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The Categorization of Ideophone-Gesture Composites in Quichua Narratives

Maria Graciela Cano

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
Chris L. Rogers
Dirk A. Elzinga

Department of Linguistics
Brigham Young University

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ABSTRACT

The Categorization of Ideophone-Gesture Composites in Quichua Narratives

Maria Graciela Cano
Department of Linguistics, BYU
Master of Arts

Ideophones are “marked words that vividly depict sensory events” (Dingemanse, 2009, p. 1). They often occur with gesture, but the link between the two is not yet fully understood. McNeill (1992) and Streeck (2008) have proposed classification schemas for gesture, and Nuckolls (2019) is developing a framework for the categorization of ideophones. This thesis categorizes ideophone-gesture composites using a combination of all three of these frameworks. I used data from *Quechua RealWords*, an online video corpus of 221 ideophones of Pastaza Quichua elicited by students and faculty at the Andes and Amazon Field School in Ecuador. I analyzed video clips of composite utterances and classified them according to McNeill’s, Streeck’s, and Nuckolls’s classification systems.

This thesis demonstrates how using these three classification systems together allows for a more holistic analysis of ideophone-gesture composites as well as for the identification of certain patterns in the data. In this case, these were the existence of deictic + beat gestures and the pairing of sound-only ideophones with head gestures rather than with hand gestures. This thesis also suggests that head gestures may be classified using Streeckian and McNeillian categories and it points out ways in which beats paired with Quichua ideophones deviate from the criteria put forth by McNeill.

Keywords: Quichua, Quechua, Kichwa, ideophones, gesture, depiction

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ABBREVIATIONS AND SYMBOLS

1	First person
2	Second person
3	Third person
ACC	Accusative
ADV	Adverbial
AG	Agentive
CAUS	Causative
COR	Coreference
DUR	Durative
EV	Evidential
FUT	Future tense
HES	Hesitation
IDEO	Ideophone
INCHO	Inchoative
INF	Infinitive
INST	Instrumental
INTJ	Interjection
LIM	Limiter
LOC	Locative
NEG	Negation
NOM	Nominalizer
PAST	Past tense
PERF	Perfective
PL	Plural
POSS	Possessive
PRES	Present tense
REFL	Reflexive
SING	Singular
SWITCH	Switch reference
TOP	Topicalizer

Chapter 1: Introduction

In the summer of 2017 I traveled to Ecuador, where I spent eight weeks learning Quichua at the Andes and Amazon Field School near the town of Tena. Every morning, I and about twenty other students gathered around Dr. Janis Nuckolls to study the language. “Mama” Luisa Cadena, a language consultant and long-time friend of Dr. Nuckolls, would often join us. She told us stories, both from her own experience and from Quichua folklore. Accounts of legendary beasts; plants and animals that were once human; and *Yaku Runa* and *Sacha Runa*, water and forest people, respectively, filled her narratives. Although we could not understand much of the language yet, she would draw us in with her expressive language and gestures.

“*Pital, pital, pital, pital,*” she would say, wiggling her fingers to depict a man’s legs kicking and flailing as he was carried away by a giant mythical hawk. We learned words like these were called ideophones, and we quickly began to pick them out as Luisa and other language consultants told stories.

Pastaza Quichua, spoken by Luisa Cadena, is a Quechua II dialect spoken in Amazonian Ecuador (Eberhard, Simons, & Fennig, 2020). Quichua was not originally spoken in the Napo region; contact with the Incan empire and interaction with regional trade played important roles in its spread to the Ecuadorian Amazon (Ennis, 2019, p. 6). Later, during the colonial period, separate peoples were brought into contact with one another and consolidated into larger groups by the mission system (Ennis, 2019, p. 8). Missionaries taught Indigenous interpreters Quichua, resulting in many people learning Quichua as a second language and leading to its simplification and creolization (Ennis, 2019, pp. 8–9; Grzech, Schwarz, & Ennis, 2019, p. 128).

Today in Ecuador, Quichua is divided into Highland and Lowland varieties. The latter can be further divided into Pastaza, Napo Alto, and Napo Bajo varieties (Grzech et al., 2019, p. 128). A map is reproduced here from Aschmann (2006).

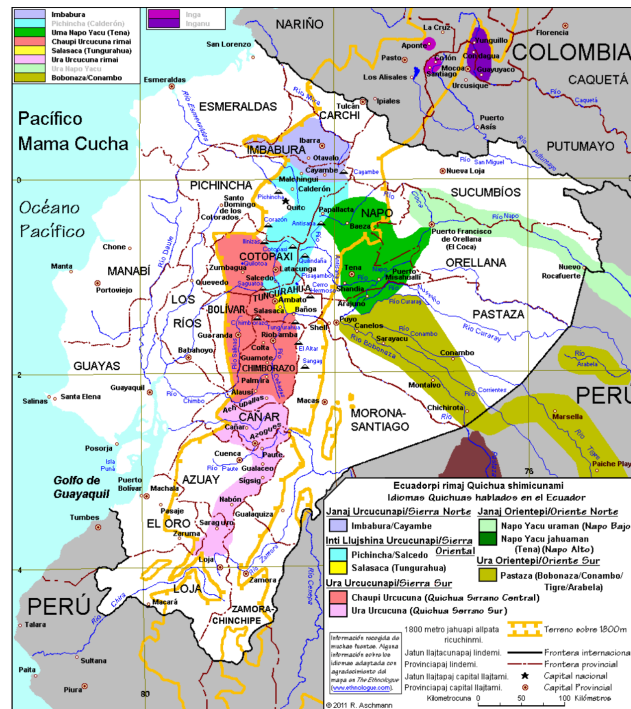


Figure 1 Ecuador's Quichua Varieties

This thesis deals with the Pastaza and Napo Alto (specifically, Tena) dialects of Quichua. According to Eberhard, Simons, & Fennig (2020), there were approximately 8,000 speakers of Northern Pastaza Quichua in Ecuador in 2007. The literacy rate is about 15% in Quichua, although 40% of speakers are literate in Spanish (Eberhard, Simons, & Fennig, 2020). A map representing the territory covered by this dialect is reproduced from Eberhard, Simons, & Fennig (2020) below.



Figure 2 Range of Pastaza Quichua

In 2009, there were 14,000 speakers of Tena Quichua living in Ecuador (Eberhard, Simons, & Fennig, 2020). Of these, 800 were monolingual (Eberhard, Simons, & Fennig, 2020). The literacy rate among Tena Quichua speakers is 25% and 60% in Spanish (Eberhard, Simons, & Fennig, 2020). The orthography for all Ecuadorian Quichua dialects is Spanish based (Eberhard, Simons, & Fennig, 2020).



Figure 3 Range of Tena Quichua
(Reproduced from Eberhard, Simons, & Fennig, 2020)

Speakers of Quichua use the language mostly in their homes and in the community, while Spanish is used for “official matters” (Grzech et al., 2019, p. 127). Monolingual speakers of Quichua are 60 years old or older, while most younger people “are either monolingual in Spanish or use it as their primary language” (Grzech et al., 2019, p. 132). While Pastaza Quichua is currently the only threatened Amazonian variety, multiple authors estimate that all dialects of Amazonian Quichua will be endangered “in the short- or mid-term” (Grzech et al., 2019, p. 132).

In a push for inclusion of Indigenous peoples in education, a standard of orthography—Unified Kichwa—was developed and is currently taught in schools (Grzech et al., 2019, p. 132). However, it is associated with the Highland dialects and often perceived as “foreign” by speakers of local dialects who feel their language is now threatened by not only Spanish but also Unified Kichwa (Grzech et al., 2019, p. 134). While “Kichwa” is the spelling used by the Ecuadorian Ministry of Education, it is also associated with Unified Kichwa and the highland dialects (Nuckolls, Nielsen, Stanley, & Hopper, 2016, p. 97). Because my thesis focuses on the Amazonian dialects, I will use the older spelling “Quichua.”

Quichua is rich in ideophones; according to Nuckolls (2001), it is impossible to speak the language fluently without using them (p. 272). These are “marked words that vividly depict sensory events” (Dingemanse, 2009, p. 1). They can be marked phonotactically, morphologically, or syntactically and are often “louder, softer, higher pitched, lower pitched, [and] pronounced more slowly, or more quickly than the prosaic words that surround them” (Dingemanse, 2009, p. 1; Nuckolls, 2016, p. 98). Nuckolls refers to this contrast as “performative foregrounding” (Nuckolls, 1996, p. 13). Contributing to the performative nature of ideophones is the fact that they are often paired with gesture (Dingemanse, 2013, p. 144). Unfortunately, both ideophones and gesture have historically been heavily stigmatized by

linguists and speakers alike. Dictionaries and grammars tend to ignore ideophones, and speakers are often reluctant or embarrassed to use them even when prompted by linguists (Childs, 2001, p. 64; Nuckolls, 2004, p. 132).

Despite this, multiple linguists have developed models and frameworks that allow researchers to describe and categorize different gestures. Kendon (1972) proposes a descriptive gesture hierarchy that breaks gestures down into shorter, more basic components, thus facilitating analysis. The second chapter of this study explains this hierarchy.

David McNeill provides several systems for gesture. In one, he divides the physical space that speakers use to gesture into the concentric center, periphery, and extreme periphery (McNeill, 1992, p. 86). Center holds within it the space center-center, while the other two “rings” are further divided into eight sections each, allowing for the tracking of hand movements during gesticulations (McNeill, 1992, pp. 86–89).

In another framework, McNeill presents functional categories that can be used to label gestures that perform similar roles. He classifies gestures as iconics, deictics, metaphoric, beats, and cohesives. Iconics are depictive gestures that “look like” an object, action, or event (McNeill, 1992, p. 12). Metaphoric are similar but depict abstract ideas such as spatial expanses (McNeill, 1992, p. 14). Deictics are pointing gestures, while beats are slight movements of the hands that accompany significant ideas, words, or phrases (McNeill, 1992, pp. 15, 18). Beats mark significant words or phrases with short, quick movements (McNeill, 1992, p. 15). Cohesives mark the relationships between different parts of discourse. Because this category can take the form of any of the other McNeillian gestures, it will not be included in this thesis’s analysis (McNeill, 1992, p. 16).

Jürgen Streeck proposes a different set of classifications. He splits iconic gestures into two broad groups: depictive and conceptual. Conceptual gestures are described as “background processes” (Streeck, 2008, p. 289). Depictive gestures demonstrate “what something looks like or is like” (Streeck, 2008, p. 289). This category is subdivided into 12 distinct subcategories, thus lending nuance to McNeill’s iconic grouping (Streeck, 2008, p. 289).

A classification scheme has also been proposed for ideophones. Nuckolls places ideophones on a map of three main sensorisemantic categories arranged on an animacy spectrum (Nuckolls, 2019, p. 173). On the low animacy side are ideophones representing visual phenomena (Nuckolls, 2019, pp. 172–173). This visual category has two subcategories: color and pattern (Nuckolls, 2019, p. 172). In the middle of the animacy spectrum is the movement category, with configurational and haptic subcategories (Nuckolls, 2019, pp. 172–173). Haptic houses its own subcategory, proprioception (Nuckolls, 2019, pp. 172-173). Sound ideophones are placed at the high-animacy end of the spectrum, with the cognition and emotion subcategories (Nuckolls, 2019, p. 173). Under this model, ideophones may be coded for multiple categories if necessary (Nuckolls, 2019, p. 173).

The frameworks discussed so far have different purposes. Kendon breaks down gesture sequences into manageable units. McNeill sorts different kinds of gestures according to form and purpose. Streeck allows us to take a closer look at iconicity. Finally, Nuckolls examines how gestures contribute to ideophones’ semantics.

This thesis aims to analyze ideophones and gestures together. It explores the use of category blends and reveals patterns that can be found regarding which types of gestures and ideophones are most likely to be paired with each other, such as the tendency for sound ideophones to occur with gestures of the head rather than manual gesture. Another finding is that

when gesture blends occur, they usually include deictic gesture. This thesis argues that the existing categorization schemas can be combined and used to holistically analyze ideophone-gesture composites.

Note that the subjects of whether or not gesture is part of language and what role gesture plays in language are still hotly debated issues. This thesis does not claim to come to a conclusion about these topics but aims to add more data highlighting the link between gesture and semantics. The following chapter provides a brief summary of the nature of these debates as well as a history of gesture, ideophones, and ideophone-gesture composites. It also explains in more detail the models and frameworks that have been developed for the study of each. Chapter 3 explains the methods used to collect data, the procedures used for analysis, and some of the patterns found. Chapter 4 focuses on the relationship between sound ideophones and head gestures. Chapter 5 contains a summary and concluding thoughts about how my findings contribute to ideophone and gesture research.

Chapter 2: Literature Review

This chapter provides a review of literature on gesture and ideophones. Section 2.1 focuses on Semiotics and how it has been applied to gesture. It begins with brief summaries of Ferdinand de Saussure and Charles S. Peirce and then moves on to the gesture frameworks that their work inspired. Section 2.2 is about ideophone research and Nuckolls's sensorisemantic classification system. Section 2.3 introduces ideophone-gesture composites.

2.1 Semiotics and Gesture Frameworks

In his *Course of General Linguistics*, Saussure (1966) asserts that words or linguistic signs are composed of a “signifier” and a “signified” rather than a word and a definition (p. 66). He explains that the relationship between the signifier and the concept it represents is arbitrary; there is nothing about the individual sounds in a word that inherently connect it to the concept (Saussure, 1966, p. 67).

In the 19th century, however, Peirce (1955) argued that signs and the concepts they signify are sometimes linked (p. 104). His second trichotomy of signs consists of three categories (Peirce, 1955, p. 102). Icons communicate meaning by resemblance (Peirce, 1955, p. 104). A pencil streak, for example, might represent a geometric line (Peirce, 1955, p. 104). An index communicates by contiguity: that is, by pointing at something (Peirce, 1955, p. 104). This pointing can be either metaphorical—an arrow, for example—or literal—deer droppings indicate a deer has passed through an area (Peirce, 1955, p. 104). Symbols communicate without resemblance or pointing; here, there is no inherent connection between signifier and signified (Peirce, 1955, p. 104). Instead, they convey meaning only because they are “understood to have

that signification” (Peirce, 1955, p. 104). IPA characters represent sounds, for example; they have conventionalized meaning (Peirce, 1955, p. 104).

In *Hand and Mind*, David McNeill lays out a schema for categorizing gesture that uses similar labels. He divides gesture into iconics, metaphoric, beats, cohesives, and deictics. Iconic gestures are those that “bear a close formal relationship to the semantic content of speech” (McNeill, 1992, p. 12). These occur most often with narrative speech (McNeill, Cassell & Levy, 1993, p. 8). Below is an example of an iconic gesture reproduced from *Hand and Mind*. The speaker describes a scene in which one party chases the other with an umbrella.



Figure 1.2. Illustration of speech-gesture complementation with “she [chases him out again].” The gesture reveals the weapon while speech conveys the action (chasing) and the idea of recurrence.

(1.2) and she [chases him out again]
Iconic: hand appears to swing an object through the air.

Figure 4 Iconic Gesture
(Reproduced from McNeill, 1992, pp. 13–14)

Metaphoric gestures are similar to iconic gestures, but they depict abstract ideas rather than objects or events and tend to be paired with metanarrative speech, defined as the part of a story “that is about the narrating” (McNeill, 1992, p. 14; McNeill, Cassell, & Levy, 1993, pp. 7, 9). Beats are small, quick gestures of the hands that have no iconicity and are used frequently with metanarrative speech (McNeill, 1985, p. 359; McNeill, Cassell, & Levy, 1993, p. 10). They

are called beats because they are “mere flicks of the hand(s) up and down or back and forth that seem to ‘beat’ time along with the rhythm of speech” (McNeill, 2005, p. 39).



Figure 1.3. Illustration of a metaphoric gesture with “it [was a Sylves]ter and Tweety cartoon.” The gesture is an instance of the conduit metaphor: the idea of a genre presented as a bounded container supported by the hands.

(1.3) it [was a Sylves]ter and Tweety cartoon
Metaphoric: Hands rise up and offer listener an “object.”

Figure 5 Metaphoric Gesture
(Reproduced from McNeill, 1992, pp. 13–14)

Cohesive gestures “tie together thematically related, but temporally separated parts of the discourse” (McNeill, 1992, p. 16). Cohesives can take the form of iconic, metaphoric, deictic, or beat gestures (McNeill, 1992, p. 16). What makes them cohesive is repetition (McNeill, 1992, p. 16). A speaker may use a particular gesture when talking about one topic, go on a tangent and use a different gesture, and then return to the first topic and repeat the first gesture. This repeated gesture marks the return to the original train of thought (McNeill, 1992, p. 16). This is illustrated below in Figure 6.

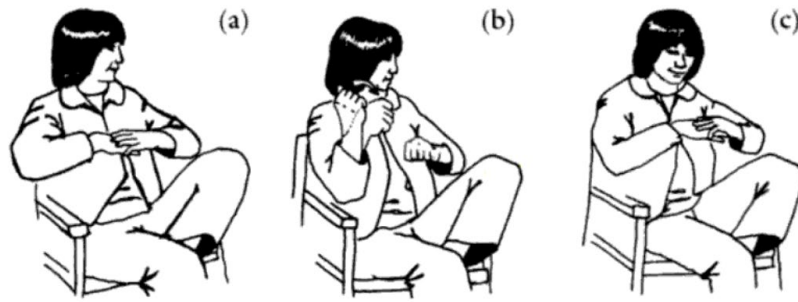


Figure 1.5. Illustrating cohesion with iconic gestures through the utilization of form. Panel (a) appeared with “[the network of wires that hooks up the cable cars],” (b) with “[you know the trolley system],” and (c) with “[right and there’s a whole network of these wires].” The gesture at (c) replays the one at (a) and shows where the story resumes after the interruption at (b).

(1.5) [the network of wires that hooks up the cable cars . . . um]

Iconic: both hands, palms facing down, come together at the tips and form a crisscross.

(1.6) [you know the trolley system]

Iconic: right hand moves back and forth at side of head.

Listener: oh across [also gestures]

(1.7) [right and there’s a whole network of these wires]

Iconic: both hands resume crisscross.

Figure 6 Cohesive Gesture
(Reproduced from McNeill, 1992, p. 17)

Deictic gestures are simple pointing gestures and often occur with paranarrative speech, or speech that occurs when “the narrator steps out [of the story] and speaks in his/her own voice to the listener” (McNeill, 1992, p. 18; McNeill, Cassell, & Levy, p. 7).



Figure 1.6. Illustration of an abstract pointing gesture with “[where did you] come from before?” The space being pointed at is not the space where the speaker and hearer currently find themselves, but an abstract space housing an introduced reference.

(1.8) [where did you] come from before?
Points to space between self and interlocutor.

Figure 7 Deictic Gesture
 (Reproduced from McNeill, 1992, p. 18)

McNeill (1985) references another category: emblems. This category includes gestures that “have a specific social code of their own” and “are learned as separate symbols” (McNeill, 1985, p. 351). Emblems can be interpreted without accompanying speech and include the okay sign, the peace sign, and other such gestures (McNeill, 1985, p. 351). Because there is currently insufficient data to examine and decipher which gestures used by Quichua speakers are emblems, these will not be dealt with in this thesis. The definitions and functions of the gestures studied here are summarized in the table below.

Table 1: McNeillian Gesture Categories

Iconic	Tied to the semantic content of the speech they accompany	Most frequently occur with narrative speech Usually paired with metanarrative speech
Metaphoric	Similar to iconics, but depict abstract ideas	Tie together separate parts of discourse
Cohesive	Can take the form of iconic, metaphoric, deictic, or beat gestures	Paired with metanarrative speech
Beat	Mark significant words or phrases with short, quick movements	Often occur with paranarrative speech
Deictic	Pointing gestures	

In *Gesture and Thought*, McNeill notes that these categories are not mutually exclusive. That is, gestures can—and often do—carry elements of more than one category (McNeill, 2005, p. 39). McNeill suggests viewing these as “dimensions” (McNeill, 2005, p. 39). He writes, “In a dimensional framework, we think of every gesture as having a certain loading of iconicity, metaphoricity, deixis, temporal highlighting, and social interactivity; these loadings vary from zero upwards” (McNeill, 2005, p. 40). This falls in line with Peirce’s argument that a single sign can have both iconic and indexical qualities; it would be hard to find a sign that does not also incorporate any indexicality (Peirce, 1955, p. 108).

Jürgen Streeck is another linguist who applies Peirce’s framework to gesture. The framework proposed in Streeck’s paper provides a more fine-grained approach to iconicity. It divides depiction into twelve categories, listed in Table 1. These are summarized from Streeck (2008, pp. 292–295).

Table 2: *Streeckian Gesture Categories*

1	Modeling	Using a body part to represent an object
2	Bounding	Using the positions of the hands or fingers to indicate length, width, or height
3	Drawing	“The drawing of lines, for example by an extended index-finger” (p. 293)
4	Handling	Representing an object with the action that “goes with” it (p. 293)
5	Making	Using the hands to “simulate the making and shaping . . . of things” (p. 293)
6	Scaping	Giving shape to “undivided domains and terrains” (p. 293)
7	Marking	Drawing lines, points, etc. on “virtual surfaces or volumes” (p. 294)
8	Self-Marking	Drawing lines, points, etc. on one’s own body
9	Model-World Making	Using a sequence of gestures to build a “model world” (p. 294)
10	Abstract Motion	Using the hands to express movement without directly depicting the object that is moving
11	Acting	When “the gestural action of the hand shows the practical action of the hand”
12	Pantomime	“Bodily acts made to imitate and depict the bodily acts of living beings”

Note that the main difference between the marking and self-marking labels is speaker perspective, which refers to a “way of defining the nature of oneself in relation to what is being imitated” (Nuckolls et al., 2017, p. 162). Speaker-internal perspective applies when a speaker uses their body to depict, and in doing so “becomes” what is being depicted (Nuckolls et al., 2017, p. 162). When a speaker gestures in a more detached way or in a way that makes it clear they are “depicting events external to” themselves, this perspective is said to be “speaker-external” (Nuckolls et al., 2017, p. 163). Thus, the difference between Streeck’s marking and

self-marking categories is that in marking, the object being marked is external to the speaker, while self-marking involves the speaker playing the role of the object being marked.

Like McNeill, Streeck also allows for a gesture to qualify for multiple categories (Streeck, 2008, p. 296). He cites an example where a woman reenacts putting on a pillbox hat and tying a knot under her chin (Streeck, 2008, p. 296). According to Streeck (2008), this tying gesture “could be classified as acting, or handling, or pantomime” (p. 296).

2.2 Ideophones

Ideophones are a class of words that “depict sensory perceptions” and “deviate phonologically, phonotactically, morphologically, and syntactically from the prosaic words of their languages” (Nuckolls, Nielsen, Stanley, and Hopper, 2016, p. 95). Previous research on ideophones has claimed these words are “louder, softer, higher pitched, lower pitched, [and] pronounced more slowly, or more quickly than the prosaic words that surround them” (Nuckolls, Nielsen, Stanley, and Hopper, 2016, p. 98). Nuckolls refers to this difference in pronunciation as “performative foregrounding,” a term that has been adopted by a number of researchers who study ideophones in a variety of languages (Nuckolls, 1996, p. 13; Schultze-Berndt, 2001, p. 367).

Like gestures, ideophones can be categorized. Nuckolls’s framework uses sensorisemantic mapping, which accounts for the interrelated roles of the different senses in creating meaning (Nuckolls, 2019, p. 196). Nuckolls’s sensorisemantic map includes three super categories—visual, movement, and sound—along with seven subcategories (Nuckolls, 2019, p. 173).

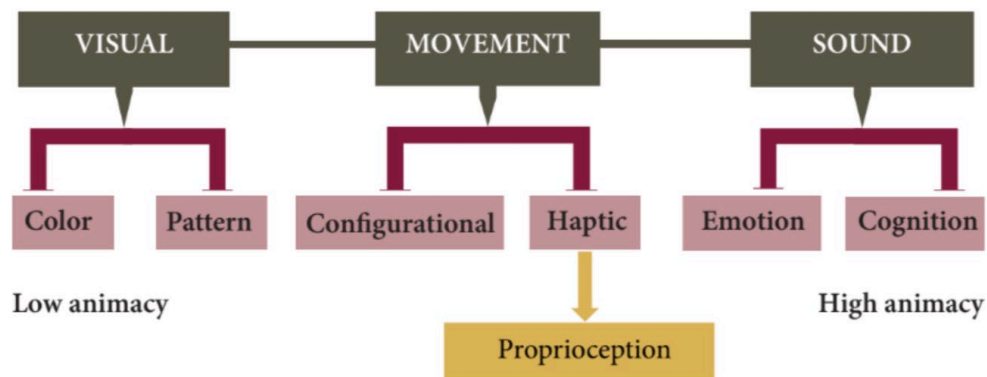


Figure 8 Sensorisemantic Categories for Ideophones
(Reproduced from Nuckolls, 2019, p. 173)

At the low-animacy end of the spectrum is the visual category. Ideophones with visual as part of their semantics represent objects and phenomena that can be perceived with the eyes (Nuckolls, 2019, p. 174). Visual includes the subcategories color and pattern. Nuckolls (2019) includes pattern here because “whatever is patterned often stands out like a figure against its surroundings” (p. 174).

Movement includes the subcategories configurational, haptic, and proprioception (Nuckolls, 2019, p. 172-173). Nuckolls (2019) codes ideophones as configurational if they “depict a movement that has a distinct profile or comes to rest in a distinctive pattern or profile” (p. 178). If an ideophone represents surfaces coming into contact with each other, it is coded as haptic (Nuckolls, 2019, p. 172). Haptic’s subcategory, proprioception, involves sensations of “movement originating from within the body” (Nuckolls, 2019, p. 181).

Sound also has two subcategories: cognition and emotion. Sound ideophones coded for emotion can express sadness, happiness, anger, and other emotions of humans, animals, plants, and even phenomena such as thunder (Nuckolls, 2019, p. 184). Cognition includes sound

ideophones that “express ideas with sound that are not emotional, but nevertheless, they communicate something informative” (Nuckolls, 2019, p. 186).

The context and the sensations evoked by the ideophone are what determine its category (Nuckolls, 2019, p. 175). For example, a bird diving into water could be described as haptic because of the contact between the bird and the water. It could also be configurational because the bird’s movement has a distinct profile. It would be coded according to what is being emphasized: haptic if the focus is on the bird’s penetration of the water or configurational if the main focus is the flight path.

It is important to note that a single ideophone may make use of more than one of these categories, as long as they are adjacent to each other on the animacy scale. An ideophone may be labeled as visual and movement, as movement and sound, or as all three, but never as only visual and sound (Nuckolls, 2019, p. 173).

2.3 Ideophone-Gesture Composites

Many ideophones are performed with gesture as well. In a 2013 study, Mark Dingemanse analyzed these composite utterances and coded the gestures according to McNeill’s categorization schema. He found that gesture-ideophone composites most frequently use iconic gesture (Dingemanse, 2013, p. 144). A study by McNeill and Cassell found that ideophones and gestures most frequently co-occur in the context of narrative speech (McNeill, Cassell, & Levy, p. 8). Dingemanse provides several theories as to why this might be. One is because ideophones are a case of “a speaker-turned-actor using all available means to produce a single multimodal act of depiction” (Dingemanse, 2013, p. 153). Another theory suggests that “ideophones are likely lexical affiliates for iconic gestures” (Dingemanse, 2013, p. 154).

A paper by Elena Mihas (2013) divides composites into two categories according to gesture: codified and creative (p. 37). Codified composites have gestures whose meanings are understood throughout the speaker community, whereas in creative composites the gesture accompanying the ideophone is spontaneously invented, its meaning is not shared by the speaker community, and the gesture may actually be representing the ideophone's accompanying verb (Mihas, 2013, p. 37).

Dingemanse, Nuckolls, and Mihas explore the question of why, if these utterances are already more expressive than non-ideophonic ones, so many ideophones incorporate gesture (Dingemanse, 2013, p. 144; Mihas, 2013, p. 1; Nuckolls et al., 2017, p. 156). Kendon (2000) argues gesture can add context to an utterance and reduce ambiguity (p. 60). His study also demonstrates that gesture can contribute additional information to an utterance that otherwise might have been completely left out (Kendon, 2000, p. 53). He concludes that using gesture with speech is a “way of accomplishing more than one speech act simultaneously,” and that speech and gesture are “co-expressive of a single inclusive ideational complex” (Kendon, 2000, p. 61). Dingemanse's work supports this and applies it to ideophones; he states that “ideophones and gesture are two aspects of the process of depiction” (Dingemanse, 2013, p. 161). Further support for this idea can be seen in Mihas's study, which finds that in the context of participatory learning, ideophone-gesture composites make it easier to communicate instructions and processes to learners because “ideophones evoke superbly rich imagery” and isolate the most important parts of what is being taught (Mihas, 2013, p. 55).

This chapter has introduced three typologies of gesture and ideophones, provided an overview of how gesture and ideophones fit into the accepted frameworks of language, and given a brief summary of the work that has been done on ideophone-gesture composites.

Chapter 3: Data, Methods, and Findings

The previous chapter provided an overview of literature pertaining to ideophones and gesture. This chapter explains the data and methods used to categorize ideophone-gesture composites. It also highlights specific patterns that underlie the types of gestures used with ideophones and points out inconsistencies with beats as a category.

3.1: Data.

The data for this thesis was extracted from *Quechua RealWords*, an online corpus of Quichua ideophones (Nuckolls, 2020). These can be accessed and sorted by clicking on tabs at the top of the website, seen in Figure 9.



Figure 9 *Quechua RealWords* Home Page
(Nuckolls, 2020)

Each entry in the corpus has its own page and at least one video of a native Quichua speaker using the ideophone. It is also labeled with a definition and with the sensory semantic categories used by the ideophone. Most entries include a paralinguistic description and all have transcriptions of each video. Some (but not all) of the videos are translated.



AKI

Pronunciation	[aki]
Related Ideophones	kuki
Definition	to move by deviating from a central axis usually from lack of control
Sensory Modality	MOVEMENT > Configurational VISUAL
Paralinguistic Description	Usually gestured by upper body movements involving arms and entire upper torso

Video 1:



Transcription wawata markashaga aki aki aki aki rishka apashaga

Translation Carrying the baby he went (wobbling) aki aki aki aki

[View full video](#)

Figure 10 Sample Corpus Entry
(Nuckolls, 2020)

The videos are short clips taken from longer interviews. These interviews were conducted by faculty and students at the Amazon-Andes Field School at Iyarina near Tena, Ecuador (Nuckolls, 2020). Each interviewer is interested in a different facet of Quichua culture. The data reflects this, and at times all or part of a gesture may be out of frame or otherwise not eligible for analysis in this thesis. Also note that some of the interviews are elicited stories, while others are explanations of wildlife; other videos were collected during language classes taught to non-Quichua students. Quichua speakers tend to answer questions with stories, meaning most of the

ideophones occurred in a narrative context. The informants in these videos are all native speakers of the Pastaza and Tena Quichua who live in rural areas near the field school. There is some variation between dialects, but I will collectively refer to them as Quichua for the purposes of this thesis.

Examples from the *Quechua RealWords* website are used in this thesis to illustrate certain points. Because of the visually expressive nature of gestures, simply describing them with words seems inadequate. Instead, still frames are included of the videos that were analyzed. They are marked with arrows to illustrate what the speakers are doing with their hands. However, even this does not adequately represent the gestures being used; therefore, links to each video have been included.

3.2: Methods.

Analysis consisted of observing an occurrence of an ideophone-gesture composite and coding the ideophone according to both McNeill's and Streeck's frameworks. Ideophones are categorized on each entry of *Quechua RealWords* according to Nuckolls's sensorisemantic map, although the categorization of each occurrence of the ideophone may vary.

Note that there are two ways to talk about any one of Nuckolls's supercategories. "Sound-only" can refer to ideophones that have been categorized as sound exclusive of either of the two other supercategories, visual and movement. "Sound-only" can also refer to ideophones that have been classified as sound exclusive of any supercategories or subcategories. For this reason, in the following section, when one of Nuckolls's categories is mentioned as being [category]-only, the former case is being referenced. When I talk about an ideophone being sound-only, I am talking about both the main category—sound—and its subcategories, emotion and cognition. The same applies to movement and visual.

For the classification of gestures, I used an altered version of McNeill's framework. The "cohesives" category was excluded, leaving the following four categories: iconic, metaphoric, deictic, and beat. If a gesture fell into the iconic or metaphoric category, I then placed it in one of Streeck's depictive categories. Some deictic gestures occasionally fit into Streeck's categories, such as marking, self-marking, and drawing. This tended to happen with deictics that also had a degree of iconicity.

If a gesture seemed to fall into the beat category, I analyzed it according to McNeill's beat filter to ensure it qualified for this category.

The filter is a series of questions, and a score of 1 is added for each yes answer: (1) Does the gesture have other than two movement phases (i.e., either one phase or three phases, or more)? (2) How many times does wrist or finger movement or tensed stasis appear in any movement phase not ending in a rest position? (add this number to the score). (3) If the first movement is in a non-center part of space, is any other movement performed in center space? (4) If there are exactly two movement phases, is the space of the first phase different from the space of the second? (McNeill, 1992, pp. 81–82)

According to the beat filter, scoring works on a scale of 0 through 6. The higher the score, the higher the imagery in the gesture, and the more likely it is to be iconic rather than a beat (McNeill, 1992, p. 82). Sometimes a gesture met the criteria for more than one category. I marked these as "blends," such as iconic + deictic or, in the case of Streeck, handling + acting.

3.3: Findings.

The frameworks discussed so far have different purposes. McNeill sorts different kinds of gestures according to form and function. Streeck allows for a closer look at iconicity. Nuckolls analyses ideophones from a sensory perspective. Using all three categorization schemas side by

side allows for a multidimensional view of ideophone-gesture composites. It reveals the senses being evoked by the ideophone, the purpose the gesture is serving, what the gesture is depicting and how, and it provides a better picture of how all these elements come together to compose an image.

For example, *pital* is an ideophone which in the context of this narrative means “the appearance and movement of something dangling in mid-air” (Nuckolls, 2020). The speaker accompanies *pital* with a gesture during which her hand rises while her index and middle fingers represent someone’s legs as this person is carried away by a giant hawk. Because the gesture visually represents the objects and motions being spoken about, this is clearly an iconic gesture. Its Streeckian category is modeling because the speaker shapes her hand to represent the shape of the person and mimic their movements.

Example 3.1 Iconic gesture

Video 1—<http://quechuarealwords.byu.edu/?ideophone=pital>



Figure 11 Gesture paired with *pital*

paj	kaj-manda	tak	hapi-ŋ,	kiru-waŋ	tsaxx!	pital pital pital pital pital;
Paj	here-from	IDEO	catch-3	Teeth-INST	IDEO	IDEO IDEO IDEO IDEO

urku	eaŋ!	micawali	urku	ni-g	a-ra	ɲuka	jaja
hill	EV.be	hawk	hill	say-AG	be-PAST	I	father

‘So then he, from here would grab hold *tak*, and then with his teeth *tsaxx* (he would puncture), (and the victim’s legs would dangle) *pital pital pital pital pital*; and there was a hill, and it was the misha wali’s hill, my father used to say’ (Nuckolls, 2020).

The ideophone and its gesture depict the movement of a person, an event that the speaker experienced visually, making this both a visual and a movement ideophone. Because it also represents the hawk’s flight path, the ideophone is configurational.

Like the use of combined frameworks, allowing for category blends can reveal interesting patterns. According to McNeill (1992), “Any gesture superimposed on another gesture is a beat, while any gesture with another gesture superimposed on it is iconic or metaphoric” (p. 381).

These blends were definitely present in the data. See Figure 12.

Example 3.2 Layered iconic and beat gestures

Video 28—<http://quechuarealwords.byu.edu/?ideophone=tag>



Figure 12 Gesture paired with *tag*

apa-naw-ra	kaha	iekaj	kaha-ta,	kaj	intiruta
to take-3.PL-PAST	box	two	box-ACC	this	entire

<i>tak</i>	shuk	shuk ku-wa-naw-ra
IDEO	one	give-1ACC- 3.PL-PAST

‘They brought boxes (of medicine), two boxes filled *tak*, this full, and gave me one of them’ (Nuckolls, 2020).

In the video, the speaker brings her hands to the center of the gesture space, with flat palms facing each other to simulate a box. She then maintains this gesture for a couple of seconds in a hold but makes small, quick movements (one of which co-occurs with the ideophone *tak*) before her hands retract to resting position (McNeill, 1992, p. 83; Nuckolls, 2020).

The beat part of this is the small movement that adds emphasis to *tak*, an ideophone that conveys fullness (Nuckolls, 2020). This is superimposed on the iconic “box” gesture (the flat of the palms facing each other).

Figure 12 is an example of an iconic + beat blend, but there are also gestures in the data that are deictic + beat. This is significant because according to McNeill, this blend should not be possible. *Tsyun*, in Figure 13, is an example of this. According to *Quechua RealWords*, this ideophone represents “the happy or sad sound of a hummingbird” (Nuckolls, 2020).

Example 3.3 Layered deictic and beat gestures

Video 3—<http://quechuarealwords.byu.edu/?ideophone=tsyun>

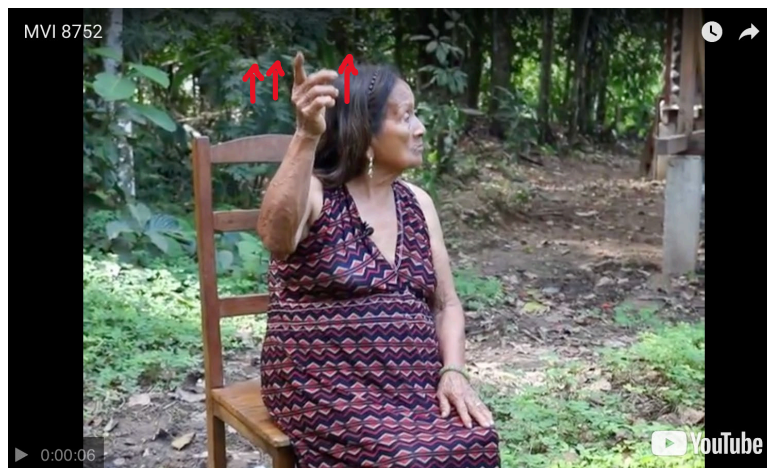


Figure 13 Gesture paired with *tsyun*

waka- <i>ea</i>	puri-u-k	iʎa-kpi	ima-ta-ta	upi- <i>ea</i>	ni- <i>ea</i> ;	paj-ga
cry-COR	walk-DUR-AG	flower	lack-SWITCH	drink-1FUT	say-COR	he-TOP

kuti	uja-ngichi	<i>tsju tsju tsju tsju tsju tsju</i>	waka-w-ta
again	hear-2PL	IDEO	cry-ACC-TOP

‘He goes about crying if there are no flowers, wondering “what will I drink?” well haven’t you all heard when he’s crying, going *tsyu tsyu tsyu tsyu tsyu tsyu*?’ (Nuckolls, 2020).

Here, the speaker raises her arm at the shoulder and elbow as she extends her index finger, and her hand moves to the upper right extreme periphery of the gesture space. Her hand pauses at this point before making small strokes that are synchronized with iterations of the ideophone, all while pointing in the direction of the sound.

Because this is a pointing gesture, it falls into the deictic category. Similar to *tak*, however, beats are superimposed onto the gesture. The difference is that while McNeill limits beats to gestures involving movements of the wrist, here the arm moves at the shoulder while the rest of the arm joints remain static (McNeill, 1992, p. 381).

Another example of a deictic gesture being overlaid with beat gesture can be seen in the following occurrence of *chiling*. *Chiling* refers to “the unintelligible sound of certain frogs, which is compared to the sound of people speaking a language that is not known to a listener” (Nuckolls, 2020). In the video below, the speaker’s left hand leaves her lap and gestures toward the interviewers.

Example 3.4 Layered deictic and beat gestures

Video 1—<http://quechuarealwords.byu.edu/?ideophone=chiling>



Figure 14 Gesture paired with *chiling*

kaŋ-guna	chiliŋ chiliŋ	kwinta-w-ŋgichi	sapo
2-PL	IDEO IDEO	speak-DUR-2.PL	frog

ɛina;	Mana	uja-ntei	ɲuka-nchi
like	NEG	hear-1.PL	1-PL

‘Yeah, you-all talk (sounding) *chiling chiling*, like a frog; we do not understand it!’ (Nuckolls, 2020).

The speaker then moves her hand from pointing at the interviewers to pointing up and to the right with her index finger extended. This is followed by a hold, during which her hand and arm briefly remain static. Instead of immediately retracting, however, her hand and arm (maintaining their configuration) make a slight movement that punctuates the second iteration of *chiling*. This is a deictic gesture that is held while short, quick strokes (beats) are added.

According to McNeill (2005), beats are “mere flicks of the hand(s) up and down or back and forth that seem to ‘beat’ time along with the rhythm of speech” (p. 39). The gestures that accompany *tsyun* and *chiling* meet these criteria, but they do not meet the criterion of being only movements of the wrist. The beat part of the gesture paired with *tsyun* passes McNeill’s beat filter:

- (1) Does the gesture have other than two movement phases (i.e., either one phase or three phases, or more)?
- (2) How many times does wrist or finger movement or tensed stasis appear in any movement phase not ending in a rest position? (add this number to the score).
- (3) If the first movement is in a non-center part of space, is any other movement performed in center space?
- (4) If there are exactly two movement phases, is the space of the first phase different from the space of the second? (McNeill, 1992, pp. 81–82)

Each iteration of the gesture is biphasic; tensed stasis does not occur outside of a rest position, none of the movements happen in the center space, and all movements occur in the same part of the gesture space. According to the filter, these gestures receive a score of 0, making them beats. The occurrence of deictic + beat blends is also problematic; beats are only supposed to be superimposed on iconics and metaphoric. This is not the first time someone has noticed that beats performed by Quichua speakers do not always conform to McNeill's criteria. Nuckolls found that some beats use a "more expansive gesture space," where traditionally, beats are "small, simple movements that are performed more rapidly at or near the rest position of the hands" (McNeill, 1985, p. 359; Nuckolls, forthcoming, p. 21). A footnote in Nuckolls's manuscript notes a comment by Dingemanse, saying that "there is a problem with the notion of beats as a coherent category" (Dingemanse as cited in Nuckolls, forthcoming, p. 24).

McNeillian categories are not the only ones that can blend. Streeck (2008) provides an example of a gesture that can be assigned more than one classification at a time (p. 296). However, because his framework breaks down iconicity into more specific categories, I expected Streeckian blends to be much rarer than they actually are. In fact, some of these categories have

definitions that can partially overlap, giving way to gestures that can be considered blends of two or even three categories.

For example, the gesture occurring with *tsak* in Figure 15 fits the definitions of acting, handling, and pantomime. The gesture consists of the speaker pretending to stab someone else in the neck. He holds his hand in a configuration that suggests he is holding a blowgun (acting). The blowgun is represented both by this and by the stabbing motion (handling). Finally, the speaker is imitating someone else’s motions, meaning pantomime is an appropriate classification as well.

Example 3.5 Blended Streeckian gesture: Acting, handling, and pantomime
 Video 6—<http://quechuarealwords.byu.edu/?ideophone=chiling>



Figure 15 Gesture paired with *tsak*

maeti-sha	maeti-sha	kaj	pungara-wañ	hapi-tei-eka,	tja-j
HES-COR	HES-COR	where	tar-INST	catch-CAUS-SWITCH	exist-LOC

hapi-tei-εa	tei	sapi-bi	tei	sapi	hapi-εa
catch-CAUS-COR	this	vein-LOC	this	vein	catch-COR

aktea-ja	tak	hapi-εa	tsak	wañu-tei-g	acka-wna,	tuksi-εa
hair-INCHO	IDEO	catch-COR	IDEO	die-CAUS-AG	many-PL	puncture-COR

‘Um, with this sap, making (the poison dart) stick, making it stick tightly, and grabbing the base (of the blowgun), and then grabbing hold of their hair, *tsak* they would kill, piercing (the neck)’ (Nuckolls, 2020).

These tables might give the reader the impression that assigning categories to gesture is easy. Sometimes it is not. Allowing for blends helps, but even then, categorizing gesture is not always so straightforward. *Wing* provides a good example of this. *Wing* is a visual and pattern ideophone defined as “anything or any group or collection of entities, or expanse of entities, considered as a whole” (Nuckolls, 2020).

Example 3.6 Difficulty classifying gesture

Video 2—<http://quechuarealwords.byu.edu/?ideophone=win>



Figure 16 Gesture paired with *wing*

kaŋ-guna	upi-kpi-ga,	ɲuka	sisa	βin	urma-kpi-ga,
2-PL	drink-SWITCH-TOP	1	flower	IDEO	fall-SWITCH-TOP

kaŋ-guna	ʎaki-ri-ŋgitei-mi,	ni-ɕa-ɕi	ni-ra	ɲuka
2-PL	sadness-REFL-2.PL-EV	say-COR-EV	say-PAST	1

‘As you-all drink (from me), if my flowers were (all) *βin* to fall, you-all would become sad, saying he said’ (Nuckolls, 2020).

As she begins her sentence, the speaker moves her hands to a preparation hold in the center gesture space. When she pronounces the ideophone, she moves her hands, palms up, around her in a bimanual gesture. This ideophone took longer to categorize because it does not portray the meaning of the verb “to fall.” It gestures to where the flowers are located in space

before they fall. This particular gesture is interesting because the speaker places herself in the middle of the flowers, as if she is the tree. This gives the gesture an internal perspective.

If the speaker is gesturing to where the flowers are located, then the gesture has a high degree of deixis. However, if at the same time she is the tree, then there is also a lot of iconicity in the gesture. Therefore, I classified the gesture as iconic + deictic.

Streeck's categories present an additional challenge. This gesture almost seems like it would be pantomime because the speaker is "being" the tree. However, she is not imitating movements of the tree. One might argue that her hands are "configured as if they were in contact with" the boundaries of the crown of the tree in which the flowers are located (Streeck, 2008, p. 292). That would make this a bounding gesture. If that were the case, however, it would be a highly unique bounding gesture because of the way the hands move around the imaginary boundary.

Chapter 3 has laid out the procedures that were used to categorize gestures and ideophones. By classifying composite utterances according to a combination of frameworks and allowing for category blends, I was able to find several patterns in the data. I found that Streeckian blends are more common than I expected. The frequency of deictic + beat gestures as opposed to that of iconic + beat is also surprising, considering the former should not exist according to McNeill (1992, p. 381). Chapter 4 will delve into another finding—the frequent pairing of sound-only ideophones with movements of the head as opposed to movements of the hands.

Chapter 4: Sound Ideophones and Head Gesture

This chapter explores the relationship between sound ideophones and head gesture. Here, I also point out that some head gestures seem to fit McNeill's and Streeck's categories. Both Nuckolls and Hatton wrote about the tendency for sound ideophones to occur without manual gesture. According to Nuckolls (forthcoming), sound-only ideophones "tend to be gesturally impoverished" (p. 21). Hatton (2016) notes that speakers often gesture until they come to the ideophone, at which point their "hands conspicuously drop and all focus is placed on the sound of the ideophone" (pp. 85–86).

However, this is not to say none of these occurred with gesture at all. Although the categorization systems covered here tend to describe movements of the hands, multiple linguists have posited definitions of gesture that include other parts of the body. De Ruiter (2000) wrote, "Although most gestures are hand gestures, other body parts, such as the head are also often used for gesture" (p. 285). Kendon (1972) defined gesture as "complex movements of the hands and arm and head that may often be observed in a speaker" (p. 177).

As Hatton noticed, in many cases, the speaker gestures with their hands until they reach the sound ideophone, at which point their hands drop. *Chikwang* provides an example of this.

Example 4.1 Head gesture

Video 1— <http://quechuarealwords.byu.edu/?ideophone=chikwang>



Figure 17 Gesture paired with *chikwang*

aytea	jaja-guna	ri-nawn	ruku-guna	ajtea-nga	ri-ekaj	ajtea
meat	father-PL	go-3.PL	old-PL	hunt.meat-3.FUT.SING	go-PERF.NOM	Meat

tija-w-łera	ɲa	ɲa	maja-ła-ŋ	tija-w-ŋ	wanɣana	tijaŋga
exist-DUR-ADV	then	then	where-LIM-ADV	exist-DUR-3	forest pig	exist-3.FUT

teari,	o	venado	tija-ŋga	teari,	mono	tija-ŋga
maybe	or	deer	exist-3.FUT	maybe	monkey	exist-3.FUT

teari;	ima	tono	pieku-ła-s	tija-w-łata	ara	paj	rimana
maybe	what	type	bird-LIM-DES	exist-DUR-ADV	be-pst	he	speak.INF

teikwaŋ	teikwaŋ	teikwaŋ	ni-kpi
IDEO	IDEO	IDEO	say-SWITCH

‘The hunters, the old ones (will) have gone to catch meat, and even though there is meat nearby, there might be forest pig, or deer, or monkeys, whatever type of bird there is, he is going to speak (saying) *chikwang chikwang chikwang* (in order to deceive them)’ (Nuckolls, 2020).

Chikwang is an ideophone representing the sound a squirrel cuckoo bird makes when it is trying to deceive hunters (Nuckolls, 2020). In the above example, the speaker, Pedro Andi, uses deictic gestures to point in the direction where game might be found (Nuckolls, 2020). He explains that the cuckoo bird would say *chikwang* in order to trick the hunters (Nuckolls, 2020).

He repeats the ideophone three times, but when he does so, he stops gesticulating with his hands. Instead, he tilts his head side to side with each repetition.

While McNeill’s categories strongly focus on hand movements, this head gesture meets many of the criteria for beats. It is biphasic, emphasizes the rhythm of speech, consists of a back and forth motion, lacks iconicity, and occurs with quotative speech (Cassell & McNeill, 1991, p. 397; McNeill, 1985, p. 359; McNeill, 2005, p. 39). This gesture also passes the beat filter. There are two phases per iteration of the gesture, there is no stasis, and both phases happen in the same area of gesture space (McNeil, 1992, pp. 81–82).

A similar thing can be observed in Figure 19. The speaker uses the ideophone *tsun* to represent “a sound heard near a tree believed to be inhabited by forest spirits” (Nuckolls, 2020). Here, Cadena gestures with her hands as she speaks. When she comes to *tsun*, however, her hands drop to her lap, and she marks the word with a quick forward movement of her head, followed by a retraction.

Example 4.2 Head gesture

Video 1— <http://quechuarealwords.byu.edu/?ideophone=tsun>



Figure 18 Gesture paired with *tsun*

paj-ba	laro-ta	tsuun	ninga
he-POSS	side-ADV	IDEO	IDEO

‘By his side it will say *tsun*’ (Nuckolls, 2020).

Like the gestures paired with *chikwang*, these are biphasic, are used for emphasis, and are not depictive. *Tsiri* in Figure 19 co-occurs with yet another example of a beat-like head gesture.

With each repetition of *tsiri*, the speaker’s head inclines forward and then retracts.

Example 4.2 Head gesture

Video 3— <http://quechuarealwords.byu.edu/?ideophone=tsidi>



Figure 19 Gesture paired with *tsiri*

aj!	ima-ta	tuku-ŋgi	ni-kpi
INTJ	what-QUEST	become-2.SING	say-SWITCH

tsiriririri	tsiriririri-ɛi	ni-ra	api-
IDEO	IDEO-EVI	say-PAST	catch

[No translation available]

McNeill’s beat category seems to accommodate head movements, but the head can be used for iconic gesture as well. In the example below, the speaker uses the ideophone *ha* to represent someone’s laughter. During the utterance, she inclines her head with each repetition of *ha*, as if she were the person laughing, giving the gesture an internal perspective. This gesture

meets Streeck’s criteria for pantomime because he does not limit this category to the hands (Streeck, 2008, p. 295).

Example 4.3 Head gesture

Video 1—<http://quechuarealwords.byu.edu/?ideophone=ha>



Figure 20 Gesture paired with *ha*

jambana	ni-ea	uja-ri-u-ehka	teun	tukueka...
yambana	say-COR	hear-go-PROG-PRES.PERF	IDEO	grub-PRS.PRF

t̥ei-ga	t̥ei	waea	paj-ga	ha ha ha
this-TOP	this	behind	he-TOP	IDEO

‘After saying ‘yambana’ it became *chun* (quiet) and after that he went *ha ha ha* (laughing) . . .’ (Nuckolls, 2020).

Another example is the following performance of the ideophone *ga kaka*. This ideophone represents the sound of the guacamaya anaconda. The speaker’s facial expression changes during the performance of the ideophone, and in doing so the speaker “becomes” the anaconda. Thus, the gesture could be seen as iconic according to McNeill’s framework and as pantomime according to Streeck’s.

Example 4.4 Facial Expression

Video 1—<http://quechuarealwords.byu.edu/?ideophone=ga-kaka>



Figure 21 Gesture paired with *ga kaka*

mateaj-wan	pariu	<i>gga ga kakakakukukukukuku gga</i>
intoxication-INST	same	IDEO IDEO IDEO IDEO

‘Simultaneous with his intoxication, (was heard) *gga ga kakakakukukukukuku gga. . .*’ (Nuckolls, 2020).

A variation of this is the gesture paired with *hwa* in the example below. *Hwa* is the sound made by the “spirit of [a] deceased person speaking through the monkey bird” (Nuckolls, 2020). While speaking, Cadena is looking up at the interviewer. When she says *hwa*, she brings her eyes down and keeps them that way until the final iteration of the ideophone, when the interviewer asks her a question.

Example 4.5 Gaze

Video 1—<http://quechuarealwords.byu.edu/?ideophone=hwa>



Figure 22 Speaker looking at the interviewer.

jaja-ga	h ^w a h ^w a h ^w a h ^w a	mateiŋ	pieku
father-TOP	IDEO IDEO IDEO IDEO	monkey	bird

‘(The spirit of) my father (went) h^wa h^wa h^wa h^wa (using the monkey bird sound)’ (Nuckolls, 2020).



Figure 23 Speaker changes the direction of her gaze.

This could also be another case of internal perspective, although there is not enough context here for me to decipher whether the speaker “becomes” the monkey bird. Still, the conspicuous change in the direction of her gaze is worth noting.

This chapter has used examples from *Quechua RealWords* to highlight ways in which beats that accompany Quichua ideophones challenge the criteria for the gesture category. These results have also built on Nuckolls's and Hatton's findings regarding sound ideophones. While sound ideophones tend to not be accompanied by manual gestures, they are sometimes paired with movements of the head. Some of these seem to fit McNeill's and Streeck's categories, although further research will be necessary to further explore this.

Chapter 5: Conclusion.

Ideophones are words that differ in volume, pitch, morphology, syntax, phonology, and speed of pronunciation from the words around them (Nuckolls, Nielsen, Stanley, and Hopper, 2016, pp. 95, 98). They often occur with gesture. In this thesis, I used data from the audio-visual online corpus *Quechua RealWords* to analyze these composite utterances. Two main research questions were addressed. Can the categorization schemas by McNeill, Streeck, and Nuckolls be used to better analyze ideophone-gesture composites? If so, which kinds of ideophones and gestures are most likely to co-occur?

Chapter 2 contains a review of literature explaining how Pierce and Saussure influenced the study of gesture. Here, I also describe in detail the classification systems developed by McNeill and by Streeck. I then write about ideophones and how prosodic foregrounding differentiates them from the surrounding words. This is followed by an explanation of the categories of Nuckolls's sensorisemantic framework. I also discuss observations that have been made about composite utterances and why ideophones and gestures tend to occur together.

In Chapter 3, I detail the data and methods I used to classify ideophones and gestures. While categorizing gestures, I found that some of them met the criteria for multiple categories. This occurred with both McNeill's and Streeck's frameworks. To deal with this, I allowed for gesture blends, such as iconic + deictic or handling + acting. Analyzing composite utterances with these descriptive frameworks and allowing for ideophones to fall into blended categories highlighted several surprising patterns in the data.

First, I found that beat + deictic gesture blends occurred more frequently than iconic + beat gestures. This is significant because although McNeill notes the existence of superimposed gestures, he writes that beats can be superimposed only on iconic or metaphoric gestures.

According to McNeill (1992), “Any gesture superimposed on another gesture is a beat, while any gesture with another gesture superimposed on it is iconic or metaphoric” (p. 381). In the data, however, the beats in question are layered on top of gestures that are clearly deictic. It is apparent that these are indeed beats because they meet every other characteristic of the category.

This highlights a second finding—beats in Quichua do not always conform to McNeill’s criteria. While Quichua beats are biphasic, lack iconicity, occur with reported speech, and mark the rhythm of the utterance they accompany, these beats can be blended with deictic gestures and are not limited to small movements of the wrist. They may make use of the elbow or shoulder as well, resulting in gesticulations that occupy more of the gesture space. This supports the observation made in Nuckolls (forthcoming), where some beats occupy “a more expansive gesture space” than a typical beat (pp. 21–22).

A third finding of this thesis builds on the findings of Hatton (2016) and Nuckolls (forthcoming). It involves the relationship between sound-only ideophones and head gesture. Sound ideophones have been observed to occur most frequently either with beats or without gesture at all (Hatton, 2016, p. 8; Nuckolls, forthcoming, p. 40). However, I found that when sound-only gestures occur without manual gesture, they tend to occur with head gestures and facial expressions. Although McNeill and Streeck focus primarily on the hands, the head gestures found here fit the criteria for some of their categories, including beats and iconics, or in Streeck’s framework, pantomime.

A fourth observation made in this thesis is that Streeckian blends are more common than I expected. Because his categories focus mainly on iconicity and break it down further into multiple categories, I expected to find only one or two blends. However, there is overlap between some of the categories, meaning if a gesture met the criteria for acting, for example, then it

would likely also meet that of pantomime. There are even a few cases of gestures that are blends of more than two categories.

The presence of certain factors may have affected the expressivity of ideophones and gestures explored here. One is the dynamic between the interviewers and the language consultants. Because those conducting the interviews are not native Quichua speakers, the language consultants may have felt the need to be more expressive to be understood.

Another factor that may have come into play involves the dynamic between the interviewees in interviews of more than one person, such as that seen in [9]. In this example, two people are being interviewed. One performs the ideophone *tsak* by using the other person in his depiction of someone being stabbed. In doing so, he grabs the man's hair. If the two men did not know each other well, it is unlikely he would have felt comfortable performing the ideophone in this particular manner.

The findings above raised questions that went beyond the scope of this thesis. Areas for future research include the relationship between sound ideophones and head gestures. How does this relationship compare to the frequency with which head gestures occur with other sensorisemantic categories? What other categories can head gestures be classified under? And why are beats different in Quichua? Could their more expressive nature have something to do with the way Quichua speakers use gesture space? Can beats as a category be broken down into more fine-grained categories, as Streeck did with iconicity? Are beats difficult to classify because we need more categories for them? And how do Quichua speakers use gesture space? McNeill says the size of gesture space can vary across ages and cultures. How does Quichua gesture space compare to that of other languages?

This thesis builds on what is known about the relationship between ideophones and gesture. It applies accepted classification systems to data collected in the field, adds to the existing knowledge about the nature of beats, and expands the focus of ideophone-gesture research to include head gesture. It contributes to the field of Linguistics and to research on ideophones, gesture, sound-symbolism, iconicity, depiction, and semantics.

The findings of this thesis also add to the knowledge that has been collected about Quichua language and culture. Because stories are passed down from generation to generation orally, ideophones are especially important (Grzech et al., 2019, pp. 127, 135). They carry meaning and information about cultural myths and the natural world. The issue of the intergenerational transmission of cultural knowledge is particularly relevant right now because of the societal pressures on Amazonian Quichua dialects (Grzech et al., 2019, p. 126). The more that is understood about ideophones, the better chance there is of preserving this unique element of the language.

This thesis is also important because it focuses on ideophone-gesture composites in a language and culture in which these elements do not carry stigma. This offers a unique window into the role they play in communication. The importance of this is not limited to Quichua—it contributes to the cumulative knowledge of the tools humans have at their disposal and the many different ways in which it is possible to create and communicate meaning.

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