of examples. Each example will be examined in light of the research which I have already discussed, as well as their specific contexts.

Chapter 6: Analysis of Results

In chapters 3 through 5, I discussed the previous research on ideophones, gestures, and their interaction. In chapter 3, I discussed how ideophones are depictive imitations of sensory events. They are sound-symbolic utterances that depict visual, auditory, and haptic sensations. Ideophones can pack a great deal of information into a single word through sound-meaning correlations. They create "a vivid representation" of an event (Doke, 1935, p. 118) which is "simultaneously expressive, explicit, and precise" (Nuckolls, 1993, p. 249). Distinct from the surrounding words and syntax, ideophones are foregrounded by differences in volume, pitch, length, and repetition. They have an expanded phonology (Nuckolls et al., 2016), complex semantics, and unique structural and discourse properties. These distinctive features set ideophones apart from the rest of the utterance as impressive performances, and at the same time, add "additional layers of expressivity and meaning" (Klassen, 1998, p. 8).

In chapter 4, I discussed the characteristics of gesture. Like ideophones, gestures can be placed on a scale of iconicity as well as a scale of conventionalization. The details of how gesture and speech are combined, including timing, can be explained as aspects of the speaker's thought process. Gestures help provide context and create understanding as they interact with the conceptual environment. The stroke of the gesture coincides with the main idea of an utterance. In McNeill's (1992) classification, gestures are divided into two categories: imagistic gestures (iconic and metaphoric) and non-imagistic gestures (deictic, beat, and cohesive).

In chapter 5, I discussed the relationship between ideophones and gestures as well as the functions of ideophone-gesture composites in discourse. Both ideophones and gestures foreground important information and engage the audience in a sensory experience. They enable the listener to vicariously experience events by intensifying dramatic effect and evoking a physical sensation of the depicted event (Moshi, 1993, p. 190; Reiter, 2013, p. 413; Kilian-Hatz, 2001, p. 155; Nuckolls, 1996, p. 11). Because of this, they are excellent teaching tools. In IG composites, the gesture is most often iconic. However, there are varying levels of iconicity that may reveal the speaker's perspective of the conceptual environment that forms part of the utterance context.

In chapter 6, I will discuss the results of my analysis of the PQ data. In past research, onomatopoeic ideophones have been have been set aside as different by many researchers (Klassen, 1998, pp. 28-31; Kilian-Hatz, 2001, pp. 161-163; Dingemanse, 2011, pp. 131, 165-167; Mihas, 2012, pp. 327-329; Reiter, 2013, pp. 9-10, 308). My data support that division, showing that they behave differently than other ideophones in terms of gestural affiliation. However, onomatopoeic ideophones have been stigmatized as simple or even excluded from the class of ideophones entirely, despite the fact that they possess the phonological and syntactic qualities required to be a member of the ideophone class. They have, instead, been put into separate groups such as 'sound mimicking words' (McGregor, 2002, p. 341), 'non-linguistic sounds' (Güldemann, 2008, p. 283), or 'imitative sounds' (Hinton et al., 1994, §2.1). In the PQ data, onomatopoeic ideophones are performed and treated like other ideophones in all ways except gestural accompaniment. For them, gestural accompaniment is not simple or easy to predict, but it is principled. This analysis will demonstrate that onomatopoeic ideophones are not as simple as previously assumed and that they do not have the same relationship with gestures

that other ideophones do. At the end of this chapter, I will provide a qualitative analysis of each onomatopoeic ideophone-gesture composite. I have used some of these composites earlier in the thesis for illustration. In this chapter, I will discuss my quantitative results first.

6.1 Summary of Results

This analysis draws on both qualitative and quantitative methods. My quantitative methodology consists of close examination, classification, and tagging of 435 ideophones in the PQ data for sensory class and gestural accompaniment, using McNeill's (1992) typology. I reviewed the video data and noted the occurrence of each ideophone performance. I marked them with certain features and noted relevant background information (see Appendix 1). The 8 hours of video data includes 435 ideophone performances and 16 folksongs, which are sung without instrumental accompaniment. My qualitative analysis consists of individual examinations of onomatopoeic IG composites within their performance context, which will be given in section 6.4.

This thesis differs from the norm in that my research is uniquely accessible. With access to the data through online videos as well as a detailed list of ideophones and their locations, readers may access my data and use it to make their own decisions. Presenting my research in this manner also allows the reader to witness the performance in context.

As defined in section 4.4, I will be using McNeill's (1992) gesture classification. McNeill distinguishes between imagistic and non-imagistic gestures. Each of these classes can be further subdivided into categories: imagistic gestures include **iconic** and **metaphoric** gestures, while non-imagistic gestures include **deictic**, **beat**, and **cohesive** gestures. The divisions between these categories is not always clear. Some of the gestures in my data can fit into more than one. I endeavored to consider communicative intent and utterance context in the assignment of

categories. It is also important to note that ideophones do not have a monopoly on gestural expression. Pastaza Quichua speakers gesture constantly while speaking (Nuckolls et al., 2015).

For a gesture to be considered as co-occurring with an ideophone in my data, the 'stroke' of a gesture has to be synchronized and linked expressively with the ideophone. The stroke of the gesture is the point at which meaning is expressed. The other phases are the 'preparation' and 'recovery' phases that come before and after the stroke of the gesture. This is discussed in section 4.2.

In my analysis, I also noted what I call a 'conspicuous lack of gesture'. McNeill (2007, p.1) also notes the 'conspicuous absence' of gesture and postulates on its meaning, which I discuss in section 6.2. PQ speakers gesture very frequently, especially during dramatic or significant utterances. Sometimes, an informant will conspicuously stop moving their hands and perform an ideophone. A lack of gesture is defined as a stillness of hands and body. When a speaker stops gesturing, their hands usually return to a neutral position. However, a speaker may maintain a hand position from a previous gesture if they plan to gesture immediately after a pause. This hand position is not synchronized or expressively associated with the ideophone and is therefore marked as a lack of gesture.

Each ideophone in the data was marked according to its sensory class. For the purposes of this thesis, I used only four categories: **sound**, **sound and motion**, **motion**, and **other**. The 'sound' category includes ideophones that only depict audio phenomena. These are also referred to as onomatopoeic ideophones. The 'sound and motion' category includes ideophones that depict both the audio and motion aspects of an event. The 'motion' category includes ideophones that only depict motion information (motion ideophones may also depict manner). The 'other' category includes ideophones that depict an abstract idea such as "completiveness" (*win*). It also

includes visual ideophones like *shaka*, meaning “pale” or “white”, as well as other difficult-to-define sensations (like *chun*, the sensation of silence). The lines between these categories were, at times, difficult to draw. I often referred to the classification of PQ ideophones in Nuckolls (1996), as well as her list of commonly associated verbs, to make these distinctions. Synesthetic and onomatopoeic ideophones are primarily distinguishable by semantic criteria (Reiter, 2013, p. 280). Therefore, I also endeavored to take utterance context into the sensory class assignment.

The data as a whole does not represent the natural distribution of sensory classes among ideophones as many of the interviews include elicited explanations of wildlife (particularly birds). It is therefore weighted to onomatopoeic ideophones. Due to the nature of recorded interviews, the data does not represent the casual speech of day-to-day discourse among PQ speakers. Instead, the interviews represent the slightly more formal discourse of teaching non-Quichua learners in front of a camera. This situation may have lead our informants to explain more clearly and use more gestures than they would if they had been speaking to other PQ speakers.

As mentioned earlier, there is not a lot of research focused on ideophone-gesture composites. However, almost everyone who has studied the ideophone-gesture relationship has reported that ideophones have a very high correlation with gestures. Klassen (1998, p. 8) and Moshi (1993, p. 201-202) observe that ideophones are incomplete without their accompanying gesture. Reiter (2013, p. 404) noted that ideophones “seem to be nearly always accompanied by gestures”; yet, she also describes what is called syntactic integration (lexicalization, see section 5.6), when an ideophone becomes part of the prosaic lexicon and loses its ideophonic features and thus its unique relationship with gesture (2013, p. 422). Kunene (1965, p. 21) said, “Ideophones are often accompanied by gestures of mimicry.” And Zondo (1982, p. 123) said

gestures “almost always” accompany ideophones. Also, Kita (1997, p. 392) reports that 94% of the ideophones in his data are accompanied by gestures.

In contrast, Dingemanse found that, in conversational Siwu (in contrast to narrative dialogue), gestural accompaniment of ideophones is much less common. In his analysis of 174 ideophone performances, only 66 (38%) were accompanied by gesture. He states that this may be because day-to-day interaction “does not call for much performative elaboration”, or simply, that the speaker’s hands may be busy (2013, pp. 152). While his study did not specifically address the matter, he says that gestural accompaniment does seem to be correlated to sensory class. He noted that ideophones “come with iconic gestures relatively more often” in the domains of movement, size, and shape rather than others like sound, temperature, or feeling (Dingemanse, 2013, p.159). In these tables, representing the PQ data, it is easy to see that the ‘sound’ class of ideophones has a very different relationship to gesture than the others:

Table 1: Distribution of ideophones and gesture (synesthetic vs. onomatopoeic).

Sensory Class	**With Gesture**	**Without Gesture**	**Total**
Synesthetic	236 (94.4%)	14 (5.6%)	250 (100%)
Onomatopoeic	50 (27%)	135 (73%)	185 (100%)
All ideophones	286 (65.7%)	149 (34.3%)	435 (100%)

Table 2: Distribution of ideophones and gesture (sensory class).

Sensory Class	**Accompanied**	**Unaccompanied**	**Total**
Sound	50 (27%)	135 (73%)	185 (100%)
Sound/Motion	66 (98.5%)	1 (1.5%)	67 (100%)
Motion	85 (91.4%)	8 (8.6%)	93 (100%)
Other	85 (94.4%)	5 (5.6 %)	90 (100%)
All Ideophones	286 (65.7%)	149 (34.3%)	435 (100%)

In my data, 286 of 435 (65.7%) of ideophones are accompanied by gestures. Yet, as I will demonstrate, the lack of gesture is highly correlated to the sensory class of the ideophone. In this corpus, the gestural accompaniment of onomatopoeic and synesthetic ideophones approaches a state of complementary distribution. If I remove onomatopoeic ideophones from consideration, I

get a result similar to Kita's: 94.4% of synesthetic ideophones are accompanied by gesture in the PQ data. Kita's data was gathered from participants who described the events of a Tweety cartoon and is therefore weighted to motion ideophones. The PQ data, in contrast, is weighted to onomatopoeic ideophones.

The researchers who have approached the ideophone-gesture relationship have also commented on the gesture types commonly associated with ideophones. Klassen (1998, pp. 221, 241, 256) notes that, in her data, ideophones were much more likely to be accompanied by iconic gestures than metaphoric gestures, while prosaic speech is more likely to be accompanied by metaphoric gestures. She attributes this to the fact that ideophones focus on sensory events while prosaic speech is more likely to refer to abstract concepts. She did not see any deictic or beat gestures associated with the ideophones in her data. Reiter (2013, p. 408), who focused on synesthetic ideophones, saw no beat or metaphoric gestures associated with them. She noted that synesthetic ideophones are associated with iconic gestures (most common), deictic gestures, or a mix of the two. Dingemanse found all types of gestures associated with ideophones in his data; yet, he stated that "by far the strongest relation is between ideophones and iconic gestures" (2013, p. 150). He recorded very few beat gestures associated with ideophones and noted that they "bear only the most tenuous relation to the ideophone" (2013, p. 150). Of the 66 IG composites in his data, 52 (or 79%) of the gestures are iconic. Mihas noted that the IG composites that contain visual or acoustic ideophones tend to be associated with depictive gestures, while haptic (tactile) ideophones tend to co-occur with deictic gestures. "The patterning of ideophones and gestures is likely to be due to the sensory class membership (nonhaptic or haptic) of the ideophone and specificity of the ideophone's semantics" (2013, p. 57).

In the PQ data, I also found that gesture type is highly correlated to sensory class in ideophone-gesture composites. This is illustrated in table 3:

Table 3: Gesture type by sensory class.

Sensory Class	Metaphoric	Deictic	Beat	Iconic	Total
Sound	0	0	3 (6.0%)	47 (94.0%)	50 (100.0%)
Sound/Motion	0	0	0	66 (100.0%)	66 (100.0%)
Motion	0	0	0	85 (100.0%)	85 (100.0%)
Other	58 (68.2%)	2 (2.4%)	0	25 (29.4%)	85 (100.0%)
All Ideophones	58 (20.3%)	2 (0.7%)	3 (1.0%)	223 (78.0%)	286 (100.0%)

All gestures in the 'motion' and 'sound/motion' sensory classes were iconic. Almost all gestures in the 'sound' class were iconic, but three were beat gestures. And ideophones from the 'other' class are mostly accompanied by metaphoric gestures (68.2%) or iconic gestures (29.4%), but are occasionally accompanied by deictic gestures (twice). Metaphoric gestures fell into the 'other' sensory class by definition, since they accompanied the metaphoric ideophones that are included in that class. In this analysis, it was apparent that the sensory class of an ideophone is the most important factor in predicting gestural accompaniment.

In this section, I briefly related how I analyzed my data and how it compared to previous research. I found that sensory class is definitely a factor in the gestural accompaniment of ideophones. In the next section, I will continue to discuss some of the reasons behind a lack of gesture.

6.2 The Lack of Gesture

Gestures very frequently accompany spoken discourse, particularly ideophonic performances. In the PQ data, onomatopoeic ideophones are distinguished by a lack of gesture. There are a few previously suggested reasons for a lack of gesture. These were mentioned in the last section: the ideophone is syntactically integrated into the prosaic lexicon (lexicalization), the speakers' hands are full, or the ideophone simply does not require performative elaboration.

McNeill (2007:1) proposes that a gesture is an image in its most developed, embodied, material form while the lack of gesture is an image in its least material form. The greater the departure from the immediate context, the more likely it is that the image will be embodied in gesture, because of its contribution to being. Gestures are more or less elaborated depending on the need for an image to be made more real. McNeill postulates that absence of gesture is then the predictable result of a minimal departure from context; "in repetitive or denatured contexts imagery fades and, Cheshire Cat-like, only the leer of imageless thought remains" (McNeill 2007:11).

My data support the claim that gestures are used to make an image more real and that repetition can lead to fading gestures (and ideophones). These explanations do account for the fourteen synesthetic ideophones that are not accompanied by gestures. However, they do not account for the 135 onomatopoeic ideophones that are performed with a conspicuous lack of gesture. Onomatopoeic ideophones are often performed without gestures **before** they are performed with them later in the interview. Of the 135 unaccompanied onomatopoeic ideophone performances, 100 are never accompanied by gestures in the same interview. This lack of gesture happens in spite of the fact that these ideophones occur at the height of dramatic performances, not in "repetitive or denatured contexts." These ideophones are (almost by definition) the center of attention. A conspicuous lack of gesture is illustrated in the next example:

Example 6.1 A conspicuous lack of gesture.
Video 26—3:38 https://youtu.be/9WBoORq9SYc?t=3m37s

Figure 61 *tak*

Figure 62 *tandangar*

Tak tak tak tak tak tak	tandangarrrr	kuti	tak tak tak tak tak tak	tandangarrr
IDEO	IDEO	again	IDEO	IDEO
Tak tak tak tak tak tak	tandangarrrr	again	tak tak tak tak tak tak	tandangarrr

‘(It pecked) *Tak tak tak tak tak tak tandangarrrr*, and again *tak tak tak tak tak tak tandangarrr.’*

In example 6.1 (also in chapter 1, example 1.3), Luisa is telling the story of how Noah’s people regained fire after the flood. She is gesturing throughout the whole story. In figure 4, she is gesturing while performing the ideophone *tak*, depicting a giant woodpecker pecking the wood of a hard tree, which will shower the ground with sparks. *Tak* depicts the instant of contact. Her gesture depicts its beak hitting the wood. The next ideophone, however, is not accompanied by gesture. As she performs *tandangar*, she drops her hand and does not gesture. This lack of gesture is conspicuous. Throughout the story, her hands have been moving, yet as she comes to *tandangar*—an ideophone performed at the climax of the story—she becomes still. This is an onomatopoeic ideophone depicting the sound of extremely rapid pecking resonating across the land. Even though there is pecking going on at the moment depicted by *tandangar,* it seems that only the sound event is being emphasized. This performance is repeated several times in her story and the pattern of gestural accompaniment remains the same. She is specifically not gesturing as she performs *tandangar*.

Onomatopoeic ideophones are often preceded and followed by gestures, yet at the moment of performance, the speaker’s hands conspicuously drop and all focus is placed on the

sound of the ideophone. When gestures do accompany onomatopoeic ideophones, it is to elaborate the visual scene that accompanies the sound, not the sound event itself. It is possible that the lack of gestures accompanying onomatopoeic ideophones is caused by their focus on sound—a non-visual sensation—which could make them more like direct reported speech than other ideophones. Direct reported speech and song are the only other situations in which a conspicuous lack of gesture is demonstrated in PQ. Songs have been compared to reported speech in previous research (Klassen, 1998, pp. 167-8). Of the 16 songs in my corpus, 15 are performed without a single gesture; I will elaborate on this in the next section.

A similarity between ideophones and reported speech has been noted by Klassen (1998, p. 168), Güldemann (2008, pp. 276, 289, 294), Nuckolls (2010, p. 19), Reiter (2012, p. 374), and Mihas (2012, p. 328). Onomatopoeic ideophones have a distinctive syntactic distribution that suggests their affinity with **direct** reported speech is stronger than other kinds of ideophones. Unlike most other ideophones, they are primarily associated with quotative constructions (Mihas, 2012, p. 328). Mihas and Nuckolls note that when onomatopoeic ideophones occur, they are generally found with the verbs meaning ‘to speak’, ‘to hear’, and ‘to sound’ (Mihas, 2012, p. 328, Nuckolls et al., 2016, p. 99). Reiter (2013, p. 423) also noted that the morphology of onomatopoeic ideophones made them formally similar to quotatives in Aweti. I suggest that onomatopoeic ideophones exhibit a different relationship with gesture because they have a special affinity with direct reported speech (which exhibits a lack of gesture.) Currently, instances of direct reported speech are not marked in the PQ data, so I cannot support this claim with evidence, but it should be pursued in future research. It is possible that this connection presents the best explanation for the unique gestural behavior associated with onomatopoeic ideophones.

6.3 Songs

In the PQ data, 15 of 16 songs are not accompanied by gestures and rarely contain ideophones. The only ideophone used in the PQ songs was *uyung*, meaning "to jiggle." It was used in Video 8 by Narcissa (fig. 62) to describe a fat lizard and was reduplicated to the rhythm of the music. The following figures demonstrate the still posture common in PQ song performances.

Example 6.2 Postures while singing.

Figure 63 Video 29

Figure 64 Video 39

Figure 65 Video 8

Figure 66 Video 51

Figure 67 Video 53

Figure 68 Video 64

In all recorded songs, save one, the singers stand with their hands down or held together. They maintain the same posture throughout the song, sometimes swaying to the beat of the music. In video 29 (fig. 63), Luisa is gesturing expressively while she sings. However, this song is different from the others. She is not singing a traditional song from Quichua; she learned this one from an Achuar woman. She had heard it many years ago and could not remember it all, so

she may have been trying to embellish with gestures. A list of these songs as well as the rest of the songs in the PQ data is given in Appendix 3 along with links to the videos in which they occur (timestamps are also listed).

Klassen also notices a lack of gesture in song. In her data, the storyteller gestures rhythmically, choosing to not use the iconic gestures she applies so freely in other enactments. She explains that songs are considered as similar to reported speech in the study of African storysong. Klassen emphasizes that the placid, rhythmic performance of the song heightens the drama of a story by contrast (1998, pp. 167-8).

6.4 Gestures that Accompany Onomatopoeic Ideophones

Despite the many fascinating aspects of all PQ ideophones, I will be focusing primarily on onomatopoeic ideophones in this analysis. These ideophones mainly depict sound rather than visual or tactile experiences. English has a few onomatopoeic words (like “ding-dong” and “kaboom”) as well as sound-symbolic words in other grammatical classes such as “clap” and “rumble” (Langdon, 1994, p. 95). Onomatopoeic ideophones are different from sound imitations, which ignore the phonetic and syntactic rules of the ideophone class and make use of all possible vocalizations. For example, one might imitate the sound of mud squishing underfoot by squeezing the air out of his or her cheeks. This sound, while very clearly understood, does not follow the rules of the ideophone class and must be placed in a separate category. Onomatopoeic ideophones, on the other hand, do have the qualities required to be a word in Pastaza Quichua. In PQ, the phonemic inventory is expanded for the ideophone class (Nuckolls et al., 2016). Yet, they are never perfect copies of the imitated sound since they do follow the constraints of the inventory (Dingemanse 2011, p. 162).

It is apparent that onomatopoeic ideophones have a different relationship with gestures than synesthetic ideophones. In order to further define this relationship, I will now discuss specific examples of onomatopoeic ideophone-gesture composites within their performance context. The specific meaning of these IG composites will "best be understood by a detailed exploration of each ideophone" within this context (Klassen, 1998, p. 202).

In the PQ data, there are 50 onomatopoeic ideophones accompanied by gesture. These IG composites can be divided into three categories based on their accompanying gestures. The first category is 'beat gestures', discussed with examples in section 6.4.1. I found three IG composites with beat gestures, all of which were in the 'sound' sensory class. Beats are non-imagistic gestures that do not convey meaning. Rather, they punctuate discourse structure and mark speech rhythm (see section 4.4; McNeill, 1992, p. 15). The other two categories are comprised of onomatopoeic ideophones that are accompanied by iconic gestures (see section 4.4).

The second, and most populous, category of onomatopoeic IG composites is 'path gestures', discussed with examples in section 6.4.2. Path is a very common feature in IG composites. Of the 286 IG composites in the PQ data, 139 (48.6%) exhibit path: either as a simple path gesture or as a gesture with path elements. An example of a simple path gesture would be a depiction of the path of a bird in flight. On the other hand, a gesture that mainly depicts something besides path may do it using path elements, such as a "drinking" gesture, which shows the path of a cup to the mouth. Mihas also noted that ideophones are commonly accompanied by gestures which depict imaginary paths and the spatial distribution of the participants involved (2013, pp. 31-32). Why are path gestures so common among ideophones? It may be that motion is the most salient feature of a depicted event and that path is the most

salient feature of motion. McNeill (2007, p. 185) notes that when adults describe motion events, they typically produce gestures showing path. Chui (2009, p. 1775) concludes that path must be most salient feature in the concept of motion events. (See also Reiter 2013, pp. 451-3)

There are 32 IG composites in the 'path gesture' category, divided into two subcategories. The first subcategory is 'object-path' and the second is 'sound-path'. The sound-path composites depict a visual image of sound moving out from a point of origin. This distinction is based on context. For instance, in example 6.17, Eulodia describes the sound of a tree being felled. She does not depict the path of the tree falling, but depicts the sound, *gyawn*, sweeping out into the forest. Significantly, 24 (75%) of the 32 onomatopoeic ideophones accompanied by path gestures were performed earlier in the interview without a gesture. And, on four occasions, these ideophones were performed without a gesture after they had already been performed with a gesture earlier in the interview. This occurs even when the ideophone is produced in the same specific context. This suggests that path information is not intrinsic to the meaning of the ideophone, but is an elaboration technique that is added on to further depict the conceptual environment and increase the audiovisual experience.

The third category of onomatopoeic IG composites is 'voice/action composites', discussed with examples in section 6.4.3. These IG composites occur in a situation described by Klassen: "the verbal aspect speaks for one character in the narrative while the gestural action comments on that character's activity" (1998, p. 202). There are fifteen IG composites in this category, divided into two subcategories. The first is 'speaker-external perspective' and the second is 'speaker-internal perspective'. Now, many IG composites exhibit speaker perspective (either external or internal) outside of the 'voice/action' category. I am simply using this

distinction in this category to draw attention to the different ways these IG composites depict the voice and action of a character.

The ideophones in the voice/action category are always immediately accompanied by gestures. And none of these ideophones are performed without gestures in the same interview. The voice/action category may also fit the requirements of the object-path category; however, the difference in the patterns of gestural accompaniment distinguishes the presence of a path gesture as a different situation. Therefore, I will add that the gestures in the voice/action composites are not path gestures.

Categories of onomatopoeic ideophone-gesture composites:

- Beat gestures
    1. Simple, rhythmic beat gestures (3)
- Path gestures
    2. Object-path (17)
    3. Sound-path (15)
- Voice/action composites
    4. Speaker-external perspective (9)
    5. Speaker-internal perspective (6)

Kita's data exhibit ideophones consistently accompanied by gestures. He concluded that, in situations where gestural accompaniment is not explained by communicative necessity, there must be a cognitive motivation for its production. He suggests that ideophones co-occurring with iconic gestures possess an inherent imagery (Kita, 2001, p. 428). As noted earlier, Dingemanse (2013) and Güldemann (2008) disagree with this statement and suggest that ideophones and gestures co-occur because they are both depictive modes of expression. I suggest that the answer

lies in between. Synesthetic ideophones seem to have an inherent imagery and are almost always accompanied by gestures. While onomatopoeic ideophones may or may not be accompanied by gestures because their sensory domain is that of sound rather than imagery. This sensory class distinction may account for some of the discrepancies in cross-linguistic comparisons of the ideophone-gesture relationship.

6.4.1 Beat Gesture Category

I was only able to find three examples of beat gestures accompanying ideophones. In example 6.3, Clara depicts the plaintive call of a bird who cries when she sees the full moon (*ilʸucucu)*. She is speaking in Spanish, but still uses Quichua ideophones to depict the bird's call. The first two performances are unaccompanied by gesture. The third and final performance of this ideophone is preceded by a gesture depicting the full moon with a wide-open hand facing up, fingers extended. Clara maintains the moon gesture as she performs the ideophone and moves her hand in very slight beat gestures.

Example 6.3 Clara performs a beat gesture.
Video 9—1:00 https://youtu.be/svVQ_P4H0wY?t=58s

Figure 69 *ilʸucucu*

Para	estar	llora-ndo	allí	ilyucucucu ilyu
To	BE	cry-GER	there	IDEO
To	be	crying	there	ilyucucucu ilyu

'To be crying there *ilʸucucucu ilʸu.*'

In example 6.4, (also described in example 4.7) the beat gesture is more expressive. Luisa is describing the sound a baby sloth makes when it cries. It sounds a lot like a human baby, so she uses the onomatopoeic ideophone *mema*. In the first performance, she repeats the ideophone three times. She emphasizes her performance with a repeated gesture in which both hands come up to mid-gesture space on the first syllable of the ideophone and then roll out and back down, palm up, by the end of the second syllable. Luisa performs *mema* three more times in the interview but does not gesture during those performances.

Example 6.4 Luisa performs a beat gesture.
Video 14—0:56 https://youtu.be/8ZkzQ1zHVxk?t=55s

Figure 70 *mema*

Mema mema mema	waka-n-ga	shuk	puri-u-n	uyak-pi
IDEO	cry-3-FUT	one	walk-DUR-3	ear-LOC
Mema mema mema	it will cry	one	walking	hear

'*Mema mema mema* it will cry and be heard by someone walking'

In example 6.5, Pedro is describing the sound of a squirrel with the ideophone *chik*. The ideophone is repeated several times as his hand goes up and down twice. Pedro's gesture emphasizes the energy of the squirrel's call.

Example 6.5 Pedro performs a beat gesture.
Video 69—0:00 https://www.youtube.com/watch?v=bvIggItVoFE

Figure 71 *chik*

Chik chik chik chik chik chik chik chik
IDEO
Chik chik chik chik chik chik chik chik

'*Chik chik chik chik*, c*hik chik chik chik*.'

Beats are simple rhythmic movements that punctuate or refer to discourse structure and rhythm. They can also emphasize a word to show that it is significant or that it is new information. Beat gestures are not conventionalized and have no discernible meaning but are easily understood through the common practices of gesture. Perhaps due to the imagistic nature of ideophones, beat gestures do not commonly accompany them. The fact that they are only found among onomatopoeic ideophones in the PQ data further distinguishes this sensory class from the others.

6.4.2 Path Gesture Category

When gestures do occur with onomatopoeic ideophones, they are most likely to be path gestures. About half of these path gestures depict the path of the being or object making the noise depicted in the ideophone, while the other half depict the pathway of traveling sound. In this section, I will discuss the IG composites with gestures that depict the path of the object in

eleven examples. I will also discuss the IG composites with gestures that depict the pathway of traveling sound in four examples.

Some prime examples of path gestures are found in birdcalls. In example 6.6, Eulodia performs the birdcall *piria* five times. This takes place during an interview with an ornithologist, David Pearson, on the kwilin bird. She makes no gesture during the first performance, but the rest are accompanied by path gestures that depict the bird jumping up and down the branch as it calls. Deictic gestures are used during her description of the bird's behavior but only the path gesture is used in the performance.

Example 6.6 Eulodia performs piria *with a path gesture.*
Video 6—1:57 https://youtu.be/hOxp4rgJZiA?t=1m53s

Figure 72 *piria* (1)

Figure 73 *piria* (2)

Figure 74 *piria* (3)

Saltar	saltar	lleg-a	piria piria piria piria piria piria piria
Jump	jump	come-3	IDEO
Jump	jump	it comes	piria piria piria piria piria piria piria

'Jumping, jumping it comes *piria piria piria piria piria piria piria.*'

From the same interview, example 6.7 is an illustration of a more embedded onomatopoeic ideophone, *tarr* accompanied by a minimal path gesture. Eulodia and Pedro are still describing the calls of the kwilin bird. While Pedro's depiction of *tarr* is definitely performative (see example 6.20), Eulodia's is not. Eulodia agrees with his description and says that the bird usually makes that noise (*tarr tarr)*, but that it makes the *piria* call when it is

portending death. In this sentence, Eulodia is quoting Pedro and the ideophone is less marked. It is not set apart syntactically or intonationally as much as ideophones usually are. She uses a very minimal path gesture (which she makes in Pedro's general direction) depicting a little hop.

Example 6.7 Eulodia performs a less performative IG composite
Video 6—6:22 https://youtu.be/hOxp4rgJZiA?t=6m21s

Figure 75 *tarr* (1) Figure 76 *tarr* (2)

Pay	chi	tarr tarr
He	then	IDEO
He	then	tarr tarr

'He then (goes) *tarr tarr*.'

In example 6.8, taken from the same interview, Pedro depicts the call and behavior of the suyu bird. Before Pedro performs the ideophone *suyu* for the first time, he is making path gestures, showing the path of the bird over his head while he describes the bird's behavior in prose. He stops gesturing to perform *suyu*, which depicts the call of the bird. A few moments later, he repeats himself—this time elaborating the ideophone with the path gesture.

Example 6.8 Pedro performs suyu *with a path gesture.*
Video 18—4:48 https://youtu.be/emdIvhq2tys?t=4m47s



Figure 77 *suyu* (1) Figure 78 *suyu* (2) Figure 79 *suyu* (3)

Suyu suyu suyu suyu suyu suyu suyu
IDEO
Suyu suyu suyu suyu suyu suyu suyu

'*Suyu suyu suyu suyu suyu suyu suyu.*'

In example 6.9, Eulodia relates a narrative about a lonely bird (as noted in chapter 1, examples 1.4 and 1.5). The ideophone that depicts its call, *kukuli*, is performed six times. The first two performances are unaccompanied by gesture. The third is accompanied by a path gesture in which her finger traces the lateral, circular flight of the bird over her head.

Example 6.9 Eulodia performs kukuli *with a path gesture.*
Video 2—0:48 https://youtu.be/6QrT2t9HguU?t=46s

Figure 80 *kukuli* (2)

Kukuliii kukuliii kukuliii	kanta-g	a-n	lyaki-lya
IDEO	sing-AG	be-3	sadly-LIM
Kukuliii kukuliii kukuliii	a singer	it is	sadly

'It sings sadly "*kukuliii kukuliii kukuliii.*"'

The gesture is not always the same when the performance is repeated. The fifth and sixth performances are accompanied by another path gesture which traces the bird's flight in a large, vertically-oriented circle so that her hand is going up above her head and then down into low gesture space as she traces the circles.

In example 6.10, the call of the hummingbird is immediately accompanied by a path gesture. Luisa relates the origin story of the hummingbird after one flew quickly past her. As she performs the ideophone *pis*, she imitates the path of the angry bird flying quickly back and forth in front of her. It is possible that this ideophone is immediately associated with gesture because Luisa is focusing on the hummingbird's anger which is more apparent in its swift flight than in its high pitched chittering.

Example 6.10 Luisa depicts the path of an angry hummingbird.
Video 47—1:11 https://youtu.be/hu1Qw9vuydM?t=1m10s

Figure 81 *pis* (1) Figure 82 *pis* (2) Figure 83 *pis* (3)

Pis pis pis	chi-ga	shamu-sha
IDEO	that-TOP	come-COR
Pis pis pis	that	coming

'*Pis! Pis! Pis!* That's how it comes.'

In example 6.11, men from the military base of Luisa's husband assume that she is lost when she is late to return home one night. They decide to throw dynamite to try to guide her back with the sound. Luisa depicts this sound with the ideophone *ting*. The gesture she uses with

this ideophone depicts the path of the dynamite being thrown—her hand reaches up beside her head and throws out.

Example 6.11 Luisa depicts the path of dynamite.
Video 38—0:26 https://youtu.be/1oD84PigKI8?t=25s

Figure 84 *ting* (1)

Shita-naw-ra	ting ting
Throw-3PL-PAST	IDEO
They threw	ting ting

'They threw *ting ting.*'

In example 6.12, Eulodia uses *tin,* a version of *tan*, as she depicts the sound of revelers who are not listening to Noah. She uses *tin* to depict the sound of drums in three performances throughout the story. During the first performance, she does not gesture. During the second, she gestures using a lateral, circular gesture that depicts the circular path of the dancers rather than the physical beating of the drums depicted in the ideophone. It is interesting that even when a gesture could be directly related to the sound depicted in the ideophone (such as mimicking the beating of a drum), it is not what she focuses on. She prefers to set the visual scene of the dancers moving in a circle.

Example 6.12 Eulodia depicts dancers moving in a circle.

Video 23—6:47 https://youtu.be/sg9COax91y4?t=6m45s

Figure 85 *tin* (1)

Figure 86 *tin* (2)

Tin tin tin tin tin tin tin tin tin
IDEO
Tin tin tin tin tin tin tin tin tin

'*Tin tin tin, tin tin tin, tin tin tin.*'

In Delicia's version of the Noah story in example 6.13, she uses the ideophone *tan* to depict the sound of drums. Her first performance of *tan* is also accompanied by a circular gesture depicting the path of the dancers rather than the beating of the drums. In a later performance (at 8:47), *tan* is accompanied by an abbreviated version of the first gesture, in which she depicts the path of the dancers going back and forth beside her. By abbreviating the gesture and placing them low and to the side of her gesture space, she seems to be moving them to the periphery of the main story.

Example 6.13 Delicia also depicts the path of dancers.
Video 25—3:02 https://youtu.be/3dnaxjIinaE?t=2m59s

Figure 87 *tan* (1)

Figure 88 *tan* (2)

Figure 89 *tan* (3)

Upi-nawn	macha-nawn	kahaa-awwwn-guna	kaha-wan	tan tan tan tan tan tan tan tan tan tan
Drink-3PL	intoxicate-3PL	drum-DUR-PL	drum-WITH	IDEO
They drink	they get drunk	they are drumming	with drums	tan tan tan tan tan tan tan tan tan tan

'Drinking, becoming drunk, they drummed with their drums, *tan tan tan tan tan tan tan tan tan.*'

In example 6.14, Luisa is telling the story of a night in the forest when she heard many strange noises. One of the noises she depicted was *turuk*, the sound of something moving in the forest. She performs this ideophone three times. On the first two, she does not gesture. On the third, she raises her hand out high and to the side and traces a path gesture back and forth. The height of her gesture suggests that the sound came from far away (Klassen, 1998, p. 256) and suggests that it sounded like something was moving around in the undergrowth.

Example 6.14 Luisa depicts the sound of movement in the undergrowth.
Video 13—4:37 https://youtu.be/blgFC8SFEYA?t=4m36s

Figure 90 *turuk*

Turuk turuk turuk	ni-shka	washa
IDEO	say-PERF	after
Turuk turuk turuk	said	after

'After going "*turuk turuk turuk . . .*"'

In example 6.15, Luisa tells of her first experience in an elevator. She performs the ideophone *dzin,* which depicts the sound of the elevator coming to a new floor. *Dzin* is also used

to depict a sudden awareness or startled movement (Nuckolls, 1996, pp. 250-52). It is immediately accompanied by a gesture in which one pointed finger goes up with each iteration of *dzin*, though not directly vertical, each gesture goes up in a different direction. It seems that the verticality was not the only salient feature of her experience but also the sense of being brought to a new place. The path gesture is not intrinsic to the meaning of the ideophone, yet it further illustrates the visual scene.

Example 6.15 Luisa depicts a trip in an elevator.
Video 32—10:26 https://youtu.be/6Tp_MJphcPE?t=10m24s

Figure 91 *dzin* (1)

Figure 92 *dzin* (2)

Figure 93 *dzin* (3)

Asi	suba	dzin dzin dzin dzin	ñukanchi
Like this	ascend	IDEO	us
Like this	ascend	dzin dzin dzin dzin	us

'Like this, we ascended *dzin dzin dzin dzin.*'

The last IG composite in this group is not as straightforward. In example 6.16, Eulodia narrates the origin story of the chuku tree. In it, she uses the ideophone *dzhin*, which is different from *dzin*. The [h] is used in this transcription to denote the palatalization of the /z/. It is pronounced /dʒin/. In this story, the man who becomes the chuku tree tells the birds that when

they hear *dzhin dzhin* they are to come and drink his flowers. She does not gesture in that performance. In the next performance, the chuku tree calls out to the birds as he is transforming. She moves both index fingers up together twice—once for each iteration.

Example 6.16 Eulodia depicts the transformation of a man into a tree.
Video 11—1:29 https://youtu.be/8aF02E9rbYo?t=1m28s

Figure 94 *dzhin* (4)

Figure 95 *dzhin* (5)

Chiga	ña	pay	ni-shka	shina	dzhin dzhin	kapari-shka
Then	now	he	say-PERF	like	IDEO	cry-PERF
Then	now	he	said	like	dzhin dzhin	cried

'Then, as he had said, he cried out, *Dzhin*! *Dzhin*!'

At first, it is not clear what was being depicted in Eulodia's gesture, but within the context of the PQ data, some assumptions can be made. *Dzhin* depicts the loud sound of cicadas that is associated with the tree (Nuckolls, p.c.). Quichua people generally use an ideophone during the moment of transformation in an origin story, so it can be assumed that *dzhin* is associated with that moment in this story.

As an onomatopoeic IG composite, the gesture could be a beat gesture, a path gesture, or a voice/action gesture. The handshape and direction of the gesture are depictive rather than just emphatic, so it is not a beat gesture. The voice/action composite possibility can probably be ruled out since all voice/action composites are immediately accompanied by gesture, while the path

gesture composites are usually performed first without a gesture, as in this situation. I have placed this IG composite in the path category because of these distinctions.

The gesture could be a physical path gesture depicting the character's upward assent as he turns into a tree; or it could be the path of the sound of his call traveling upward like a beacon. At this point, we can only guess at what she was thinking when she made the gesture. Nevertheless, it seems that the physical transformation of the chuku man would be a more significant image in the story than the path of his call. In addition, all other sound pathways are depicted as laterally, rather than vertically, expansive. Therefore, it seems most likely that it is a physical path gesture depicting his upward growth.

The second subcategory under 'path gestures' is that of sound-path gestures. These gestures depict the imaginary image of sound traveling out from its origin. They are distinguished from object-path gestures by context only, since, in appearance, they depict the same thing—the path of motion. It is tempting to place these gestures in the 'metaphoric' class as they display a visual image to represent a non-visual phenomenon; however, sound does take a physical path through space. Consequently, the sound-path gestures depict an actual event rather than a purely mental concept and still belong in the iconic sensory class.

In example 6.17, Eulodia and Delicia are speaking of a nearby piece of forest that was being cleared to make way for an agricultural field. They said that the tree they saw being cut down called out *gyawn* as it fell. This was performed three times. The first *gyawn* was said by both speakers at the same time without gesture. The second and third performances were by Eulodia. As she performed them, she swept one hand out to depict the cry of the tree travelling out into the forest.

Example 6.17 Eulodia depicts the sound of a falling tree travelling into the forest.
Video 3—2:42 https://youtu.be/epELexB9L4E?t=2m41s

Figure 96 *gyawn* (1)

Figure 97 *gyawn* (2)

Gyawn	waka-sha	urma-n	pay-was
IDEO	cry-COR	fall-3	it-INCL
Gyawn	crying	falls	it

'*Gyawn*, it cries as it falls.'

In example 6.18, Luisa performs *huhi* three times, which depicts the frightening sound of a spirit calling. Two performances of *huhi* are accompanied by a gesture in which her hand comes up next to her face and then shoots out in front of her. This depicts the sound *huhi* traveling out from its origin. Klassen notes that high deictic gestures indicate long distances and low gestures indicate close proximity (1998, p. 256). The force and height of her gestures may indicate that the sound travelled a long distance.

Example 6.18 Luisa depicts a ghostly call.
Video 13—4:43 https://youtu.be/blgFC8SFEYA?t=4m40s

Figure 98 *huhi*

Hatun	ruku-ta-ya	puru-shina	ruku-ta	huhi
Big	(big old)-TOP-EMP	pure-like	(big old)-TOP	IDEO
Great	big old	clear	big old	huhi

'A huge, great big, clear *huhi!*'

In example 6.19, Luisa and Eulodia both use the ideophone *dolon* in five performances to depict the sound of thunder. The first time Luisa uses it, she does not accompany it with gesture. The next three times she makes a wide, expansive sound-path gesture depicting thunder rolling out. Her hands go up and out, tracing a wide half circle in the gesture space. Eulodia then performs it using the same gesture as Luisa.

Example 6.19 Luisa depicts the sound of thunder rolling out.
Video 12—1:50 https://youtu.be/05L7PCW2TSs?t=1m49s

Figure 99 *dolon*

Warmi-ga	uchu-ta	apamun-pi-sha	asi-u-n	pay-ga	dolon
Woman-TOP	pepper-TOP	bring-LOC-COR	laugh-DUR-3	he-TOP	IDEO
Wife	pepper	in bringing	laughing	he	dolon

'When his wife brought the peppers, he laughed *dolon*.'

In this interview, *dolon* and *hihihi* are used interchangeably as the sound of the thunder-man laughing. *Dolon* was introduced to the conversation by the interviewer. He had heard it used in this situation before and wanted to know if Luisa and Eulodia used it to depict the sound of thunder. In this conversation, *dolon* is used as a alternative for *hihihi*, but it may not have come up naturally.

In example 6.20, Luisa is depicting the floodwaters again. She performs the ideophone *ting* eight times. *Ting* is an explosive sound associated with the receding waters, possibly thunder. In example 6.9, *ting* depicts the sound of dynamite exploding.

Example 6.20 Luisa depicts the sound of thunder with ting.
Video 26—9:21 https://youtu.be/6Nk9G-hqKWk?t=9m19s

Figure 100 *ting* (2)

Kilya-guna-y-shi	tinnng	dirirririri
Month-PL-LOC-EV	IDEO	IDEO
In months	tinnng	dirirririri

'Months later, it went *tinnnng dirirririri*.'

The first five performances are unaccompanied by gesture. During some of them, she maintains a gesture from a previous utterance and does not move her hands during the performance of *ting*. These gestures are not synchronized or expressively associated with *ting* and are counted as a lack of gesture. On the sixth *ting* performance, she makes an expansive gesture with both hands over her head much like the gestures for *dolon*.

One abstract synesthetic ideophone worth mentioning alongside the sound-path composites is *chun,* which depicts the sound of silence. It is performed three times in the data and is accompanied by sound-path gestures, but instead of depicting sound, it depicts the path of silence falling. (Note that the English phrase "silence falling" also implies a physical presence in

the image of silence.) In example 6.21, in figures 101 and 102, *chun* is performed with the same expansive gesture used with *ting* and *dolon*. In figures 103 and 104, it is accompanied by the same gesture as *huhi*. Then, in figures 105 and 106, *chun* is accompanied by a one-handed sweeping gesture.

Example 6.21 Chun*, the sensation of silence.*
Video 2—4:27 https://youtu.be/6QrT2t9HguU?t=4m26s
Video 15—4:29 https://youtu.be/vqxdcXPW18Q?t=4m28s
Video 26—6:54 https://youtu.be/6Nk9G-hqKWk?t=6m53s

Figure 101 *chun* (1)

Figure 102 *chun* (2)

Figure 103 *chun* (3)

Figure 104 *chun* (4)

Figure 105 *chun* (5)

Figure 106 *chun* (6)

I placed this ideophone in the abstract sensory class. However, it could also be argued that it belongs in the sound sensory class. For example, Smoll (2014, p.71) came across a similar ideophone in her study of Katuena. She categorized it with onomatopoeic ideophones saying, “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 conventionalized form.”

When gestures do occur with onomatopoeic ideophones, they are most likely to be path gestures. Yet, onomatopoeic ideophones accompanied by path gestures are usually performed without gesture before they are performed with gesture. This shows us that the path gesture is not an intrinsic part of these ideophone performances, even when produced in the same specific context. Path gestures are added on to elaborate the scene and increase the audiovisual experience.

6.4.3 Voice/Action Gesture Category

In this section, I will discuss voice/action ideophone-gesture composites. This category of composites includes onomatopoeic ideophones that are accompanied by gestures depicting an action unrelated to the production of the sound but happening at the same time. None of these

ideophones are performed without gestures in the same interview. This may happen because the events being gesturally depicted alongside these ideophones are significant in the narrative. While, in most other cases of onomatopoeic ideophones, the speaker's focus is on the sound event.

Voice/action gestures can be considered more iconic than the path gestures (Poggi, 2008, p. 56). Path gestures seem to be purely from a speaker-external perspective, but some of these composites depict an event from the perspective of the being or object in the story. These are called speaker-internal perspective gestures, which may be considered the most iconic kind of gesture. In this section, I will first describe three examples of speaker-external voice/action composites, then four examples of speaker-internal voice/action composites.

In example 6.22, Luisa tells the story of a group of men lost in the jungle. They become desperate and eat an anaconda. Luisa performs the ideophone *kau* to depict the sound of eating crunchy anaconda skin. At the same time, she scoops both hands toward her mouth. Thus, the ideophone imitates the sound of teeth crunching on skin and the gesture mimics another action happening at the same time. This gesture is related to eating the skin, but not to the crunching noise.

Example 6.22 Luisa depicts the sound of chewing and the action of scooping.
Video 22—12:56 https://youtu.be/klRYDf4ND0s?t=12m55s

Figure 107 *kau* (2)

Figure 108 *kau* (2)

Amarun	chaki-chi-shka	markay-lya	payba
Anaconda	dry-CAUS-PERF	carry-LIM	them
Anaconda	dried	just carrying	them

'Just carrying the dried anaconda,

kara-ta	kilyu-ta	shina	ra-sha	kau kau kau kau
skin-ACC	yellow-ACC	like	do-COR	IDEO
the skin	yellow	like	doing	kau kau kau kau

his skin yellowed, they went like *kau kau kau kau*.'

In example 6.23, Eulodia uses the ideophone *hahaha* to depict the laughter of birds who are misbehaving. While performing this ideophone she moves her hands in front of her in a vague waving gesture. This depicts what the British term "to fall about" captures so well. The IG composite depicts the animals falling about with laughter. Eulodia retells this story in a second interview and performs the same IG composite (provided in the second link).

Example 6.23 Eulodia depicts the laughter of birds and their movement.
Video 11—2:43 https://youtu.be/8aF02E9rbYo?t=2m42s
(Also in Video 2—0:58 https://youtu.be/6QrT2t9HguU?t=57s)

Figure 109 *hahaha* (1)

Figure 110 *hahaha* (2)

Chiga	wiba-guna	payna	hahahaha	asi-g	a-shk-awna
Then	animal-PL	XPRO	IDEO	laugh-AG	be-PERF-3PL
Then	animals	they	hahahaha	laughers	were

'Then the animals laughed, *ha ha ha ha*.'

In example 6.24, Luisa shares a scary story about spirits making noise in the jungle at night. One of the sounds she depicts is that of dogs barking, *hau*. In this composite, she reaches out her hand, holding it high—indicating that the sound came from far away—and thrusts it forward a little on each iteration of *hau*. She also partially closes her fingers with each iteration. In this example, her hand becomes the dogs and depicts an image of their physical movements as they bark.

Example 6.24 Luisa depicts dogs barking in the distance.
Video 13—1:06 https://youtu.be/blgFC8SFEYA?t=1m4s

Figure 111 *hau* (1)

Figure 112 *hau* (2)

Alyku-ga	kati-sha	sati-shka	uya-y-ni	hau hau hau
Dog-TOP	follow-COR	insert-COR	ear-LOC-1	IDEO
Dog	following	penetrating	I heard	hau hau hau

'I heard dogs following, penetrating (the forest) *hau hau hau*.'

The next four examples describe voice/action composites that exhibit speaker-internal perspective gestures. In example 6.25, Pedro performs the ideophone *tarr*, depicting the sound of the kwilin bird. This happens in the same interview as examples 6.6, 6.7, and 6.8. As he performs the ideophone, he bobs his head forward with each iteration, depicting the motions of the bird as it calls. In this example, Pedro becomes the bird and performs the gesture from the bird's perspective.

Example 6.25 Pedro depicts a bird calling with speaker-internal perspective.
Video 6—1:06 https://youtu.be/hOxp4rgJZiA?t=1m5s

Figure 113 *tarr*

Pay	tarr tarr tarr tarr	chi	ma-n	tara kwilin
It	IDEO	that	be-3	tara kwilin
It	tarr tarr tarr tarr	that	is	tara kwilin

'It goes *tarr tarr tarr tarr*. That's the *tara kwilin*.'

In example 6.26, Luisa performs a similar head bobbing gesture as she depicts the sound of a puma's teeth crashing together while it runs: *talax*. This is also a speaker-internal

perspective gesture. The head bobbing is very pronounced and expressive. Her hands (held together, palm up), move with the same rhythm in front of her. This, perhaps, emphasizes the up-and-down movement. She repeats the head bobbing gesture a little later when she uses *tau* and *chalin* to depict the same sound, but she does not use her hands. In these three composites, Luisa is becoming the puma. She is performing the action of the puma physically while depicting the sound of the puma verbally. These gestures clarify the fact that the three composites are depicting the same event, even though they accompany different ideophones.

Example 6.26 Luisa depicts a running puma with talax*,* tau*, and* chalin*.*
Video 30—14:05 (14:35, 14:36) https://youtu.be/CPDwno3Czvg?t=14m4s

Figure 114 *talax* (1)

Figure 115 *talax* (2)

Payba	kiru	karu-mandu	uyari-ra	talax talax talax talax
They	teeth	far-from	sound-PAST	IDEO
They	teeth	from far away	sounded	talax talax talax talax

'It sounded from far away *talax talax talax talax*

kiru-ta	apari-mu-shka	shina	tau tau	chalin chalin
teeth-ACC	carry-CIS-PERF	like	IDEO	IDEO
teeth	carried	like	tau tau	chalin chalin

as if he is carrying his teeth….*tau tau, chalin chalin*.'

In example 6.27, Delicia tells us the story of her strange Grampa Angel who would bathe in the river and make calls like a monkey hawk. In contrast to Eulodia's laughing gesture in 6.23, Delicia performs another laughing ideophone, yet uses a speaker-internal perspective gesture. In her story, she depicts the sound of people laughing in ideophone form. At first she says *hihihi* and later she says *hahaha*. Both are performed slowly and quietly, depicting quiet laughter. On both occasions, Delicia's body shakes gently on each syllable. In these composites, she becomes the people who are laughing and mimics them in a stylized fashion.

Example 6.27 Delicia depicts laughter in a stylized fashion.
Video 2—3:38 and 4:30 https://youtu.be/6QrT2t9HguU?t=3m37s

Figure 116 *hihihi*

Figure 117 *hahaha* (3)

hihihi	hahaha
IDEO	IDEO
hihihi	hahaha

'Hihihi(fig 116)…hahaha (fig 117)'

In example 6.28, from the story about a puma catching and killing a tapir, Luisa simultaneously becomes the predator and its victim. I discussed this in examples 5.1 and 5.2. Luisa depicts the noises and actions of both creatures in her story. At the point that the puma grabs the tapir's throat, Luisa grabs her own throat. In this gesture, her hand is the puma's mouth

and her neck is the tapir's throat. She performs the ideophone *tuglu,* which depicts the sound of the puma drinking the tapir's blood, much like the English "glug-glug." A few moments later, she performs a similar gesture, this time with the ideophone *tus,* which depicts the sound of the breaking neck skin.

Example 6.28 Luisa is both tapir and puma.
Video 30—16:26 https://youtu.be/CPDwno3Czvg?t=16m20s

Figure 118 *tuglu*

Rawai-ta	tuglu tuglu tuglu
Blood-TOP	IDEO
The blood	tuglu tuglu tuglu

'The blood *tuglu tuglu tuglu*.'

Video 30—16:48 https://youtu.be/CPDwno3Czvg?t=16m47s

Figure 119 *tus* (1)

Figure 120 *tus* (2)

Tus	kan-iu-n	kai-bi
IDEO	bite-DUR-3	there-LOC
Tus	it is biting	there

'*Tus*! It is biting there.'

Voice/action ideophone-gesture composites depict both the character's voice and activity. The consistent gestural accompaniment of these composites distinguishes them from the path gesture category of onomatopoeic ideophones. Earlier, I noted that the inconsistent gestural accompaniment of the path gesture composites suggests that path information is not intrinsic to the meaning of those onomatopoeic ideophones. If that is so, then the consistent gestural accompaniment of the voice/action ideophones (as well as other synesthetic ideophones) suggests that the image depicted in the gesture is intrinsically related to the meaning of those ideophones in a specific context.

6.5 Conclusions

Ideophones and gestures work together to create a vivid image. When ideophone-gesture (IG) composites are used in narrative discourse, the speaker is not only narrating the event but is also taking on the role of an actor who re-creates or dramatizes an event for his or her audience.

The composite simultaneously depicts the event in two modalities. This further enables the listener to vicariously experience events by intensifying the dramatic effect and evoking a physical sensation.

Ideophones tend to disappear in languages with a long written tradition where, in modern dialects, they seem childish and are undervalued linguistically; likewise, highly expressive gestures are viewed, in some cultures, as irreverent or uncouth. Both ideophones and gestures have generally been ignored by linguistic description and investigation (at least until recently). The relationship between them has only lately been studied and is not yet completely understood.

What has been discovered about this relationship only begins to define a subtle and complex phenomenon. This complexity is partially illustrated in the way gestures reveal a speaker's perspective of the conceptual environment. This perspective is apparent only in the gesture's manner of depiction; it is not described in the verbal utterance. Nuckolls et al. (2015) noted that the level of iconicity in IG composites seems to coincide with the 'closeness' of the referent in the conceptual scene. The most iconically depictive gestures seem to have a speaker-internal perspective built within them. While, on the other hand, the least iconic gestures seem to be from a more distant, speaker-external perspective.

Most who have studied the ideophone-gesture relationship report that ideophones are almost always accompanied by gestures. (Klassen, 1998, p. 8; Moshi, 1993, p. 201-202; Reiter, 2013, p. 404; Kunene, 1965, p. 21; Zondo 1982, p. 123). Kita (1997, p. 392) reports that 94% of the ideophones in his data are accompanied by gestures. However, Dingemanse (2013) finds that only 38% of ideophones are accompanied by gesture in conversational Siwu. He postulates that this difference is due to the narrative nature of the previous data analyzed in this field. While his

study did not specifically address the matter, he says that gestural accompaniment with ideophones seems to be correlated to sensory class (Dingemanse, 2013, p.159).

In my own data, 286 of 435 (65.7%) of Pastaza Quichua (PQ) ideophones are accompanied by gestures. I found that gestural accompaniment is highly correlated to the sensory class of an ideophone. In this corpus, the gestural accompaniment of onomatopoeic and synesthetic ideophones approaches a state of complementary distribution. When onomatopoeic ideophones are removed from consideration, the remaining synesthetic ideophones are accompanied by gestures 94.4% of the time. This is similar to Kita's result, whose data is weighted to synesthetic ideophones. The PQ data, in contrast, is weighted to onomatopoeic ideophones, which are accompanied by gesture 27% of the time.

Some researchers who have approached the ideophone-gesture relationship have also commented on the gesture types commonly associated with ideophones. All of these noticed that most gestures in IG composites were iconic (Klassen, 1998, pp. 221, 241, 256; Reiter, 2013, p. 408; Dingemanse, 2013, p. 150). Of the 66 ideophone-gesture composites in Dingemanse's data, 79% of the gestures are iconic. Mihas observed, "The patterning of ideophones and gestures is likely to be due to the sensory class membership…of the ideophone and specificity of the ideophone's semantics" (2013, p. 57).

Like Mihas, I also found that gesture type is highly correlated to sensory class in PQ ideophone-gesture composites. And, like the other researchers mentioned above, I found that most of the gestures associated with ideophones were iconic. All gestures in the 'motion' and 'sound/motion' sensory classes were iconic. Almost all gestures in the 'sound' class were iconic, but three were beat gestures. The ideophones from the 'other' class are mostly accompanied by metaphoric gestures (68.2%) or iconic gestures (29.4%), but are occasionally accompanied by

deictic gestures (twice). Metaphoric gestures fell into the ‘other’ sensory class by definition, since they accompany the metaphoric ideophones that are included in that class. In this analysis, it was apparent that the sensory class of an ideophone is the most important factor in predicting gestural behavior.

In my analysis, I focused on the onomatopoeic ideophone-gesture relationship. Onomatopoeic ideophones do not have the same relationship with gestures that synesthetic ideophones do. These ideophones were only accompanied by gestures 27% of the time, demonstrating a conspicuous lack of gesture in comparison to other ideophones and within the performance context.

Some reasons for a lack of gesture have been noted in previous research. A lack of gesture may occur when the ideophone is syntactically integrated into the prosaic lexicon (lexicalization), the speakers’ hands are full, or the ideophone simply does not require performative elaboration. McNeill (2007, p. 1) proposes that a gesture is an image in its most developed, embodied, material form while the lack of gesture is an image in its least material form. The greater the departure from the immediate context, the more likely it is that the image will be embodied in gesture, because of its contribution to being. Gestures are more or less elaborated depending on the need for an image to be made more real. McNeill postulates that absence of gesture is then the predictable result of a minimal departure from context.

These explanations do account for the fourteen synesthetic ideophones that are not accompanied by gesture. My data also supports the claim that gestures are used to make an image more real and that repetition can lead to fading gestures (and ideophones). However, these explanations do not account for the 135 onomatopoeic ideophones that are performed with a conspicuous lack of gesture. Of the 135 unaccompanied onomatopoeic ideophone performances,

100 are never accompanied by gestures in the same interview. Onomatopoeic ideophones are often performed without gestures **before** they are performed with gestures later in the interview. This lack of gesture happens in spite of the fact that these ideophones occur at the height of dramatic performances. These ideophones are (almost by definition) the center of attention.

Onomatopoeic ideophones are often preceded and followed by gesture, yet at the moment of performance, the speaker's hands conspicuously drop and all focus is placed on the sound of the ideophone. When gestures are added to onomatopoeic ideophone performances, it is to elaborate the visual scene that accompanies the sound, not the sound event itself. It is possible that the lack of gesture accompanying onomatopoeic ideophones is caused by their focus on sound—a non-visual sensation—which could make them more like direct reported speech than other ideophones. Direct reported speech and song are the only other situations in which a conspicuous lack of gesture is demonstrated in PQ. Of the 16 songs in my corpus, 15 are performed without a single gesture. Songs have often been compared to reported speech in linguistic research (Klassen, 1998, pp. 167-8).

In the PQ data, there are 50 onomatopoeic ideophones accompanied by gesture. These IG composites can be divided into three categories based on their accompanying gestures: 'beat gestures', 'path gestures', and 'voice/action gestures'. I was only able to find three examples of beat gestures accompanying ideophones. Perhaps due to the imagistic nature of ideophones, beat gestures do not commonly accompany them. The fact that they are only found among onomatopoeic ideophones further distinguishes this sensory class from the others.

The second, and most populous, category of onomatopoeic IG composites is 'path gestures'. Path is a very common feature among all types of IG composites. Most of the ideophones in the 'path gesture' category are performed without gestures before they are

performed with gestures in the same interview. This suggests that the path information is not intrinsic to the meaning of the ideophone, but is an elaboration technique that is added on to further depict the conceptual scene.

The third category of onomatopoeic IG composites is ‘voice/action gestures’. These composites depict both the character’s voice and activity. The ideophones in this category are always immediately accompanied by gesture. None are performed without gestures in the same interview. The consistent gestural accompaniment of these composites distinguishes them from the path gesture category of onomatopoeic ideophones. Earlier, I noted that the inconsistent gestural accompaniment of the ideophones in the path gesture composites suggests that path information is not intrinsic in their meaning. If that is so, then the consistent gestural accompaniment of the voice/action ideophones (as well as other synesthetic ideophones) suggests that the image depicted in the gesture is intrinsically related to the meaning of those ideophones in a specific context.

Kita’s data exhibited ideophones consistently accompanied by gesture. He concluded that, in situations where gestural accompaniment is not explained by communicative necessity, there must be a cognitive motivation for its production. He suggests that ideophones occurring with iconic gestures possess an inherent imagery (Kita, 2001, p. 428). As noted earlier, Dingemanse (2013) and Güldemann (2008) disagree with this statement and suggest that ideophones and gestures co-occur because they are both depictive modes of expression. I suggest that the answer lies in between. Synesthetic ideophones seem to have an inherent imagery and are almost always accompanied by gestures. While onomatopoeic ideophones may or may not be accompanied by gestures because their sensory domain is that of sound rather than imagery. This

sensory class distinction may account for some of the discrepancies in cross-linguistic comparisons of the ideophone-gesture relationship.

This thesis contributes to a better understanding of the relationship between ideophones and gestures and, ultimately, between language and gesture. The study of how ideophones and gestures relate adds to our understanding of how the mind and body work together. This thesis has implications in the studies of sound symbolism, iconicity, depiction, communication practices, language production and processing, and the link between language and cognition. IG composites are not simple or naive, but rather can express multiple meanings and represent a range of perspectives, viewpoints, and characters within the narrated event (Klassen 1998, 250-259).

This study has demonstrated that IG composites are a prominent resource in PQ social interaction. They are used constantly, both conventionalized and novel. IG composites are tools for the oral transmission of traditional knowledge: not only botanical, zoological, agricultural and medicinal knowledge, but also oral history, myths, and cultural knowledge (Smoll, 2014, p. 88). Composite utterances contribute to the embodied knowledge of PQ society (Mihas, 2013, p. 57).

As Haviland emphasized, master speakers owe much of their expressive power to their ability to gesture (2005, pp. 15-16). Studying the ideophone-gesture relationship, especially in the context of an oral tradition, will lead us to better understand the techniques of skillful performance. It will also shed light on those things that are most important to the speakers. After all, IG composites highlight what the speaker considers to be the most relevant and salient aspects of his or her utterance.

This thesis differs from the norm in that my research is uniquely accessible. With access to the data through online videos as well as a detailed list of ideophones and their locations, readers may access my data and use it to make their own decisions. Presenting my research in this manner also allows the reader to witness the performance in context. My thesis poses a challenge to take the performative aspects of language seriously and encourages their holistic analysis within the performance context.

REFERENCES

Ahlner, F., & Zlatev, J. (2010). Cross-modal iconicity: A cognitive semiotic approach to sound symbolism. *Σημειωτκή-Sign Systems Studies*, (1-4), 298-348.

Blench, R. (2010). The sensory world: ideophones in Africa and elsewhere. *Perception of the Invisible: Religion, Historical Semantics and the Role of Perceptive Verbs, Sprache und Geschichte in Afrika*, 275-296.

Childs, G. T. (1994). African ideophones. *Sound symbolism*, L. Hinton, J. Nichols and J.J. Ohala (eds), 178-204. Cambridge: Cambridge University Press.

Chui, K. (2009). Linguistic and imagistic representations of motion events. *Journal of Pragmatics*, *41*(9), 1767-1777.

de Ruiter, J. P. (2003). The function of hand gesture in spoken conversation. In Matthias Bickenbach, Annina Klappert, & Hedwig Pompe (Eds.), *Manus loquens* (pp. 338–347). Cologne: DuMont.

Diffloth, G. (1972). Notes on expressive meaning. In *Chicago Linguistic Society* (Vol. 8, No. 44, p. M4).

Dingemanse, M. (2011). *The meaning and use of ideophones in Siwu* (Doctoral dissertation, Radboud University Nijmegen).

Dingemanse, M. (2012). Advances in the cross-linguistic study of ideophones. *Language and Linguistics Compass*, *6*(10), 654-672.

Dingemanse, M. (2013). Ideophones and gesture in everyday speech. *Gesture*, *13*(2), 143-165.

Doke, C. M. (1935). *Bantu linguistic terminology*. Longmans, Green and Company.

Evans-Pritchard, E. E. 1962. “Ideophones in Zande.” *Sudan Notes and Records* 34: 143-146.

Fortune, G. (1962). *Ideophones in Shona*. Oxford University Press.

Gomi, Taro. 1989. *An Illustrated Dictionary of Japanese Onomatopoeic Expressions*. Transl. by J. Turrent. Tokyo: Japan Times.

Güldemann, T. (2008). *Quotative indexes in African languages: A synchronic and diachronic survey* (Vol. 34). Walter de Gruyter.

Haviland, J. B. (2005). Gesture as cultural and linguistic practice. *Linguistic Anthropology*. Oxford: EOLSS Publishers.

Hinton, L., Nichols, J. and Ohala, J.J. (1994). Introduction: Sound-symbolic processes. *Sound Symbolism*, L. Hinton, J. Nichols and J.J. Ohala (eds), 1-12. Cambridge: Cambridge University Press.

Holler, J., & Beattie, G. (2002). A micro-analytic investigation of how iconic gestures and speech represent core semantic features in talk. *Semiotica*, 142 (1), 31–69.

Holler, J., & Beattie, G. (2003). Pragmatic aspects of representational gestures: Do speakers use them to clarify verbal ambiguity for the listener?. *Gesture*, *3*(2), 127-154.

Jakobson, R., & Waugh, L. (1979). The Sound Shape of Language (Bloomington: Indiana UP). *JakobsonThe Sound Shape of Language 1979*.

Kendon, A. (1975). Gesticulation, speech, and the gesture theory of language origins. *Sign Language Studies*, *9*(1), 349-373.

Kendon, A. (1997). Gesture. *Annual review of anthropology*, 109-128.

Kendon, A. (2000). Language and gesture: Unity or duality. *Language and gesture*, (2).

Kendon, A. (2004). *Gesture: Visible action as utterance*. Cambridge University Press.

Kilian-Hatz, C. (2001). Universality and diversity: Ideophones from Baka and Kxoe. *Typological studies in language*, *44*, 155-164.

Kita, S. (1993). *Language and thought interface: A study of spontaneous gestures and Japanese mimetics* (Doctoral dissertation, University of Chicago, Department of Psychology, Department of Linguistics).

Kita, S. (1997). Two-dimensional semantic analysis of Japanese mimetics 1. *Linguistics*, *35*, 379-415.

Kita, S. (2001). Semantic schism and interpretive integration in Japanese sentences with a mimetic: Reply to Tsujimura. *Linguistics*, *39*(2; ISSU 372), 419-436.

Klassen, D. H. (1998). *"You can't have silence with your palms up": ideophones, gesture, and iconicity in Zimbabwean Shona women's ngano (storysong) performance* (Doctoral dissertation, Indiana University).

Kock, I. J. (1985). The speech act theory: A preliminary investigation. *South African Journal of African Languages*, *5*(2), 49-53.

Kulemeka, A. T. (1995). Sound symbolic and grammatical frameworks: a typology of ideophones in Asian and African languages. *South African Journal of African Languages*, *15*(2), 73-84.

Kunene, Daniel P. (1965). The ideophone in Southern Sotho. *Journal of African Languages* 4. 19-39.

Lakoff, G., & Johnson, M. (1980). *Metaphors we live by*. University of Chicago press.

Langdon, M. (1994). Noise words in Guaraní. *Sound symbolism*, L. Hinton, J. Nichols and J.J. Ohala (eds), 94-103. Cambridge: Cambridge University Press.

Lenaerts, M. (2006). Substances, relationships and the omnipresence of the body: an overview of Ashéninka ethnomedicine (Western Amazonia). *Journal of Ethnobiology and Ethnomedicine*, *2*(1), 1.

Liddell, S. K. (2003). *Grammar, gesture, and meaning in American Sign Language*. Cambridge University Press.

McGregor, W. B. (2002). *Verb classification in Australian languages* (Vol. 25). Walter de Gruyter.

McNeill, D. (1992). *Hand and mind: What gestures reveal about thought*. University of Chicago press.

McNeill, D. (2007). *Gesture and thought.* Chicago: University of Chicago Press.

Mihas, E. (2012). Ideophones in Alto Perené (Arawak) from Eastern Peru. *Studies in Language*, *36*(2), 300-344.

Mihas, E. (2013). Composite ideophone-gesture utterances in the Ashéninka Perené 'community of practice', an Amazonian Arawak society from Central-Eastern Peru. *Gesture*, *13*(1), 28-62.

Morris, D., Collet, P., Marsh, P., & O'shaughnessy, M. (1979). Gestures: Their origins and distribution. *Stein and Day, New York*.

Moshi, L. (1993). Ideophones in KiVunjo-Chaga. *Journal of linguistic Anthropology*, *3*(2), 185-216.

Müller, F. M. (1862). *Lectures on the Science of Language: Delivered at the Royal Institution of Great Britain in April, May, & June 1861*. Longmans, Green, Longman, and Roberts.

Nuckolls, J. B. (1993). The semantics of certainty in Quechua and its implications for a cultural epistemology. *Language in Society*, *22*(02), 235-255.

Nuckolls, J. B. (1996). *Sounds like life: Sound-symbolic grammar, performance, and cognition in Pastaza Quechua*. Oxford University Press.

Nuckolls, J. B. (2001). Ideophones in pastaza quechua. *Typological Studies in Language*, *44*, 271-286.

Nuckolls, J. (2006). The neglected poetics of ideophony. *Language, Culture, and the Individual*, 39-50.

Nuckolls, J. B. (2010a). *Lessons from a Quechua strongwoman: ideophony, dialogue, and perspective*. University of Arizona Press.

Nuckolls, J. B. (2010b). The sound-symbolic expression of animacy in Amazonian Ecuador. *Diversity*, *2*(3), 353-369.

Nuckolls, J. (2015, April). Ideophone-gesture composites: depictive type, sensory class, and modality. In *LSA Annual Meeting Extended Abstracts* (Vol. 6, pp. 15-1).

Nuckolls, J. B., Stanley, J. A., Nielsen, E., & Hopper, R. (2016). The Systematic Stretching and Contracting of Ideophonic Phonology in Pastaza Quichua 1. *International Journal of American Linguistics*, *82*(1), 95-116.

Nuckolls, J. B., Swanson, T., Hatton, S. A., Rice, A., Sun, D. (forthcoming). Lexicography in your face: the active semantics of Pastaza Quichua ideophones. *Canadian Journal of Linguistics* (Special issue entitled: "Structuring sensory imagery: ideophones across languages & cultures," edited by: Solveiga Armoskaite and Päivi Koskinen)

Nuckolls, J. B., Jensen, S., Peterson, E., Millar, M. (2017, January). Rethinking mono-sensory, implicational approaches to ideophones in Pastaza Quichua. In *SSILA Annual Meeting*.

Peirce, C. S., & Buchler, J. (1955). Philosophical writings of Peirce: Selected and edited, with an Introduction, by Justus Buchler. Dover Publications.

Perniss, P. M. (2007). Achieving spatial coherence in German Sign Language narratives: The use of classifiers and perspective. *Lingua*, *117*(7), 1315-1338.

Perniss, P., Thompson, R., & Vigliocco, G. (2010). Iconicity as a general property of language: evidence from spoken and signed languages. *Frontiers in psychology*, *1*, 227.

Poggi, I. (2008). Iconicity in different types of gestures. *Gesture*, *8*(1), 45-61.

Poggi, I. (2001, April). From a typology of gestures to a procedure for gesture production. In *International Gesture Workshop* (pp. 158-168). Springer Berlin Heidelberg.

Reiter, S. (2013). *Ideophones in Awetí* (Doctoral dissertation, Kiel, Christian-Albrechts-Universität, Diss., 2012).

Samarin, W. J. (1971). Survey of Bantu ideophones.

Saussure, F. D. (1916). Nature of the linguistic sign. *Course in general linguistics*, 65-70.

Schlegel, J. B. (1857). *Schlüssel zur Ewe-Sprache, dargeboten in den grammatischen Grundzügen des Aŋlo-Dialekts derselben, mit Wörtersammlung, nebst einer Sammlung von Sprüchwörtern*.

Smoll, L. (2014). Me: ɾuɾu, ɸoku and tʃitowiʃ: An analysis of ideophones in Katuena (Tunayana).

Steinen, K. v. d. (1894). *Unter den Naturvölkern Zentral-Brasiliens. Reiseschilderung und Ergebnisse der Zweiten Schingú-Expedition 1887-1888.* Berlin: Dietrich Reimer.

Streeck, J. (2008). Depicting by gesture. *Gesture*, *8*(3), 285-301.

Streeck, J. (2009). Depicting gestures: Examples of the analysis of embodied communication in the arts of the West. *Gesture*, *9*(1), 1-34.

Streeck, J. (2010). Ecologies of gesture. *New adventures in language and interaction*, *196*, 223.

Tedlock, D. (1999). Ideophone. *Journal of Linguistic Anthropology*, *9*(1/2), 118-120.

Voeltz, F. E., & Kilian-Hatz, C. (Eds.). (2001). *Ideophones* (Vol. 44). John Benjamins Publishing.

Watson, R. L. (2001). A comparison of some Southeast Asian ideophones with some African ideophones. *Typological studies in language*, *44*, 385-406.

Zondo, J. (1982). Some aspects of the ideophone in Ndebele. *Zambezia X (ii)*.

Zwicky, A. M., & Pullum, G. K. (1987, September). Plain morphology and expressive morphology. In *Annual Meeting of the Berkeley Linguistics Society* (Vol. 13, pp. 330-340).

APPENDIX 1: IDEOPHONES IN PQ DATA

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
1	0:03	tas		other	Yes	her pointed finger follows the path of the cup from in front of her to her mouth	Iconic	drinking something	Delicia
1	0:11	tai		motion	Yes	she brings her hands together	Iconic	tai is the absence of movement	Delicia
2	0:07	kukuli	3	Sound	No	no gesture	n/a	The kukuli bird is sad because he is alone	Eulodia
2	0:15	kukuli	2	Sound	No	no gesture	n/a	The kukuli bird is sad because he is alone	Eulodia
2	0:48	kukuli	3	Sound	Yes	gazing into the distance, she traces the circular path of the bird in the air with a pointed finger (pointed up)	Iconic	The kukuli bird is sad because he is alone	Eulodia
2	0:58	hahahaha		Sound	Yes	Sweeping hands back and forth vaguely, 'falling about' gesture	Iconic	the bird sees the people happy together and is sad that he is alone	Eulodia
2	1:04	kukuli	2	Sound	No	no gesture	n/a	The kukuli bird is sad because he is alone	Eulodia
2	1:15	kukuli	3	Sound	Yes	Just before the ideophone she retraces the flight of the bird above but then changes the gesture as she says the ideophone sweeping down in a vertical circle (with slightly cupped hand) as if the bird were diving down and sweeping back up	Iconic	The kukuli bird is sad because he is alone	Eulodia
2	2:05	kukuli	3	Sound	Yes	broad circles further down than the first flight, following the vertical orientation of the second flight gesture, with a pointed finger	Iconic	The kukuli bird is sad because he is alone	Eulodia
2	2:23	huway	3	Sound	No	no gesture	n/a	Her grandpa Angel is bathing in the river and making this sound, sometimes at 3am	Delicia
2	2:46	huway	3	Sound	No	no gesture	n/a	she continues saying huwai in a normal voice as she transitions back to prosaic speech	Delicia
2	2:55	tong	3	sound/motion	Yes	both arms start wide and scoop into the middle with each repetition	Iconic	Angel hits the water	Delicia
2	3:38	hihihi		Sound	Yes	no hand gesture, but her head is tilted to the side and her body shakes on each 'hi' as if she is laughing	Iconic	said very quietly, people quietly laughing at Angel	Delicia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
2	4:09	tuphux	4	sound/motion	Yes	one hand stretched out, sweeping back and then forward again	Iconic	Fish in the water, like supux: starting above and going below	Delicia
2	4:16	patak	4	sound/motion	Yes	one hand moves up quickly on each patak (getting smaller with each repetition)	Iconic	fish jumping around in the boat	Delicia
2	4:27	chun		other	Yes	hands jump up and out	iconic	the sound of silence	Delicia
2	4:30	hahahaha		Sound	Yes	no hand gestures, body shakes with laughter, head tilted to the side	Iconic	laughing at Angel	Delicia
2	5:14	huway	2	Sound	No	no gesture	n/a	monkey hawk/Grandpa Angel	Delicia
2	5:54	huway	2	Sound	No	no gesture	n/a	monkey hawk/Grandpa Angel	Delicia
3	0:54	win		other	Yes	Delicia points and indicates the area in front of her, some back and forth movement which indicates an area, rather than just a direction	deictic	pointing to the chagra where they chopped down the trees	Delicia
3	1:59	gyawn		Sound	No	no gesture	n/a		Delicia and Eulodia
3	2:33	gyawn		Sound	Yes	sweeps hand out	iconic	path of traveling sound	Eulodia
3	2:42	gyawn		Sound	Yes	sweeps hand out	iconic	path of traveling sound	Eulodia
4	0:07	ki		motion	Yes	two handed lifting gesture (about a foot apart) moving from the side forward	Iconic	'ki' is dumping a pile of little things, like rice. In this case, it is a pile of the skins of a particular fruit	Luisa
4	0:11	awin	3	motion	Yes	two hands in an upward grasp--- repeated, small opening, down-and-out movements	Iconic	awing: to open up	Luisa
4	0:17	win		other	No	no gesture; but it was deeply embedded and she was prepping for another gesture	n/a		Luisa
4	0:20	win		other	Yes	two handed open, up-and-out completive gesture	Metaphoric		Luisa
4	1:07	win		other	Yes	one hand moves forward	Metaphoric		Luisa
5	1:22	lapu	3	motion	Yes	one handed snatching in the air above her head repeatedly,	Iconic	snatching oriel babies that fell from the nest. Lapo: Spanish for swipe	Eulodia
5	1:31	hyaw	3	Sound	No	pointing at the place the snake was, not synchronized with ideophone, deictic, part of the previous utterance	n/a	She saw the snake making the sound of an agouti in order to lure the agouti to it.	Eulodia
5	1:41	hyaw	4	Sound	No	no gesture	n/a		Eulodia
5	1:50	hyaw	2	Sound	No	no gesture	n/a	tail end of a deictic gesture is held through the ideophone	Eulodia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
5	2:03	hyaw	4	Sound	No	no gesture	n/a	she does maintain the 'head-up' gesture from the previous utterance	Eulodia
5	2:28	hyaw	4	Sound	No	no gesture	n/a		Eulodia
5	2:48	hyaw	4	Sound	No	no gesture	n/a	maintains the 'head-up' gesture from the previous utterance	Eulodia
5	3:00	dzas		motion	Yes	path gesture, going down	Iconic	She quickly jumped down from a tree	Eulodia
5	3:14	lin	3	motion	Yes	inserting gesture, moving across a space as if sticking her grasped hand into a line of nests	Iconic	grabbing oriol chicks from nests to raise them as pets	Eulodia
5	3:25	hyaw	2	Sound	No	deeply embedded, not performed; she maintains a deictic gesture throughout the utterance	n/a		Eulodia
6	1:06	tarr	4	Sound	Yes	no hand gesture, but head bobbing	Iconic	sound of a tara kwilin bird--rolled /r/	Pedro
6	1:26	piria	5	Sound	No	no gesture	n/a	same bird, called kaka kwilin {from bobonaza}	Eulodia
6	1:43	piria	6	Sound	Yes	she points and moves along a line in front of her then comes back	Iconic	sound of the kaka kwilin	Eulodia
6	1:57	piria	6	Sound	Yes	[Tod moves back in order to see the gesture and asks her to say it again] her pointed finger bounced down a line in front of her	Iconic	the bird hops down the branch as it calls and then moves back again	Eulodia
6	2:39	zun	3	other	Yes	pointing up at the branches of a tree, indicating the bird jumping around	Iconic	Chuckta zun: once here, once there; zun: random movement	Eulodia
6	2:41	piria	5	Sound	Yes	pointing up (at the branches of a tree) she traces the path of the bird hoping around from branch to branch	Iconic		Eulodia
6	3:10	pizhan	2	Sound	No	no gesture	n/a		Pedro
6	6:22	tarr	2	Sound	Yes	minimal path gesture, pointing at Pedro or just away at the trees (quoting him)	Iconic	this is the bird's normal call	Eulodia
6	6:27	piria	3	Sound	Yes	out of frame, it looks like the same path gesture she made with this ideophone 5 mins earlier	Iconic		Eulodia
7	0:25	polang	2	motion	Yes	both hands slowly rotate up and spread out--fingers hanging down to facing up and then flattening out	Iconic	the fish are lazily surfacing in the sun	Eulodia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
7	2:17	tai	2	motion	Yes	she has her hands wrapped around her legs, tai is embedded in the sentence, not emphasized, but she scrunches her shoulders a little	iconic	monkeys huddled tight	Eulodia
7	2:19	tai	2	motion	Yes	she has her hands wrapped around her legs, tai is embedded in the sentence, not emphasized, but she scrunches her shoulders a little	iconic	monkeys huddled tight	Eulodia
7	2:23	tai		motion	Yes	she has her hands wrapped around her legs, and she scrunches her shoulders a little, but closely follows it by holding her hands together close to her chest, she says "like this"	iconic	the monkeys huddled tight to keep from getting wet	Eulodia
8	0:01	----			No	no gesture, she is singing a song	n/a		
8	0:12	uyung	8	motion	No	no gesture (ideophone reduplicated to the rhythm of the music)	n/a	Jiggle	Narcissa
8	0:36	uyung	8	motion	No	no gesture (ideophone reduplicated to the rhythm of the music)	n/a	Jiggle	Narcissa
8	1:14	uyung	4	motion	No	no gesture (ideophone reduplicated to the rhythm of the music)	n/a	Jiggle	Narcissa
9	0:35	Ilucucucucu	2	Sound	No	no gesture	n/a	Sound of the Jilucu	Clara
9	0:52	Ilucucucuilu		Sound	No	no gesture, she looks up at the sky	n/a	Sound of the Jilucu	Clara
9	1:00	Ilucucucuilu		Sound	Yes	hand held over from previous utterance, wide hand (the moon) moves slightly in a beat gesture	beat	the jilucu cries when the moon is full	Clara
10	1:27	putun	2	sound/motion	No	no gesture, she has her hands full	n/a	the sound of the food hitting the ground	Eulodia
10	1:41	turus	2	Sound	No	no gesture, her hands are full	n/a	the sound of crunching on the food, sounds like squirrels	Eulodia
10	3:35	turus	5	Sound	No	no gesture, her hands are full	n/a	the sound of crunching on the food, sounds like squirrels	Eulodia
11	1:19	dzhin	2	Sound	No	no gesture, she has her hands together	n/a	the man becoming the chuku tree tells the birds how he will call them to come drink nectar from his flowers, dzhin is the sound of the cicadas that live in the tree	Eulodia
11	1:30	dzhin	2	Sound	Yes	she puts her two forefingers together	Iconic	the chuku tree calls to the birds, sound of the cicadas that live in the tree	Eulodia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
11	2:00	palay	6	sound/motion	Yes	Both hands making separate, broad gestures--the paths of the birds in the air	Iconic	the birds landing and drinking the flowers of the tree	Eulodia
11	2:06	win		other	Yes	both hands out and coming up in a completive gesture. The gesture covers the whole utterance	Metaphoric	all the birds	Eulodia
11	2:16	tas		other	Yes	both hands move to her for head and then out to the sides of her head to indicate a feather headdress, her fingers open up as she goes away from her forehead	Iconic		Eulodia
11	2:27	win		other	Yes	hands spread out, palm up, high in the gesture space, then after the ideophone she brings her hands around and together	Metaphoric		Eulodia
11	2:38	win		other	Yes	she slowly starts the gesture with the sentence but it comes to a peak at 'win' two hands both pointing up	Metaphoric	he will put his flowers back on	Eulodia
11	2:46	hahahaha		Sound	Yes	hands back and forth vaguely	Iconic	the animals are laughing, falling about, not listening to the tree's chastisement not to fight	Eulodia
12	0:27	Hihihihihi		Sound	No	no gesture (very low voice)	n/a	thunder makes this noise	Eulodia
12	0:28	hihihihihi		Sound	No	out of frame	n/a	thunder makes this noise	Luisa
12	0:32	Hihihihihi		Sound	No	out of frame	n/a	thunder makes this noise	Luisa
12	0:37	Hihihihihi		Sound	No	no gesture (very low voice)	n/a	the thunder is angry when there are no hot peppers; his wife gets him peppers and he laughs in this way	Eulodia
12	0:47	hihihihihi		Sound	No	no gesture (very low voice)	n/a	the thunder is angry when there are no hot peppers; his wife gets him peppers and he laughs in this way	Luisa
12	0:51	hihihihihi		Sound	No	no gesture (very low voice)	n/a	the thunder is angry when there are no hot peppers; his wife gets him peppers and he laughs in this way	Luisa
12	1:11	hihihihihi		Sound	No	no gesture (very low voice)	n/a	the thunder is angry when there are no hot peppers; his wife gets him peppers and he laughs in this way	Luisa
12	1:15	dolon	2	Sound	No	no gesture	n/a	Tod asks if 'Dolon' is also a sound thunder makes and she says it is	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
12	1:26	dolon		Sound	Yes	both hands go up and out in a round gesture	Iconic	reverberating sound of thunder	Luisa
12	1:46	hihihihihi		Sound	No	no gesture	n/a	thunder laughing	Luisa
12	1:53	dolon		Sound	Yes	both hands go out in a round gesture, smaller this time	Iconic	thunder reverberating	Luisa
12	1:56	dolon		Sound	Yes	both hands go out in a wide gesture similar to the other two	Iconic	thunder reverberating	Luisa
12	2:04	hihihihihi		Sound	No	no gesture	n/a	the thunder is angry when there are no hot peppers; his wife gets him peppers and he laughs in this way	Luisa
12	2:16	lululululu		Sound	No	no gesture (very low voice)	n/a	thunder grumbling	Eulodia
12	2:36	dolon		Sound	Yes	both hands go out in a round gesture	Iconic	thunder reverberating	Eulodia
13	0:27	wa	3	Sound	No	no gesture	n/a	monkey hawk/later she says it was her father's spirit	Luisa
13	1:06	hau	4	Sound	Yes	one open hand, high in the air toward a far off place with each repetition (I assume it is far off because her hand is high and stretched out)	Iconic	dogs barking in the distance, her hand imitates the movement of the barking dogs	Luisa
13	1:45	huhum	3	Sound	No	no gesture, we can't see her hands, but it doesn't look like she's moving them	n/a	Huhum: sound of calling out with hands cupped at the mouth	Luisa
13	2:11	hoooo		Sound	No	no gesture	n/a	spirit calling, no people about but she still hears them	Luisa
13	2:19	hoooo		Sound	No	no gesture	n/a	spirit calling	Luisa
13	3:32	turuk		Sound	No	no gesture, her hands are out of frame but it doesn't look like she's moving them	n/a	we're not sure what this sound is, probably the sound of a spirit moving in the forest like 'taras'	Luisa
13	3:44	turuk	8	Sound	No	no gesture	n/a	spirit moving in the forest like 'taras'?	Luisa
13	3:53	huhi		Sound	Yes	pointed finger moves from the side to the front	Iconic	the thing making the noise moves from one part of the forest to another	Luisa
13	4:25	huhi		Sound	No	no gesture	n/a	spirit calling out	Luisa
13	4:37	turuk	3	Sound	Yes	one hand reaching out to the side and indicating various locations, something moving around	Iconic	spirit moving in the forest like 'taras'?	Luisa
13	4:39	huhi		Sound	Yes	the other hand moves from her face out and indicates a far off location with forefinger far away in front of her	Iconic		Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
13	4:43	huhi		Sound	Yes	upward, slightly cupped hand goes out from her face and indicates the far-away place again	iconic		Luisa
13	5:13	turuk		Sound	No	no gesture	n/a	sound of something in the woods	Luisa
13	5:29	hwa	4	Sound	No	no gesture	n/a	monkey hawk/father's spirit; also, her grandfather's spirit was in this story; the two of them were fighting off the bad spirits—she heard sounds of a struggle	Luisa
13	6:03	hwa	4	Sound	No	no gesture	n/a	monkey hawk/father's spirit;	Luisa
14	0:54	win		other	No	no gesture directly related to the ideophone, it was embedded	n/a		Luisa
14	0:56	mema	3	Sound	Yes	both hands low in the gesture space, open and rolling out with the beats	beat		Luisa
14	1:24	dzas		motion	Yes	climbing up with both hands	Iconic	the sloth is not fast like a monkey	Luisa
14	1:43	win		other	Yes	both hands reach to her upper chest, embedded	Metaphoric		Luisa
14	1:50	mema		Sound	No	no gesture	n/a		Luisa
14	1:55	mema	2	Sound	No	no gesture	n/a		Luisa
14	2:29	mema	4	Sound	No	no gesture; she starts the next gesture before she finishes the ideophone	n/a		Luisa
15	0:04	bun		Sound	No	no gesture	n/a	bobonero bird call	Luisa
15	0:27	luskumbui	4	Sound	No	no gesture, at the end of the last iteration she starts a deictic gesture that attaches to the next utterance	n/a		Luisa
15	1:27	luskumbui	2	Sound	No	no gesture	n/a		Luisa
15	1:34	{humming}			No	no gesture (she starts humming the bird call--luskumbui)	n/a		Luisa
15	1:54	luskumbui	2	Sound	No	no gesture	n/a		Luisa
15	2:06	pashpanju		Sound	No	no gesture related to the ideophone, but the tail end of a deictic gesture	n/a		Luisa
15	2:10	luskumbui	2	Sound	No	no gesture	n/a		Luisa
15	2:19	pashpanju	2	Sound	No	no gesture	n/a		Luisa
15	2:22	gurrururu		Sound	No	no gesture	n/a		Luisa
15	2:24	pashpanju		Sound	No	no gesture	n/a		Luisa
15	2:25	gurrururu		Sound	No	no gesture	n/a		Luisa
15	2:26	pashpanju		Sound	No	no gesture	n/a		Luisa
15	2:29	pashpanju		Sound	No	no gesture (here it is less performed)	n/a		Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
15	2:31	luskumbui	2	Sound	No	no gesture	n/a		Luisa
15	2:45	manyaa		Sound	No	no gesture	n/a		Luisa
15	2:52	sian	3	Sound	No	no gesture	n/a		Luisa
15	2:57	tatatata	2	Sound	No	no gesture	n/a		Luisa
15	3:00	sian	2	Sound	No	no gesture	n/a		Luisa
15	3:16	tatatata	2	Sound	No	no gesture	n/a		Luisa
15	3:21	sian	3	Sound	No	no gesture	n/a		Luisa
15	4:12	chira	2	Sound	No	no gesture	n/a	Alma Pishku: spirit bird	Luisa
15	4:29	chon		other	Yes	throws her hand out, palm up, from face to extended arm, in front of her	Iconic	sound of silence, her gesture indicates the direction of silence falling, where it went to sleep	Luisa
16	0:07	chis	7	Sound	Yes	Elodia has her hand above her head fluttering her fingers	Iconic	Birds flying around making noise	Elodia
16	0:15	shaka		other	Yes	points to the bridge of her nose with her finger and thumb and draws a line up over her head	Iconic	the very white stripe ran along the snake's head	Luisa
16	0:35	pur	11	sound/motion	Yes	two hands stretched up high and to the side fluttering in the air	Iconic	birds would come from everywhere and gather like fruit in the tree, soft flapping	Luisa
16	0:44	ta	5	Sound	No	no gesture	n/a	toucans and cantingas would come and sound like this	Luisa
16	0:46	sian	2	Sound	No	no gesture	n/a	sound of toucans and cantingas	Luisa
16	0:57	ush		motion	Yes	one handed snatch in the air	Iconic	the snake catches a bird	Luisa
16	1:05	lin		motion	Yes	two handed scoop into her mouth	Iconic	the snake eats the bird after he constricts it	Luisa
17	0:25	pinguli		Sound	No	no gesture (sound of the pinguli bird)	n/a		Pedro
18	0:57	shili	10	Sound	No	no gesture	n/a	sound of the shili shili bird	Eulodia
18	1:03	shili	8	Sound	No	no gesture	n/a	sound of the shili shili bird	Eulodia
18	1:17	shili	5	Sound	No	no gesture	n/a		Eulodia
18	1:28	angaran	3	motion	Yes	both hands stretched out and pulls up and over one at a time on each repetition	Iconic	the bird dancing, her arms represent the birds wings as it dances back and forth	Eulodia
18	4:34	suyu	10	Sound	No	no gesture	n/a	sound of a bird	Pedro
18	4:48	suyu	4	Sound	Yes	he holds his hand out high, palm down, and traces the birds flight through the air above him	Iconic	sound of a bird, and its flight pattern	Pedro
19	1:09	hyew	5	Sound	No	no gesture, out of frame	n/a	sound of an agouti	Daniel

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
19	1:23	{whistle}				(Daniel puts his hand to his mouth and whistles like an agouti)		sound of an agouti	Daniel
19	1:43	{whistle}				(Daniel puts his hand to his mouth and whistles like an agouti)		sound of an agouti	Daniel
19	1:56	hyaw	4	Sound	No	no gesture, out of frame	n/a	sound of an agouti	Daniel
20	4:32	wisu	5	sound/motion	Yes	she is mimicking scraping out the large fruit with her hand, rotating several times	Iconic	scooping, scraping	Elodia
21	1:11	sararara…		other	Yes	throughout her performance of 'sarara' and 'sik' she slowly raises her open hand over her head and spins it around	Metaphoric	this is the feeling/sound/experience of being under the influence of Aiawaska	Luisa
21	1:14	sik sik sik…		other	Yes	throughout her performance of 'sarara' and 'sik' she slowly raises her open hand over her head and spins it around	Metaphoric	this is the feeling/sound/experience of being under the influence of Aiawaska	Luisa
21	1:19	tinggg		other	Yes	On 'ting' her hand goes from over her head to pointing forward, she holds this gesture until she finishes saying 'ting'	Metaphoric	this is the feeling/sound/experience of being under the influence of Aiawaska	Luisa
21	2:27	polang		motion	Yes	She raises her hand out in front of her and up, palm down	Iconic		Luisa
21	2:36	tik	5	sound/motion	Yes	she raises both hands to the sides of her head, palms up, and pushes them forward	Iconic	bullets being fired, past their heads	Luisa
21	2:38	aitai tai tai		sound/motion	Yes	she continues the pushing-forward gesture, depicting bullets going by	Iconic	bullets being fired	Luisa
21	2:39	pachatatata		sound/motion	Yes	one hand, pointing in mid gesture space, going side to side rapidly	Iconic	bullets hitting the trees all around	Luisa
21	2:45	tsing tsung	3	sound/motion	Yes	both hands, pointing fingers, one at a time going up to her head and then down, like things flying past her head	iconic	bullets flying by their heads	Luisa
21	3:29	tas		other	Yes	both hands go up to her head and reach out palms facing each other	Metaphoric	thorns all over	Luisa
21	3:55	win		other	Yes	both hands close together, pinched fingers, move up her torso	Metaphoric		Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
21	3:57	win	2	other	Yes	both hands are close to her body facing away, fingers spread out, make two spreading-out motions, reaching away	Metaphoric		Luisa
22	10:08	lin		motion	Yes	two handed thrust forward, palms facing each other	Iconic	describes a man, who has been lost in the jungle for weeks, asking his companions to relieve his constipation with a stick	Luisa
22	10:16	chow		sound/motion	Yes	one hand sweeps down to her lap from the back of her neck, chopping motion	Iconic	hitting an anaconda on the head with a stick or machete	Luisa
22	10:21	chu	6	sound/motion	Yes	two hands, a foot apart, do several little motions in a line, mid gesture space	Iconic	chopping up the anaconda and taking it with them	Luisa
22	12:08	ton		other	Yes	she pulls her fist up to her neck and then sweeps both open hands out in front of her	Metaphoric	canoes filled to the brim with soldiers	Luisa
22	13:00	kau	5	Sound	Yes	double handed gesture scooping into her mouth	Iconic	crunching on anaconda skin	Luisa
22	13:34	win		other	Yes	she's indicating her legs and sweeping down them with both hands	Metaphoric	covered with bites, in a terrible state	Luisa
22	15:12	tax		other	Yes	both hands sweep down her whole body, starting at her head	Metaphoric	her husband, in her vision, was bright red from head to toe, covered in red ceremonial dust	Luisa
22	15:18	tak		sound/motion	Yes	her hand indicates the side of her knee	Iconic	coming up to her, he stood there, next to her knee	Luisa
22	17:50	----			No	she starts to sing and sways back and forth a little, but otherwise does not gesture	n/a	5.5 minutes long! Protective, curing shamanic song	Luisa
22	27:28	win		other	Yes	she sweeps both hands down her whole body, starting at her head and finishing on the word 'win'	Metaphoric	she's talking about being blown on by the shaman	Luisa
23	4:45	win		other	Yes	two hands far apart sweep together	Metaphoric	bringing all the world's animals together, two by two	Eulodia
23	6:02	win		other	Yes	two hands far apart	Metaphoric	indicating all edible foods	Eulodia
23	6:16	tun		other	Yes	two hands a foot apart, grab something on her side and sweep up in front of her	Metaphoric	tun: a lot; like ton and win: complete	Eulodia
23	6:37	tin	6	Sound	No	no gesture	n/a	the sound of dancing/music	Eulodia
23	6:39	waaa		Sound	No	no gesture	n/a	sound of people celebrating	Eulodia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
23	6:47	tin	9	Sound	Yes	one hand moving side to side next to her head	Iconic		Eulodia
23	7:00	tin	12	Sound	No	no gesture	n/a		Eulodia
23	7:05	yakulasuk	4	Sound	No	no gesture	n/a		Eulodia
23	7:11	win		other	Yes	two hands wide apart sweep up	Metaphoric		Eulodia
23	7:53	win		other	Yes	two hands come together at her chest, seems to be preparing for the next gesture indicating the whole world	Metaphoric		Eulodia
23	7:59	win		other	Yes	two hands are high above her head, it sounds embedded in the rest of the sentence and the gesture is not only for 'win'	Metaphoric		Eulodia
23	8:27	win		other	Yes	one hand, wide scooping in motion, meets the other hand near the middle	Metaphoric		Eulodia
24	0:46	polang		motion	Yes	her hands are tracing the rising water high above her head, she points up and says 'polong'	Iconic	the boat floating up	Eulodia
24	0:58	tai		motion	Yes	her hands are raised to the middle space, fingers up, palms facing each other a foot and a half apart, come together a little	Iconic	stillness	Eulodia
24	1:01	tax	2	sound/motion	Yes	hands out wide, one hand sweeps across on one 'taxx' and the other hand sweeping across on the second 'taxx'	iconic	the water wiping out all of the houses	Eulodia
24	1:09	motum	3	motion	Yes	On each repetition one arm comes up and goes forward	iconic	chainsaw anacondas cutting up boats	Eulodia
24	1:17	motum		motion	Yes	this time, the gesture is toward herself, her perspective changed	iconic	chainsaw anacondas cutting up boats	Eulodia
24	1:21	pax	2	sound/motion	Yes	hands out wide, one hand sweeps across on one 'paxx' and the other hand sweeping across on the second 'paxx'	Iconic	the water wiping out all of the houses	Eulodia
24	3:01	tihra		motion	Yes	both hands, wide apart, reach to her side and then come up over her head	iconic		Eulodia
24	3:18	win	3	other	Yes	one hand, held far out to the side, sweeps in	Metaphoric		Eulodia
25	0:50	win		other	No	no gesture, embedded in sentence	n/a		Delicia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
25	1:28	tai		motion	Yes	she hold her hands together as if praying	iconic	the faithful have their hands clasped in prayer	Delicia
25	1:45	tyam	5	motion	Yes	roles her hands over each other	iconic	rolling vines	Delicia
25	3:02	tan	10	Sound	Yes	one hand, palm up, going around in circles	iconic	people dancing to drums and shouting	Delicia
25	3:07	wahaii		Sound	Yes	the circling gesture ends	iconic		Delicia
25	3:08	tan	7	Sound	No	no gesture	n/a		Delicia
25	3:10	wai		Sound	No	no gesture	n/a		Delicia
25	3:11	hahai	2	Sound	No	no gesture	n/a	drunk women yelling and dancing	Delicia
25	5:46	tak	6	sound/motion	Yes	two hands in middle space, patting palm down, and sweep out	iconic	lay stuff down	Delicia
25	6:38	tan	3	sound/motion	Yes	one hand makes chopping motions along the other arm	iconic		Delicia
25	7:45	pak	3	other	Yes	two hands patting palm down	iconic	filling a basket with 'pikakta'	Delicia
25	8:47	tan	8	Sound	Yes	her hand sweeps back and forth, low on her side--kind of behind her	Iconic	drumming	Delicia
25	9:11	chak	7	Sound	Yes	both hands moving separately back and forth	iconic	they danced going 'chak chak'	Delicia
25	9:15	dzhas	3	Sound	Yes	hands scooping into the middle one at a time	iconic	the water was sounding 'dzhas dzhas'	Delicia
25	9:25	chindannng		sound/motion	Yes	one hand sweeps around the whole gesture space at shoulder level	iconic	the houses being taken	Delicia
25	10:37	zar		sound/motion	Yes	two hands, close together, come up the middle of the gesture space, pointing fingers, up above her head	iconic	the chainsaw anaconda cut the boat	Delicia
25	10:39	sa		motion	Yes	two hands start crossed over and then spread out widely	iconic	the boat split in two, spreading apart	Delicia
25	11:05	win		other	No	no gesture, embedded in sentence	n/a		Delicia
25	11:20	dzir	2	motion	Yes	one hand over her head, pushing up twice with the back of her hand	iconic	the tie for the boat was slipped further up the pole as the water rose	Delicia
25	11:31	dzir	2	motion	Yes	two hands, pinched fingers, about a foot apart, go up in two little movements in the middle gesture space	iconic	the tie for the boat was slipping further and further up the pole as the water rose	Delicia
26	2:19	tak		sound/motion	Yes	she holds her hand out palm down, indicating a level	iconic	filling it, tak, put it in there	Luisa
26	2:42	dzas		motion	Yes	she holds her hands together palm down in mid gesture space	iconic	zas: quickly, it will not dry quickly	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
26	4:55	win		other	Yes	two hands together face out and move across mid gesture space	Metaphoric	finish everything nicely	Luisa
26	4:57	win		other	Yes	both hands move up and out in a half-circle completive gesture	Metaphoric	finish everything nicely	Luisa
26	6:11	ting	3	Sound	No	no gestures	n/a	sound of the water	Luisa
26	6:13	dirirriririri		motion	No	no gestures	n/a	movement of water	Luisa
26	6:18	tsax		sound/motion	Yes	one hand swoops from behind across the gesture space	iconic	the water crashing and sweeping out the houses	Luisa
26	6:19	ting	3	Sound	No	no gestures	n/a	sound of the water	Luisa
26	6:21	dirirriririri		motion	No	no gestures	n/a	movement of water	Luisa
26	6:25	tsax		sound/motion	Yes	sweeping hand	iconic	the water crashing through the houses	Luisa
26	6:28	polang		motion	Yes	two hands sweep up together palm down	iconic	the boat rising	Luisa
26	6:40	ting	3	Sound	No	no gestures	n/a	sound of the water	Luisa
26	6:42	dirirriririri		motion	No	no gestures	n/a	movement of water	Luisa
26	6:46	win		other	Yes	one hand does a wide circle around her head	Metaphoric	it threw everything	Luisa
26	6:50	polang		motion	Yes	one hand moves up palm down	iconic	the boat floated up	Luisa
26	6:54	chun		other	Yes	a sweeping gesture with one hand	iconic	the sound of silence, the drumming stopped, silence swept across the land	Luisa
26	7:03	ton		sound/motion	Yes	both hands reach out in front of her and push down	iconic	the people are grabbing onto the canoe and sinking it, ton means full	Luisa
26	7:24	win		other	Yes	she brings her hand high across the gesture space to her opposite shoulder	Metaphoric	the entire forest was gone	Luisa
26	8:03	tai		motion	Yes	hands clasped close to body, head tilted down	iconic	the puma was still	Luisa
26	8:29	ting		Sound	No	she holds her hand from the previous gesture so she can use it in the next one, it is the pole she is using to measure the water	n/a	explosive sound	Luisa
26	8:31	dirirriririri		motion	No	she holds her arm up from the last gesture, but it's not part of the ideophone	n/a	movement of water, starting to lower	Luisa
26	8:56	tak		sound/motion	Yes	one hand vertical, the other hand holds her middle finger near the top	iconic	that's where the water stayed, just at the top of his steering pole	Luisa
26	9:05	ting		Sound	No	she still holds her hands up from the previous sentence, they shows the water level	n/a	explosive sound	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
26	9:06	dirirririri		motion	Yes	her hand begins to lower to the top of her palm	iconic	the water starts to recede	Luisa
26	9:22	ting		Sound	Yes	explosive gesture	iconic	explosive sound	Luisa
26	9:24	dirirririri		motion	Yes	moves her finger down her hand to show the water is going down	iconic	months later it went down	Luisa
26	9:55	ting		Sound	No	holds her arms above her from the previous utterance	n/a	explosive sound	Luisa
26	9:57	dirirririri		motion	Yes	the hands go down	iconic	water continues to lower	Luisa
26	10:20	ting	2	Sound	No	no gesture	n/a	explosive sound	Luisa
26	10:23	dirirririri		motion	Yes	one hand goes down and points to the ground	iconic	the water gets all the way down	Luisa
27	1:38	tupu		sound/motion	Yes	scoops from the side and brings a cupped hand to her mouth	iconic	drinking water	Luisa
27	1:47	par		motion	Yes	wide flapping arms, up beat	iconic	describing the big woodpecker flapping its wings, coming	Luisa
27	1:48	matsu		motion	Yes	wide flapping arms, down beat	iconic	describing the big woodpecker flapping its wings, coming	Luisa
27	1:49	par		motion	Yes	wide flapping arms, up beat	iconic	describing the big woodpecker flapping its wings, coming	Luisa
27	1:50	matsu		motion	Yes	wide flapping arms, down beat	iconic	describing the big woodpecker flapping its wings, coming	Luisa
27	1:51	par		motion	Yes	wide flapping arms, up beat	iconic	describing the big woodpecker flapping its wings, coming	Luisa
27	2:06	pararara		motion	Yes	looking up, the hand going across high gesture space	iconic	the giant bird looked around	Luisa
27	2:19	log	5	other	Yes	both hands follow a rough outline of a tree	iconic	the tree's bark was shedding	Luisa
27	2:26	matsu	2	motion	Yes	two hands held out with palms up, moving up with each iteration	iconic	he came up to the tree	Luisa
27	2:28	tak		sound/motion	Yes	two hands held straight up come together over her head	iconic	he landed on the tree	Luisa
27	2:31	taw	7	sound/motion	Yes	pecking with one finger on 'taw', no gesture on 'tandangar'	iconic	the woodpecker pecked	Luisa
27	2:33	tandangar		Sound	No	no gesture	n/a	reverberating sound of quick pecking	Luisa
27	2:35	taw	7	sound/motion	Yes	pecking with one finger on 'taw', no gesture on 'tandangar'	iconic	the woodpecker pecked	Luisa
27	2:37	tandangar		Sound	No	no gesture	n/a	reverberating sound of quick pecking	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
27	3:00	tan	6	sound/motion	Yes	pecking with one finger on each tan	iconic	the woodpecker pecked	Luisa
27	3:03	tak	6	sound/motion	Yes	pecking with one finger on each tak	iconic	the woodpecker pecked	Luisa
27	3:04	tandangar		Sound	No	no gesture	n/a	reverberating sound of quick pecking	Luisa
27	3:07	tak	4	sound/motion	Yes	pecking with one finger on each tak	iconic	the woodpecker pecked	Luisa
27	3:08	tandangar		Sound	Yes	continues the last peck from the previous ideophone	iconic	reverberating sound of quick pecking	Luisa
27	3:10	tsagling	6	other	Yes	both hands, palm down, slowly coming down, spreading out	iconic	the sparks showered down to the ground from the woodpecker	Luisa
27	3:38	tak	6	sound/motion	Yes	pecking with one finger on 'tak', no gesture on 'tandangar'	iconic	the woodpecker pecked	Luisa
27	3:40	tandangar		Sound	No	no gesture	n/a	reverberating sound of quick pecking	Luisa
27	3:43	tak	6	sound/motion	Yes	pecking with one finger on 'tak', no gesture on 'tandangar'	iconic	the woodpecker pecked	Luisa
27	3:44	tandangar		Sound	No	no gesture	n/a	reverberating sound of quick pecking	Luisa
27	3:49	tak	6	sound/motion	Yes	pecking with one finger on 'tak', no gesture on 'tandangar'	iconic	the woodpecker pecked	Luisa
27	3:51	tandangar		Sound	No	no gesture	n/a	reverberating sound of quick pecking	Luisa
27	3:55	tsagling	6	other	Yes	both hands, palm down, slowly coming down, circular shape	iconic	the sparks showered down to the ground from the woodpecker	Luisa
27	4:40	win		other	Yes	one hand moves outward	Metaphoric	The water was all dried and there was no water to drink	Luisa
27	5:37	par	3	motion	Yes	wide flapping arms, up beat	iconic	describing the big woodpecker flapping its wings, leaving	Luisa
27	5:38	matsu	3	motion	Yes	wide flapping arms, down beat	iconic	describing the big woodpecker flapping its wings, leaving	Luisa
27	5:39	par	3	motion	Yes	wide flapping arms, up beat	iconic	describing the big woodpecker flapping its wings, leaving	Luisa
27	5:40	matsu	3	motion	Yes	wide flapping arms, down beat	iconic	describing the big woodpecker flapping its wings, leaving	Luisa
27	5:41	par	3	motion	Yes	wide flapping arms, up beat	iconic	describing the big woodpecker flapping its wings, leaving	Luisa
27	5:42	matsu	3	motion	Yes	wide flapping arms, down beat	iconic	describing the big woodpecker flapping its wings, leaving	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
28	4:10	tas		other	Yes	small drinking gesture, her hand goes up like she's drinking, her fingers are held upward as if holding a very small bowl, her hand follows the path of the drink into her body	iconic	Taking Ayawaska,	Luisa
28	5:54	chik		other	Yes	her hand shoots up and out	Iconic	a vine that lives in the forest	Luisa
28	6:25	tas		other	Yes	her hand goes up to her mouth	iconic	Drinking rondo angu juice to cure blood in the urine	Luisa
28	6:28	tas		other	Yes	two hands push out	Metaphoric	it stops the blood	Luisa
28	9:32	tas		other	Yes	one hand motioning away	Metaphoric	ilya angu sap stops diarrhea	Luisa
28	10:31	tas		other	Yes	her hand starts going up in a holding-a-small-bowl shape and then turns into a point to her mouth	iconic	drinking ayawaska	Luisa
28	10:39	tas		other	Yes	this time her hand starts in a point that goes to her lips but then afterward she imitates holding the little bowl	iconic	Drinking ayawaska	Luisa
28	10:50	tsu		other	Yes	she extends her arm and points to one side	Metaphoric	Very drunk on strong Ayawaska	Luisa
28	10:53	dinggggg		other	Yes	flings her arm out to point in the opposite direction	Metaphoric	Very drunk on strong Ayawaska	Luisa
28	11:02	sik	6	other	Yes	her hand goes in a circle over her head and shakes with each iteration	Metaphoric	drunk on ayawaska	Luisa
28	11:04	suk	6	other	Yes	her hand goes in a circle over her head and shakes with each iteration	Metaphoric	drunk on ayawaska	Luisa
28	11:57	lin	10	motion	Yes	her hand moves out and then in tracing the coils of the snake, the ideophone is depicting his tongue going in and out yet the gesture depicts his shape	iconic	amarun coming to her in her ayawaska state	Luisa
28	12:09	hi	3	motion	Yes	(low voice) she reaches out with both open hands and scoops in with each iteration	iconic	puma kneading the ground	Luisa
28	14:32	tsang		motion	Yes	Hand standing up, fingers down, on Janis's leg after patting it lightly	iconic	positional ideophone	Luisa
28	16:30	win		other	Yes	both hands sweeping down her legs	Metaphoric	she could not wear the heavy mantel of the yachak in her dream	Luisa
28	16:39	win		other	Yes	both hands sweeping down her legs	Metaphoric	she could not wear the heavy mantel of the yachak in her dream	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
28	17:26	tsik		other	Yes	one hand held high over her head goes from one side to the other, while she looks in the direction of the end of the gesture	Metaphoric	feeling of being drunk on Ayawaska	Luisa
28	17:30	sik	5	other	Yes	both hands rising, held wide apart	Metaphoric	feeling of being drunk on Ayawaska	Luisa
28	17:34	tsarararara		other	Yes	Both hands rise up and go around in circles above her head	Metaphoric	Weaker feeling of being drunk	Luisa
28	18:15	tsarararara		other	Yes	Both hands rise up and go around in circles above her head	Metaphoric	Weaker feeling of being drunk	Luisa
28	18:21	sik	5	other	Yes	both hands up high, held wide apart, beats with each 'sik' and then one hand going around in circles	Metaphoric	feeling of being drunk on Ayawaska	Luisa
28	21:44	win		other	Yes	two hands held wide apart, starting on her shoulders and going out and down in front of her	Metaphoric		Luisa
28	26:02	pu	6	Sound	No	no gesture	n/a	sound of the boat motor, the yachak in her dream leaving in a big boat	Luisa
28	26:04	pung	3	Sound	No	no gesture	n/a	sound of the boat motor, the yachak in her dream leaving in a big boat	Luisa
29	2:30	----			Yes	Luisa sings a song and is gesturing! beat, emphatic, and bekoning gestures	beat	a song to get her husband back from an affair he was having, learned from an achaur woman; she has trouble remembering it	Luisa
29	14:26	tas		other	Yes	two hands extend in a high wiping-out gesture, coming from the middle and sweeping up and out	Metaphoric	she stopped singing a shamanic song	Luisa
29	19:23	tas		other	Yes	one hand tips a drink to her lips, the fingers are held up as if holding a little bowl on her finger tips	iconic	drinking ayawaska	Luisa
29	19:35	polang		motion	Yes	two hands about a foot apart go up, she looks up	iconic	Poop floating to the top of the water	Luisa
29	20:39	tsararara		other	Yes	one hand waves around the gesture space slowly, swirling around her head	Metaphoric	she started to feel a little drunkenness	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
29	20:48	wax	2	sound/motion	Yes	reaching out (out of frame) it looks like she is putting her hand out straight and moving it slightly with each step, continued in the next ideophone. So I think we can say that it is the same as the taras gesture, even though it is out of frame.	iconic	sound of a puma approaching	Luisa
29	20:49	taras	2	sound/motion	Yes	her hand comes closer to her head on the first taras, then lowers on the second	iconic	the pumas are coming closer through the forest	Luisa
29	21:48	shu	4	other	Yes	she moves each arm in front of her mouth and then indicates her legs and stomach, each move happens with a 'shu'	deictic	maybe describing the skinny body of one of the pumas	Luisa
29	21:55	lin		motion	Yes	she cups her hand to her mouth and mimics a bite	iconic	the tortoise got its mouth stuck on a tortoise	Luisa
29	22:50	kuluchi	4	motion	Yes	her hands grip something, about a foot wide, and go side to side	iconic	yanking the tortoise shell out of the teeth of the puma	Luisa
29	23:02	kuluchi	3	motion	Yes	her hands grip something, about a foot wide, and go side to side	iconic	yanking the tortoise shell out of the teeth of the puma	Luisa
29	23:05	tsi		motion	Yes	two hands grab at something to her side and she pulls it down in front of her	iconic	tsi: pulling out motion	Luisa
29	23:25	kuluchi	4	motion	Yes	her hands grip something, about a foot wide, and go side to side	iconic	yanking the tortoise shell out of the teeth of the puma	Luisa
29	23:54	tsi		motion	Yes	two hands grab at something in front of her mouth and she pulls it down, one hand stretches out in front of her	iconic	tsi: pulling out motion	Luisa
29	24:16	santun		motion	Yes	puts both hands down on knees	iconic	puma is sitting up straight like a pet	Luisa
29	25:00	win		other	Yes	she puts her hand out expressively	Metaphoric	the pumas where all gone, every one	Luisa
29	25:32	gua	10	Sound	No	no gesture	n/a	waka maya	Luisa
29	26:13	polang		motion	Yes	she raises her hand out to the opposite side, palm down, this ideophone and the next are accompanied by the same gesture.	iconic	"Polang shun" describes the long body of the anaconda gliding across the water	Luisa
29	26:15	shun		motion	Yes	her hand goes across the whole gesture space at face level,	iconic	tracing the path of the amarun in the water	Luisa
29	26:19	shun		motion	Yes	coming back across the gesture space again	iconic	tracing the path of the amarun in the water	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
29	26:21	gua ka ka		Sound	No	no gesture	n/a	waka maya bird from far away	Luisa
29	26:29	ku	4	Sound	No	no gesture	n/a	waka maya bird from far away	Luisa
29	26:33	guawa		Sound	No	no gesture	n/a	waka maya bird from far away	Luisa
30	13:43	shing	3	Sound	No	no gesture	n/a	sound of a sacha wagra if a puma is chasing it	Luisa
30	14:05	talax	4	Sound	Yes	Head bobbing up and down (internal perspective). Two hands meeting at the fingers, palms up, going down with each 'talax' at mid-gesture space	iconic	sound of the puma running with his teeth hitting together	Luisa
30	14:25	talax	2	Sound	No	no gesture since she's not actually talking, she's just agreeing with Janis about it being the sound of teeth	n/a	sound of the puma running with his teeth hitting together	Luisa
30	14:35	tau	2	Sound	Yes	Her head bobs up and down dramatically,	iconic	imitating the motion of the running puma,	Luisa
30	14:36	chalin	2	Sound	Yes	Her head bobs up and down dramatically,	iconic	imitating the motion of the running puma,	Luisa
30	16:09	tux		motion	Yes	two hands out high, palm down, pounce forward	iconic	imitating the puma pouncing on the sacha wagra	Luisa
30	16:15	tux		motion	Yes	two hands out high, palm down, pounce forward	iconic	imitating the puma pouncing on the sacha wagra	Luisa
30	16:26	tuglu	3	Sound	Yes	one hand to her throat	iconic	the puma biting on the throat of the sacha wagra and drinking its blood, gulping, 'glug glug'	Luisa
30	16:48	tus		Sound	Yes	hand to throat	iconic	the teeth of the puma bursting through the next of the sacha wagra, like biting into ripe fruit.	Luisa
30	18:18	tak		sound/motion	Yes	she grabs something off of the ground with two hands	iconic	the puma lifts the sacha wagra over its shoulder	Luisa
30	18:28	tolon		sound/motion	Yes	taking something from her shoulder, with two hands, and throwing it on the ground	iconic	the puma goes into a hole under a tree and drops the dead animal	Luisa
30	19:28	tolon		sound/motion	Yes	taking something from her shoulder, with two hands, and throwing it on the ground	iconic	the puma goes into a hole under a tree and drops the dead animal	Luisa
31	1:22	win		other	Yes	two hands start at the sides of her head and fling forward expressively, palms up	Metaphoric	meaning everything	Luisa
31	2:21	win		other	Yes	two hands high overhead, she flicks both hands out to indicate everything	Metaphoric	meaning everything	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
31	5:11	win		other	Yes	two hands look like they grab/gather something	iconic		Luisa
31	8:30	tas		other	Yes	two hands set something in the space in front of her	iconic		Luisa
31	10:34	win		other	Yes	both hands are thrown up in an expressive gesture	Metaphoric		Luisa
31	14:36	kuria	4	Sound	No	no gesture	n/a	bird call of the kwilin bird	Luisa
31	14:44	gau	3	Sound	No	no gesture	n/a	bird call of the kwilin bird	Luisa
31	14:46	kuria	2	Sound	No	no gesture	n/a	bird call of the kwilin bird	Luisa
31	14:48	gau	2	Sound	No	no gesture	n/a	bird call of the kwilin bird	Luisa
31	14:54	kuria	3	Sound	No	no gesture	n/a	bird call of the kwilin bird	Luisa
31	16:39	pax		motion	Yes	two hands, palms down, extended out in front go straight up	iconic	bird taking off	Luisa
31	16:40	dararara		motion	Yes	the hands flutter back down	iconic	bird fluttering around	Luisa
31	16:46	pax		motion	Yes	two hands, palms down, extended out in front go straight up	iconic	bird taking off	Luisa
31	16:47	dararara		motion	Yes	the hands flutter back down	iconic	bird fluttering around	Luisa
31	16:48	yung	6	Sound	No	no gesture	n/a	bird call	Luisa
31	16:52	hiii		motion	Yes	two hands, one over the other, palms facing each other, then on 'hiii' the top and shoots out to the side and up	iconic		Luisa
32	0:22	purruk	5	motion	Yes	she flops her hands on one side as if lots of things are dropping	iconic		Luisa
32	2:30	ru	2	Sound	No	she sweeps her hand in front of her face, but it looks like she is just swatting a gnat	n/a	she's making another bird sound	Luisa
32	2:38	luskumbui	2	Sound	No	no gesture	n/a	she's making another bird sound	Luisa
32	10:25	dzhin	5	Sound	Yes	one pointed finger going up and up with each iteration, though not directly up---each point points up in a different direction	iconic	the sound of an elevator going up and its bell ringing; "we press the button and it goes up"	Luisa
32	10:44	dzhin	3	Sound	Yes	with each one she explains a little, one pointed finger going up and up with each iteration, though not directly up---each point points up in a different direction	iconic	the sound of an elevator going up and its bell ringing; "we press the button and it goes up"	Luisa
33	2:44	wis	3	sound/motion	Yes	she uses both hands to scoop something low and to the side	iconic	wis: to sweep;	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
33	3:05	tsa		sound/motion	Yes	she starts with both hands together, close to her chest, then one shoots out on 'tsa'	iconic	lighting a match	Luisa
33	4:07	tsa	2	sound/motion	Yes	she starts with both hands together, close to her chest, then one shoots out on 'tsa'; the second iteration starts further out from her chest	iconic	lighting a match	Luisa
33	6:38	tsa	4	sound/motion	Yes	smaller match striking gesture, then for each of the last three 'tsa' she just indicates with her pinched hands where she would have put the matches	iconic	if she had found her matches she would have lit it up here, here, here, and here	Luisa
34	4:42	chai		motion	Yes	head tilted to lay on her shoulder, and her hands close together	iconic	monkey sleeping in the tree	Eulodia
34	7:31	win		other	Yes	she starts counting on her fingers, one hand pressing on each extended finger	iconic		Eulodia
34	7:34	win		other	Yes	still counting on her fingers	iconic		Eulodia
34	7:35	win		other	Yes	with two hands, her pinched fingers pull apart in a line in front of her	Metaphoric		Eulodia
34	9:20	lin	2	motion	Yes	hands going up and down dramatically	iconic	swimming in a lake	Eulodia
34	15:11	chik	9	sound/motion	Yes	one hand, pinched, draws lines quickly on her chest, these iterations of 'chik' are interrupted by a couple of words, they are in sets of three	iconic	skinning the alligator	Eulodia
34	15:31	pax		motion	Yes	two hands coming together, one on top of the other	iconic	the alligator’s jaws clamping shut	Eulodia
34	16:45	was		motion	Yes	her hand, with pointed finger, sweeps quickly across the gesture space and up	iconic	puma running fast	Eulodia
34	16:47	tox		motion	Yes	one hand grabbing motion	iconic	puma pouncing	Eulodia
34	17:00	pak		sound/motion	Yes	her hand grabs my knee dramatically	iconic	the puma biting	Eulodia
34	17:01	tus	2	Sound	Yes	her pursed hands, facing up in mid-gesture space, opening and closing her fingers	iconic	the puma teeth piercing skin and blood spurting out	Eulodia
35	0:15	tak		sound/motion	Yes	one hand held out about 3ft above the ground	iconic	full of fish	Eulodia
35	2:53	dzas		motion	Yes	suddenly scrambles and grabs in low gesture space	iconic	fast	Eulodia

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
35	3:23	tox		motion	Yes	she grabs a stick and hits something low to her side	iconic		Eulodia
35	5:41	pok		sound/motion	Yes	one hand throws something forward in an arch motion starting next to her head	iconic		Eulodia
35	5:56	tak		sound/motion	Yes	grabs something, then puts it in another place next to it and lower	iconic		Eulodia
35	6:27	dzas		motion	Yes	swats something away in low-gesture space	iconic		Eulodia
35	6:31	tapon	2	sound/motion	Yes	throws something away to the side after gathering it, the throwing motions coincide with both 'tapon'	iconic		Eulodia
35	8:00	chu	3	sound/motion	Yes	cutting motions on her arms and legs	iconic		Eulodia
35	8:41	tak	2	motion	Yes	she reaches up high twice	iconic	a puma smells something hiding in a tree and jumps up onto one branch and then another, tak, tak, and catches it	Eulodia
35	15:54	ka ah ah		Sound	No	no gesture	n/a	waka maya	Eulodia
36	7:50	cham		sound/motion	Yes	she is holding something with two hands and twisting down	iconic	crumbly break	Luisa
36	7:53	win		other	Yes	gathering something from mid-gesture space while she looks up	iconic	looking into a tree	Luisa
36	7:58	puton	6	sound/motion	Yes	her hands flutter down	iconic	lots of fruit are falling to the ground	Luisa
36	8:33	cham		sound/motion	Yes	she is holding something with two hands and twisting down	iconic	crumbly break	Luisa
36	8:37	cham		sound/motion	Yes	she is holding something with two hands and twisting, this time twisting upward	iconic	Neal is yanking up a young tree to use to knock down a bunch of fruit, crumbly break	Luisa
36	9:13	puton	4	sound/motion	Yes	her hands flutter down	iconic	lots of fruit are falling to the ground	Luisa
36	9:15	puton	2	sound/motion	Yes	her hands flutter down	iconic	lots of fruit are falling to the ground	Luisa
36	9:17	wax	2	sound/motion	Yes	swatting with a stick motion, both hands	iconic		Luisa
36	9:23	win		other	Yes	both hands, palm down, gesturing expansively	Metaphoric		Luisa
36	17:23	pulo	2	motion	Yes	one hand held out and high sweeping over with each iteration	iconic	pulo: poking straight through; going through the underbrush to avoid mud	Luisa
36	17:55	siau		Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	17:56	kan	4	Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	17:58	siau		Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	17:59	kan	4	Sound	No	no gesture	n/a	sicuanga tucan song	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
36	18:00	siau		Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:01	kan	4	Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:28	siau		Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:29	kan	4	Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:30	siau		Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:31	kan	4	Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:32	siau		Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:33	kan	4	Sound	No	no gesture	n/a	sicuanga tucan song	Luisa
36	18:44	tatata		Sound	No	no gesture	n/a	ancanga tucan bird song	Luisa
36	18:46	sia	3	Sound	No	no gesture	n/a	ancanga tucan bird song	Luisa
36	19:00	urlululu		Sound	No	no gesture	n/a	Amangu Orial bird song	Luisa
36	19:07	tatata		Sound	No	no gesture	n/a	ancanga tucan bird song	Luisa
36	19:08	sia	2	Sound	No	no gesture	n/a	ancanga tucan bird song	Luisa
37	0:43	patag		sound/motion	Yes	large chopping motion with one hand	iconic		Luisa
37	0:47	patag		sound/motion	Yes	large chopping motion with one hand	iconic		Luisa
37	1:48	angaran		motion	Yes	arms wide out and low	iconic	Angaran: spread out	Luisa
37	2:04	togron		sound/motion	Yes	two hands holding something push forward and up	iconic	poking or nudging an alligator with a sharp stick, like tak	Luisa
38	0:26	ting	2	Sound	Yes	one hand flicks out from face level with each 'ting'	iconic	sticks of dynamite being thrown, ting: sound of explosion	Luisa
39	1:44	wax	3	sound/motion	Yes	swatting motion	iconic	using a stick to swat fruit from a tree	Luisa
39	5:38	----			No	Eulodia sings a song, no gestures	n/a		Eulodia
39	8:29	----			No	Eulodia sings a song, no gestures	n/a		Eulodia
40	1:10	sow		motion	Yes	one hand rolls over in mid-gesture space	iconic	sow: pouring ideophone	Eulodia
40	1:33	----			No	She sings a song, no gestures	n/a		Eulodia
41	1:22	dzhin		Sound	No	no gesture	n/a		Eulodia
41	1:36	dzhin		Sound	No	no gesture, non-performative and embedded	n/a		Eulodia
42	0:06	win		other	Yes	indicating her leg, It's out of frame	iconic		Luisa
43	0:31	bula	3	motion	Yes	she's gathering the leaves together	iconic	rolling leaves into balls, like bolan?	Narcissa
43	1:21	win		other	Yes	she's rubbing the leaves together	iconic	She says win when she is done rolling leaves into balls	Narcissa
43	1:28	tas		other	No	no gesture, she has leaves in her hands	n/a	drink it up	Narcissa
44	1:28	piti	2	motion	Yes	two hands held wide apart, making little cutting movements	iconic	cutting into pieces	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
44	8:12	lin		motion	Yes	she touches the tip of her finger	iconic	lin: insertion, penetration	Luisa
44	8:22	pus	4	motion	Yes	she reaches to her feet, out of frame	iconic	puma kneading the ground	Luisa
44	9:28	win		other	Yes	she sweeps her hand out to the side to indicate the whole area over there	Metaphoric		Luisa
45	2:09	bolan		motion	No	no gesture	n/a	bunched up	Luisa
45	3:45	win		other	Yes	one hand pushes out expressively	Metaphoric		Luisa
45	5:23	hoo		Sound	No	no gesture	n/a		Luisa
45	5:37	cheu		sound/motion	Yes	she reaches down and picks something up to taste it.	iconic	Bat monster eating people, after each taste she exclaims how sweet it is	Luisa
45	5:41	cheu		sound/motion	Yes	she reaches down and picks something up to taste it.	iconic	Bat monster eating people, after each taste she exclaims how sweet it is	Luisa
45	5:48	cheu		sound/motion	Yes	she reaches down and picks something up to taste it.	iconic	Bat monster eating people, after each taste she exclaims how sweet it is	Luisa
45	5:53	win		other	Yes	she reaching down with both hands	iconic	the bat monster scoops everyone up	Luisa
45	5:56	hoo		Sound	No	no gesture	n/a		Luisa
45	6:21	hoo	2	Sound	No	no gesture	n/a		Luisa
45	6:26	win		other	Yes	gesturing low, looks like she's gesturing at her legs	Metaphoric		Luisa
45	7:17	tan	2	Sound/motion	Yes	both hands arm holding something over the shoulder, then swinging forward like an axe	iconic	the sound of the metal weapons striking the bat monster, they just bounce off	Luisa
45	7:43	win		other	Yes	two hands go up over her head and arch out to her sides, including everything	Metaphoric		Luisa
45	8:17	win		other	Yes	hands go up above her head and down, the opposite of the last 'win'	Metaphoric		Luisa
45	8:24	chikiri	4	Sound	No	no gesture	n/a	the sound as the bat monster (disguised as a human) transforms into a bat and escapes	Luisa
45	8:37	win		other	Yes	one hand sweeps into central gesture space	Metaphoric		Luisa
45	9:18	win		other	Yes	both hands spread down and out	Metaphoric		Luisa
46	0:01	----			No	She sings a song	n/a		Narcissa
46	2:59	chu	3	sound/motion	Yes	she sweeps her hand across mid-gesture space	iconic	chu: cutting	Narcissa
47	0:58	pis	3	Sound	Yes	fingers closed in loose fist swooping down and up three times back and forth	iconic	Angry hummingbird diving down several times	Luisa

Vid#	Time	Ideophone	Rpt	Sensory Class	Gesture	Gesture Description	Gest. Type	Context/Translation	Speaker
47	1:11	pis	3	Sound	Yes	hand with pointed finger swooping down and up three times back and forth	iconic	Angry hummingbird diving down several times	Luisa
48	0:01	----			No	She sings a song and talks for a bit, but she doesn't use ideophones	n/a		Narcissa
49	0:01	----			No	She sings a song, no ideophones	n/a	she sways to the music	Narcissa
50	0:05	----			No	Song, no ideophones or gesture	n/a		Eulodia
51	5:47	----			No	Luisa sings a song driving away boas	n/a		Luisa
52	0:16	----			No	Singing, no gestures	n/a		Eulodia
53	3:24	----			No	Delicia sings a song, No ideophones	n/a		Delicia
54	2:16	----			No	Eulodia sings a song, No gestures during the song	n/a		Eulodia
55						No ideophones			Carmen
56						No ideophones			Eulodia
57						No ideophones, she's gathering mushrooms			Eulodia
58						Eulodia is sweeping a girl with leaves and muttering healing words			Eulodia
59						No ideophones			Luisa
60						No ideophones			Eulodia
61						No ideophones			Luisa
62						No ideophones			Eulodia
63	0:01	----			No	Singing, no gestures	n/a		Narcissa
64	0:10	----			No	Singing, no gestures	n/a		Eulodia
65						No ideophones			Luisa
66						No ideophones			Eulodia
67						No ideophones			Luisa
68						No ideophones		lots of gestures indicating body parts including inside the body.	Luisa
69	0:01	chik	10	Sound	yes	one hand going up and opening twice	beat	Sound of a squirrel	Pedro

APPENDIX 2: VIDEOS AND LINKS

#	Video name	Length	Speaker	2nd Speaker	Ideo.	Link
1	Delicia Dahua tas upirani	0:12	Delicia		Yes	https://www.youtube.com/watch?v=MeOeGR1VGxg
2	Eludia cuculi alone	6:48	Delicia	Eulodia	Yes	https://www.youtube.com/watch?v=6QrT2t9HguU
3	Giaun Quichua Eulodia and Delicia	3:34	Delicia	Eulodia	Yes	https://www.youtube.com/watch?v=epELexB9L4E
4	IMG_1037	3:07	Luisa		Yes	https://www.youtube.com/watch?v=C2-NIoFglIs
5	A Memory Painted on a Runa Woman's Face	3:56	Eulodia		Yes	https://www.youtube.com/watch?v=2FVzJh69jyQ
6	A bird that cries when its people die	7:10	Eulodia		Yes	https://www.youtube.com/watch?v=hOxp4rgJZiA
7	Weather and the Emotions of Birds, Fish, and Humans	2:30	Eulodia		Yes	https://www.youtube.com/watch?v=RUQE-SnPM1Q
8	Bitter, Bitter, Ayambi: a magical song against anger (song)	1:46	Narcisa		Yes	https://www.youtube.com/watch?v=_LVUYDn53vo
9	Clara Santi Grefa, "Hearing the Jilucu (Grand Potoo bird) Makes Me Sad."	3:13	Clara		Yes	https://www.youtube.com/watch?v=svVQ_P4H0wY
10	Amazonian Ethnobotany: Harvesting & eating Grias Neuberthii	3:48	Eulodia		Yes	https://www.youtube.com/watch?v=AwUv4yguE8g
11	A man becomes the Chuku tree (Erythrina poeppigiana) and friends become birds	3:49	Eulodia		Yes	https://www.youtube.com/watch?v=8aF02E9rbYo
12	Luisa Eulodia, On the Sounds of Thunder	3:00	Luisa	Eulodia	Yes	https://www.youtube.com/watch?v=05L7PCW2TSs
13	Luisa on her father's ghost	6:26	Luisa		Yes	https://www.youtube.com/watch?v=blgFC8SFEYA
14	Luisa on Sloths	3:18	Luisa		Yes	https://www.youtube.com/watch?v=8ZkzQ1zHVxk
15	Luisa, Urpi y Memoria de Padres tiny	4:36	Luisa		Yes	https://www.youtube.com/watch?v=vqxdcXPW18Q
16	Luisa Pishku Amarun	1:09	Luisa	Eludia	Yes	https://www.youtube.com/watch?v=4AxjM5kMFHs
17	Musician Wren Pedro Andi	2:12	Pedro	Eulodia	Yes	https://www.youtube.com/watch?v=BBlV9FIysHY
18	Pedro Suyu tamiara kayan	6:55	Pedro	Eulodia	Yes	https://www.youtube.com/watch?v=emdIvhq2tys
19	Tod and Daniel Andi, On difference btw ideophone and imitation of agoutis	2:16	Daniel	Tod	Yes	https://www.youtube.com/watch?v=an1x6pR5s-U
20	P6120012	5:35	Luisa	Eludia	Yes	https://www.youtube.com/watch?v=MWYLK83bqII
21	MVI_1649	5:53	Luisa	Janis	Yes	https://www.youtube.com/watch?v=7kBZCR6AjEo
22	MVI_1650	28:12	Luisa	Janis	Yes	https://www.youtube.com/watch?v=klRYDf4ND0s
23	Eulodia Noe Part 1	8:35	Eulodia		Yes	https://www.youtube.com/watch?v=sg9COax91y4
24	Eulodia Noe Part 2	6:12	Eulodia		Yes	https://www.youtube.com/watch?v=XzDfKU0heDs
25	Delicia Noah and the flood	15:33	Delicia		Yes	https://www.youtube.com/watch?v=3dnaxjIinaE
26	Luisa Noe part 1	10:28	Luisa		Yes	https://www.youtube.com/watch?v=6Nk9G-hqKWk
27	Luisa Noe part 2	5:48	Luisa		Yes	https://www.youtube.com/watch?v=9WBoORq9SYc

#	Video name	Length	Speaker	2nd Speaker	Ideo.	Link
28	1878	26:49	Luisa	Janis	Yes	https://www.youtube.com/watch?v=9wQ4tFGMPu4
29	1879	26:50	Luisa	Janis	Yes	https://www.youtube.com/watch?v=jfBIY2AcubM
30	06-14-13_Quichua class	20:01	Luisa	Eludia, Janis	Yes	https://www.youtube.com/watch?v=CPDwno3Czvg
31	06-19-13_Quichua Class_1	18:58	Luisa	Janis	Yes	https://www.youtube.com/watch?v=CRcOW1MjbMM
32	06-19-13_Quichua Class_2	20:01	Luisa	Janis	Yes	https://www.youtube.com/watch?v=6Tp_MJphcPE
33	06-19-13_Quichua Class_3	8:17	Luisa	Janis	Yes	https://www.youtube.com/watch?v=vJe1ISPE6CM
34	06-20-13_Quichua Class_1	20:01	Eludia		Yes	https://www.youtube.com/watch?v=SOkoIT8-D3Y
35	06-20-13_Quichua Class_2	20:01	Eludia		Yes	https://www.youtube.com/watch?v=dtR8Fho4t6Y
36	06-21-13_Quichua Class_1	20:01	Luisa	Janis	Yes	https://www.youtube.com/watch?v=Iu_ChPsdGj4
37	06-21-13_Quichua Class_2	9:41	Luisa	Janis	Yes	https://www.youtube.com/watch?v=lg5yvrAN8u0
38	06-21-13_Quichua Class_3	1:33	Luisa	Janis	Yes	https://www.youtube.com/watch?v=1oD84PigKI8
39	06-21-13_Jungle Treck_Talk and Elodia Song	9:44	Luisa	Delicia, Eulodia	Yes	https://www.youtube.com/watch?v=_zasGNlSHG8
40	Eulodia, Origin of the Cunawaru tiny	4:24	Eulodia		Yes	https://www.youtube.com/watch?v=kQ9UWA_oWIo
41	Eulodia, Story of Chuku	2:00	Eulodia		Yes	https://www.youtube.com/watch?v=X8aYtYxrII4
42	Luisa, On the Moon and the Stars	3:46	Luisa	Eludia	Yes	https://www.youtube.com/watch?v=d4lM3or3d30
43	Maticu	2:34	Narcisa		Yes	https://www.youtube.com/watch?v=saI5wT9Q7wU
44	Luisa, Trade of rubber for goods	12:57	Luisa	Eludia	Yes	https://www.youtube.com/watch?v=LfNP88CepWY
45	Luisa, Tutapishku Runa	9:37	Luisa		Yes	https://www.youtube.com/watch?v=wxaz_NrUY-4
46	Narcisa, Kindi Warmi	4:30	Narcisa		Yes	https://www.youtube.com/watch?v=yFiPSQ8vPYM
47	The Hummingbird Sound of Anger	1:21	Luisa	Tod	Yes	https://www.youtube.com/watch?v=hu1Qw9vuydM
48	Narcisa, La Mar Cancir Warmi	5:33	Narcisa		No	https://www.youtube.com/watch?v=AMjv1gz1Hwc
49	Tiutawali Warmi	2:04	Narcisa		No	https://www.youtube.com/watch?v=2tQy71xXSag
50	Eulodia, Ñuca machicu tiny	1:53	Eulodia		No	https://www.youtube.com/watch?v=GLlFfXKTzsw
51	MVI_1904	13:58	Luisa	Mike	No	https://www.youtube.com/watch?v=MGV7gNoKqZ0&spfreload=5
52	Eulodia, Taruga Shina Bailangui	1:22	Eulodia		No	https://www.youtube.com/watch?v=wht3IdIN6JQ
53	06-21-13_Jungle Trek_Delicia Song	4:34	Delicia	Tod	No	https://www.youtube.com/watch?v=iYU7lidzLEI
54	06-21-13_Jungle Treck_Elodia Song	4:52	Eulodia	Tod	No	https://www.youtube.com/watch?v=V0SYy-DKuEc
55	"We are to talk to him nicely" Amazonian Quichua women harvest bark	12:05	Carmen	Eulodia	No	https://www.youtube.com/watch?v=jmN-tb9Z45o
56	A face painted with water animals to resist sickness	2:40	Eulodia		No	https://www.youtube.com/watch?v=0A_TRfZmQmU

#	Video name	Length	Speaker	2nd Speaker	Ideo.	Link
57	Eulodia, Sicuanga Ala	1:08	Eulodia		No	https://www.youtube.com/watch?v=dVFCky9R9V4
58	Eulodia, Sweeping Taili Tiny	1:11	Eulodia		No	https://www.youtube.com/watch?v=BetzeiVixBU
59	06-19-13_Quichua Class_4	3:02	Luisa	Janis	No	https://www.youtube.com/watch?v=US-tY1rkFtk
60	06-20-13_Quichua Class_3	1:23	Eludia		No	https://www.youtube.com/watch?v=xJ7pmleBdVs
61	06-21-13_Quichua Class_4	0:15	Luisa	Janis	No	https://www.youtube.com/watch?v=Xm_Y_Qviuvg
62	Eulodia, wauki Divinumi tocaun	2:53	Eulodia		No	https://www.youtube.com/watch?v=AiYKS_TjqC4
63	Shiringuero Warmi: "I, a rubber gathering woman am going to steal a charcoal trader man."	2:20	Narcisa		No	https://www.youtube.com/watch?v=hgVD8tG_WBY
64	Kichwa Woman Sings to Bird Russet-backed Oropendola (Psarocolius angustifrons) (song)	3:17	Eulodia		No	https://www.youtube.com/watch?v=tA4R0w9MuDQ
65	P6120013	5:02	Luisa	Eludia	No	https://www.youtube.com/watch?v=Vd2y9Y2ly6c
66	P6120016	1:47	Eludia		No	https://www.youtube.com/watch?v=Gmp7VZxcets
67	P6130009	7:18	Luisa	Eludia	No	https://www.youtube.com/watch?v=e_YWRkLmMQI
68	Luisa1 body part names_no ideophones	7:16	Luisa		No	https://www.youtube.com/watch?v=UplFmb02yZA
69	Chik, Pedro	1:56			Yes	https://www.youtube.com/watch?v=bvIggItVoFE

APPENDIX 3: LIST OF SONGS AND THEIR LOCATIONS

Video Number	Time	Speaker	Link
8	0:01	Narcissa	https://www.youtube.com/watch?v=_LVUYDn53vo
22	17:50	Luisa	https://www.youtube.com/watch?v=klRYDf4ND0s
29	2:30	Luisa	https://www.youtube.com/watch?v=jfBIY2AcubM
39	5:38	Eulodia	https://www.youtube.com/watch?v=_zasGNlSHG8
39	8:29	Eulodia	https://www.youtube.com/watch?v=_zasGNlSHG8
40	1:33	Eulodia	https://www.youtube.com/watch?v=kQ9UWA_oWIo
46	0:01	Narcissa	https://www.youtube.com/watch?v=yFiPSQ8vPYM
48	0:01	Narcissa	https://www.youtube.com/watch?v=AMjv1gz1Hwc
49	0:01	Narcissa	https://www.youtube.com/watch?v=2tQy71xXSag
50	0:05	Eulodia	https://www.youtube.com/watch?v=GLlFfXKTzsw
51	5:47	Luisa	https://www.youtube.com/watch?v=MGV7gNoKqZ0&spfreload=5
52	0:16	Eulodia	https://www.youtube.com/watch?v=wht3IdIN6JQ
53	3:24	Delicia	https://www.youtube.com/watch?v=iYU7lidzLEI
54	2:16	Eulodia	https://www.youtube.com/watch?v=V0SYy-DKuEc
63	0:01	Narcissa	https://www.youtube.com/watch?v=hgVD8tG_WBY
64	0:10	Eulodia	https://www.youtube.com/watch?v=tA4R0w9MuDQ