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A research framework for second nonverbal code acquisition

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Abstract: Nonverbal communication and language are two important components of human communication, yet the relationship between the two is severely understudied. One important question – When is learning another culture's foreign language not enough to be an effective communicator? – has special applicability to teachers and students of foreign languages. Compared to the acquisition of second languages, very little is known about the acquisition of second nonverbal codes. The extent to which different forms of nonverbal communication are universal versus culturally-constructed and involuntary versus voluntary is discussed, followed by the proposal of a framework within which empirical research on second nonverbal code acquisition may be conducted. The framework segments the forms of nonverbal communication into four different quadrants, and the feasibility and value of second nonverbal code acquisition for each quadrant are discussed. Research questions suggested by each quadrant and the implications of possible findings are also discussed. By revealing several gaps in our understanding of nonverbal communication and its relationship with language and culture, the framework highlights the need for more empirical work on nonverbal communication and the acquisition of second nonverbal codes. A deeper understanding of the cross-cultural variation of nonverbal communication and second nonverbal code acquisition could reduce intercultural miscommunication, strengthen learners' communicative competence, and uncover new insights about the nature of human communication, especially regarding the intersection between language, culture, and cognition.

Key words: Nonverbal communication; intercultural communication; second language acquisition.

1. Introduction[2]

Nonverbal communication (NVC) is a relatively new area of study; although the Greeks made mention of it as part of rhetorical discourse and Charles Darwin published a book on the topic in 1872, it did not emerge as a serious subject of study until the 1950s. Today, while NVC is an area of interest for psychologists, linguistics, sociologists, and international businesspeople, it has special applicability to teachers and students of foreign languages because it addresses the important question of "When is learning another culture's language not enough to be an effective communicator?" This question is especially relevant for international students and immigrants living in a new culture who are learning a new language not just as an academic pursuit but in order to live, work, and study effectively.

With this target population in mind, this paper presents a framework organizing empirical research in NVC to provide second language teachers and learners with some answers to this question.

1.1. Historical study of nonverbal communication

Mandal (2014: 418) states that "nonverbal communication includes all communicative acts except speech" and that "communication means conveying information through signals" (2014: 417). So, any signal other than speech that a person encodes (be it intentionally or not) that could be interpreted by another (intentionally or not) as communicating something falls under the umbrella of NVC. Under this definition, virtually every act that a person performs could be considered NVC. In fact, one significant feature that distinguishes NVC from verbal messages is that it is continuous. While words and symbols are discrete units with concrete beginnings and ends, there is no way to shut off the

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nonverbal messages a person sends aside from physically removing that person from the presence of others; the potential for NVC exists as long as a person's face, body, or presence is detectable by another (Malandro et al. 1989). This makes NVC a particularly different phenomenon for study than verbal communication.

However, it seems reasonable to allow that not everything that a person does needs to be considered as a potential component of communicative competence. One way to contain the scope of NVC, or at least distinguish which nonverbal acts are relevant to the goals of this paper, is to segment it by its forms and functions. This has parallels to the way that verbal language is approached for second language learning. At times, language forms are the focus of instruction (e.g. the present tense, -ly adverbs, plural formation, etc.), while at other times the function of language is the focus (e.g. making commands, offering apologies, making requests, etc.).

1.1.1. Forms of nonverbal communication

So, the first, fairly straightforward way to organize the types of signals that people exchange nonverbally is to categorize NVC into different *forms*. The study of the forms of NVC began around the 1940s as they were each "discovered." Some of the many forms include *kinesics* (body movements) (Birdwhistell 1970), *facial movements* (Ekman 1977; Eibl-Eibesfeldt 1979), *gestures* (hand, arm, and head movements) (Efron 1941; Ekman & Friesen 1969a; Kendon 1987), *oculesics* (eye movements) (Argyle & Cook 1976), *haptics* (touching behavior) (Hall 1959), *paralanguage* (sounds produced using the vocal tract that are not speech, such as gasping or laughing) (Trager 1958; Argyle 1972; Poyatos 1975), *proxemics* (the use of space) (Hall 1959), and *chronemics* (the use of time) (Poyatos 1972; Bruneau 1979; Merriam 1983). Empirical research on the different forms emerged slowly, but it primarily focused on just a single channel or form of NVC at a time (Patterson 2006), and only a small amount of effort was dedicated to intercultural investigation of the forms. Then, during the 1970s, the first empirical data emerged demonstrating that NVC can communicate even more than words do, particularly during emotionally-charged interactions (Mehrabian 1972).

Despite the importance of NVC to communication, the only form that has received serious attention in terms of second language acquisition (SLA) is gesture, which Kendon (2004: 7) defines as "visible action when it is used as an utterance or part of an utterance." 1.2-1.2.3 below provide an overview of recent work in gesture. Gesture is typologically universal but, like language, it varies across speech communities (Abner et al. 2015) Although gesture has been studied in terms of second language acquisition in recent years, the focus has remained on manual gestures despite the fact that gestures can be produced with the hands, arms, head, or face (Abner et al. 2015). Further, there has been little to no empirical work dedicated to studying other forms of NVC such as facial movements, oculesics, haptics, paralanguage, proxemics, and chronemics in terms of second language acquisition.

So, even though segmenting NVC by its forms renders it slightly more approachable for analysis (i.e. the ability to group like behaviors together, such as movements made with the hands vs. movements made with the facial muscles vs. movements made with the vocal tract and the emergence of the field of study of co-speech gesture), it appears that something more is needed if distinctions are to be drawn between those nonverbal acts that contribute to communicative competence and those that do not.

1.1.2. Functions of nonverbal communication

One way to determine if a nonverbal act contributes to communicative competence is to assess if it works with a verbal message in some way. This can be achieved by examining if a nonverbal behavior fits one of the six different functions NVC can serve: (1) complementing, (2) repeating, (3) accenting, (4) contradicting, (5) substituting, and (6) regulating (Malandro et al. 1989).

The first three functions are ones in which the nonverbal message works "with" the meaning of

the verbal message. For example, a nonverbal message that *complements* adds additional information or insight so that the meaning of a verbal message is further developed in some way. Tone of voice, facial expression, and gestures are all things that complement a verbal message by clarifying or reinforcing a verbal message, as when a teacher slams a fist on a desk to accompany a command (Malandro et al. 1989). Nonverbal messages that function to *repeat* are similar to complementary messages in that they emphasize or clarify a verbal message, but the difference is that a repeating message can stand alone without the verbal message while a complementing one cannot. An example would be holding up two fingers to signify you want two bags of popcorn while ordering in a noisy ballpark (Malandro et al. 1989). Accenting messages are also similar to complementing ones, but they differ in that they emphasize a particular point in a verbal message instead of the entire message. Pausing before or after a particular point functions to highlight a specific part of a speaker's message, as does kissing a spouse on the cheek highlight that you still love them while you state this as part of an apology for an earlier fight.

On the other hand, functions (4)-(6) do not work directly with the meaning of the verbal message, but they still add communicative value. In fact, some nonverbal messages even *contradict* verbal ones; this often results in confusion for the people decoding the "mixed" messages. An example would be someone verbally expressing gratitude for a gift while an obviously fake smile communicates that the gift is not liked (Malandro et al. 1989). In contrast, *substituting* messages do not accompany a verbal message at all. They often occur when barriers to verbal communication exist, such as a noisy cafeteria or large physical distance. In this situation, a person might wave to a friend instead of shouting a greeting. Sometimes, however, substituting nonverbal messages are chosen when no physical barrier to verbal communication exists, such as when a person chooses to glare at a person speaking to express dissatisfaction that the speaker is revealing something embarrassing about them (Malandro et al. 1989:14). Finally, *regulating* messages serve a function outside of content entirely: they mediate the flow of verbal dialogue. The most common signals include head nods and eye contact that communicate when someone is done speaking and who (if anyone) should speak next in a conversation.

Analyzing if a form of NVC fulfills one of these six communicative functions is a fairly objective method by which to determine if it contributes to communicative competence. However, there are two other, more subjective factors that must also be considered. First, another way to determine if a nonverbal act contributes to communicative competence is to consider if it serves a communicative function that language itself cannot. For example, Miller (2008: 59) suggests that focusing solely on the words that people exchange results in the false impression that the only goal of language is to exchange information. Alternatively, he offers, communication should be viewed as a tool via which humans exchange not only information but also "money, goods, services, love, and status." He further posits that communication acts could then be studied as "what people are trying to give and gain in their social interactions." On this view of communication, it is easier to understand how verbal messages are better suited for some exchanges and nonverbal messages for others, with each message type playing an important and complementary role in human communication (Miller 2008: 59).

For example, chronemic behavior (people's use of time) and grooming and dress habits are often labeled as types of NVC. But do they qualify as containing value for building communicative competence in a non-native culture? Neither of them seem to serve any of the six functions of NVC; however, they might seem to qualify under Miller's view that nonverbal messages are better suited than language when it comes to exchanging things other than information. If communication is viewed as "what people are trying to give and gain in their social interactions" (Miller 2008: 59), then chronemic behavior and grooming and dress habits could hold the potential to help people "give or gain" certain things that language cannot achieve as effectively. For example, there are many sociopragmatic rules governing the forms and use of verbal language to follow politeness norms, but

a person can still adhere to all of these verbal rules and still fail to demonstrate politeness if their other actions violate other aspects of politeness norms: arriving too late or too early to an event can be considered very rude and disrespectful. Similarly, the way one presents and adorns one's body can also communicate quite a lot. People who wear lots of jewelry but very little clothing vs. people who wear gothic clothing vs. people who wear flowy skirts and flowered headbands are all "saying" very different things about themselves and could be considered trying to achieve, fulfill, or maintain different types of reputations or identities. Every culture has a self-contained system for assigning meaning to different sorts of grooming or body adornment habits, through which things like status, respect, and fear can be established.

However, just because a nonverbal behavior can be used to communicate or exchange something other than information does not mean that it should be included as something to be acquired in second nonverbal code acquisition. The last, socio-psychological factor to consider is the extent to which a form of NVC is embedded within a person's identity. Just as with verbal language, it is important to ensure that second language learners are not forced to use an L2 (second language) or abandon use of the L1 (first language) in a way that harms the identity attached to their first language. The advantages and disadvantages of adopting a new form of NVC should be considered. For example, the risk of discomfort that people might feel by adopting different norms of use of time in a non-native culture (i.e. arriving earlier or later than what they feel comfortable with based on their native norms) seems to be outweighed by the advantage of not being perceived as rude or socially awkward. On the other hand, the end result of "blending in" does not seem to merit the discomfort and potential identity-infringement caused by encouraging someone to change their grooming or dress habits based on a non-native culture's norms.

In sum, under the definition given in 1.1., every behavior aside from speech *could* be considered NVC. However, for the aim of studying NVC in terms of communicative competence in second nonverbal code acquisition, it is important to consider three factors: 1) Does a form of NVC serve one of the six communicative functions related to language listed above? 2) Is a particular nonverbal message better suited than a verbal message for what is intended to be exchanged (i.e. an entity like respect or status) between two parties? 3) What is the ratio of risk (to one's identity) to benefit (in terms of communicative competence gained) associated with learning a particular non-native form of NVC?

1.2. Nonverbal communication and language

NVC is especially important when it comes to questions of second language acquisition because it plays a complementary role to verbal language and, like language, is used differently around the globe. For example, one way that NVC complements language is through the use of co-speech gesture to encode visuo-spatial information, such as the relative sizes or location of two objects (Abner et al. 2015). In this instance, co-speech gesture is used to encode information that verbal language alone cannot encode efficiently or with the desired level of detail.

As a point of clarification, the goal of this paper is not to argue that NVC is directly comparable to language. There are many aspects of language that make it different from NVC. For one, as mentioned above, language is produced with discrete beginnings and ends, while NVC is produced continuously. Second, language is considered a compositional system[3], which means that the meaning of its utterances is composed of both its forms and the way in which the forms are put together. Culbertson & Kirby (2015: 5) explain:

[3] Thank you to an anonymous reviewer for pointing this out.

> For example, the meaning of the word "stars" is derived from the meaning of the root *star* combined with the meaning of the plural morpheme *-s*. Similarly, the meaning of a larger unit like "visible stars" is a function of the meanings of the individual parts of the phrase. Switching the order to "stars visible" changes the meaning of the unit in a predictable way. [quotations in original]

The compositionality of language differentiates it from almost all other natural communication systems, which arguably are all holistic rather than compositional (Smith & Kirby, 2012). Indeed, NVC is considered a holistic system, which means that there is a simple one-to-one mapping between signal and meaning. As a result, language is much more productive than NVC. Productivity, one of Hockett's (1960) thirteen "design-features" or fundamental properties of language, means that language users can encode and decode infinitely new and creative utterances by piecing together forms of language in ways that align with the language's allowable patterns. NVC is not productive like language because the nonverbal signals that people use to create meaning cannot be combined together in different patterns to create new meanings.

Given these significant differences, one of the goals of this paper is not to highlight exact parallels between language and NVC but rather to call attention to some potential areas of similarity between the two that may reveal insights about second nonverbal code acquisition given current knowledge in the field of second language acquisition. However, just because language is more complex on the surface than NVC, this does not mean that the acquisition of second nonverbal codes will necessarily be simple. Of course, some nonverbal signals might be straightforward to teach and learn, such as the difference between signaling a quantity of three using the thumb and first two fingers or using the first three fingers (excluding the thumb).

Nevertheless, there are other forms of NVC that most certainly will be more difficult to master, such as how to use gaze appropriately to show respect (e.g. it can be hard to control one's eye in a way that is counter to one's usual behavior) or which behaviors to use within different zones of physical space (see 3.1. for more information). Furthermore, it cannot be ignored that people using second nonverbal codes are more than likely using them in conjunction with a second language. So even if NVC itself cannot be considered a fully complex system, it is important to acknowledge that people using second nonverbal codes must do so in a way that layers on top of the complex, compositional system of language in a cohesive and synchronized way, a task that should not be underestimated.

1.2.1. Gesture and language

The descriptive and explanatory work that has been done on gesture in recent decades has demonstrated a strong connection between language and gesture. Abner et al. (2015: 437) state that "At almost every level of analysis that linguists are interested in – from prosody to discourse structure – research has recently uncovered systematic and sometimes surprising relationships between language and gesture."

Gesture research has been used to further claims about connections between cognition, mental representations, and linguistic constructions. For example, Defina (2016) used analysis of co-speech gesture to uncover new evidence that serial verb constructions in Avatime refer to single events rather than multiple events, a topic previously lacking clarity as well as a viable method through which to investigate it. Defina's (2016) use of evidence from co-speech gesture to support claims about linguistic structures and their underlying mental representations highlights the value of continuing empirical research on nonverbal communication and its intersection with language.

1.2.2. Gesture and SLA: descriptive work

An example of a relationship between language and gesture that has been widely used in empirical study of gesture in SLA is the typological distinction between verb-framed and satellite-framed languages for path of motion (Talmy 1985, 2000). In this view, speakers are expected to perform path of motion gestures at the same time that they verbally articulate path of motion (either with the verb or with a satellite phrase, depending on the language). Speakers of verb-framed languages, like Spanish, express path of motion using verbs and thus nonverbally articulate path gestures simultaneously with verbally articulating the verb. Speakers of satellite-framed languages, like English, on the other hand, express path of motion using satellite phrases, such as adverbials or prepositional phrases, and thus nonverbally articulate path gestures simultaneously with verbally articulating the satellite phrase.

Results of whether speakers are able to successfully shift path of motion gestures to match native L2 ones have been inconclusive. Stam (2001, 2006, 2010) found that only one advanced speaker was able to shift gesture patterns from Spanish to English, and even then the gestures' timing mirrored the timing of native English gesture but the form was still Spanish. Kellerman and Van Hoof (2003) found that Spanish L1-English L2 speakers did not shift patterns, but that Dutch L1-English L2s put the path gesture on the verb when speaking English even though both Dutch and English are satellite-framed. They suggest verb-framed gesture as the unmarked option as one explanation of this finding. Finally, Negueruela et al.'s (2004) results aligned with Kellerman and van Hoof's in that even at advanced levels, L2 users did not demonstrate native L2 gesture patterns.

Path of motion gestures are just one example of the connection between linguistic structures and gesture patterns. Gestures for spatial frames of reference have also been shown to co-vary with typological linguistic patterns; for example, speakers of languages that use cardinal directions to discuss spatial relations (north, south, east, and west) also gesture towards cardinal directions as well (Levinson 2003). More work needs to be done to not only describe but also to understand the relationship between gesture typologies and language typologies.

1.2.3. Gesture and SLA: explanatory work

Kita's (2009) meta-analysis revealed four primary factors of cross-cultural variation in co-speech gesture: conventions on form-meaning associations (emblems), linguistic diversity in expressing spatial information, differences in spatial cognition, and gestural pragmatics. While this meta-analysis demonstrates a strong link between gesture and culture, it also suggests that there is still a great deal to explore. For example, "How exactly do emblems or gestural pragmatics originate?" "To what extent – and why – do linguistic typologies and gesture typologies overlap?" "How are cognition, gesture, and language related?"

Two major theoretical perspectives guiding gesture research in SLA begin to answer this last question: Slobin's concept of *thinking-for-speaking* and McNeill's Growth Point Hypothesis. Thinking-for-speaking could be considered a contemporary version of the Sapir-Whorf hypothesis. Slobin claims:

> There is a special kind of thinking that is intimately tied to language – namely, the thinking that is carried out, on-line, in the process of speaking… In the evanescent time frame of constructing utterances in discourse one fits one's thoughts into available linguistic frames…. In acquiring a native language, the child learns particular ways of thinking for speaking. (1996: 75-76)

Recalling Kita's (2009) findings that two sources of diversity in gesture are linguistic diversity in expressing spatial information and differences in spatial cognition, it makes sense that learning

different thinking-for-speaking modes would be tied to learning second gesture codes.

Further supporting this idea is McNeill's idea of the growth point – that together speaking and gesture comprise a single unit of meaning and express two different sides of thought (McNeill & Duncan 1998; McNeill 1992, 2000a, 2000b, 2005).

> When co-expressive speech and gesture synchronize … There is a combination of two semiotic frameworks for the same underlying idea, each with its own expressive potential. Speech and gesture are co-expressive but nonredundant in that each has its own means of packaging meanings. (McNeill 2005: 91)

If speech and gesture are two parts of a single, unified system and express two different sides to thought (McNeill 1992, 2005), then studying the SLA of gesture can give us another means by which to try to observe and understand L2 learners' thoughts, even if it is still indirectly.

In terms of pedagogical implications for SLA, this implies that second language teachers and learners must consider gesture and language as two inseparable components of well-formed utterances; both need to be learned for communicative competence to be obtained. Additionally, because research has shown that gesture is not merely a reflection of thinking but can even provide feedback that actually influences thinking (Goldin-Meadow & Beilock 2010), SLA teachers and researchers should consider how the acquisition or practice of second gesture codes might aid in the acquisition of second languages. Since learning a second language requires acquiring new online thinking processes, it could be that new physical codes, such as gesture, may be a way to speed up or ease the acquisition of new thinking processes related to underlying linguistic representations.

Gullberg (2006: 111) calls attention to the fact that "the SLA of gestural repertoires is a desperately underresearched area and questions regarding what, how, and when are wide-open to investigation." She says that gesture can be considered a system containing both receptive and productive knowledge that learners need to acquire. Because of this:

> The ways in which learners deploy gestures and the ways in which their gestures change with development can offer insights into communicative and cognitive aspects of the process of language acquisition (gestures in SLA) … Moreover, we need to investigate if and how learners can acquire gestural repertoires, and to tackle pedagogical and methodological challenges like teaching and assessment methods … The challenge is to integrate gestures into the field of SLA such that they can feed into and inform theories of L2 learning and L2 use. (Gullberg 2006: 104, 117 [parentheses in original])

If gesture might be able to reveal all of this, what else might be gained by studying the acquisition of the other forms of NVC as well?

1.3. Nonverbal communication and culture

NVC is extremely important when it comes to communicating with others from different cultures because, as Archer (1997: 86) keenly observes, "Someone who violates cultural norms for nonverbal behavior makes us profoundly uncomfortable… yet people never explicitly correct a nonverbal violation." For example, it is common in some Mediterranean cultures to hold the elbow of one's conversation partner, while to Americans this would be extremely disconcerting. Unfortunately, the result of violating nonverbal norms is typically rejection or avoidance of the offending person (Archer 1997).

Another reason that NVC is important to study interculturally is that there is no way to shut off the nonverbal messages a person sends aside from physically removing that person from the presence of others. So, even if people from different cultures have no words to exchange, they will still inadvertently communicate as long as they are in each others' presence. The idea that "one cannot not communicate," originally put forth by Gregory Bateson and later extended to nonverbal communication by Ray Birdwhistell, means that it is impossible to communicate nothing; for example, even silence can send a strong message and is used differently in communication by different cultures (Littlejohn & Foss 2009: 900). Given the ubiquitous nature of NVC, it is no wonder that it is often the source of cross-cultural miscommunication.

Anthropologist Edward Hall believed that the influence of culture on communication was so strong that he basically took the two to be equivalent (Littlejohn & Foss 2009: 533). In agreement, Littlejohn & Foss (2009: 533) claim:

> Differences in cultural values and perceptions can be a quiet, invisible source of great misunderstanding between people from different regions … the problem begins when our cultural verbal and nonverbal meanings are attached to the people of other cultures.

Today, learning how to communicate in another culture is focused largely on the verbal aspects of language. However, communicative competence (Gumperz & Hymes 1972; Canale & Swain 1980), a driving force in second language teaching and learning today, maintains that effectively communicating in a second culture requires more than just knowledge of grammar, and NVC is a prime example of this.

1.4. Communicative competence

Today, teachers of second languages are urged to consider what else students need to acquire in addition to the rules of language in order to be able to effectively communicate using an L2: in other words – the components of communicative competence. Gumperz explained communicative competence as follows:

> Whereas linguistic competence covers the speaker's ability to produce grammatically correct sentences, communicative competence describes his ability to select, from the totality of grammatically correct expressions available to him, forms which appropriately reflect the social norms governing behavior in specific encounters. (Gumperz & Hymes 1972: 205)

So, communicative competence requires knowledge not only of the rules of language but also of the rules of language *use,* or knowing when and how it is appropriate to use different forms. Communicative competence has been segmented into four aspects: linguistic, sociolinguistic, discourse, and strategic (Canale & Swain 1980). NVC plays a role in all four of these aspects of communicative competence.

First, NVC is important to linguistic and sociolinguistic competence because NVC plays a complementary role to verbal language, as discussed above. For example, in America, expressing condolences for someone's loss while grinning from ear to ear would not be considered "correct" even if the verbal message had no grammatical errors. Things like using body language and eye movements correctly are integral to behaving appropriately in different cultures, e.g. by lowering

one's eyes to show respect to others, by placing oneself at the appropriate distance from one's interlocutor based on the social situation, and knowing whether it is normal to arrive early, on time, or late to events. Next, NVC is an important part of discourse competence because regulating eye movements and some gestures help to moderate the flow of linguistic interactions; even informal regulating signals such as moving forward in one's chair or clearing one's throat serve as discourse cues (Xiong 2003: 125).

Finally, NVC is an important part of strategic competence because it is often what interlocutors rely on when one or more parties lack the shared linguistic resources needed to communicate verbally: "acting out" what one means is a typical course of action when verbal resources fall short. And, if a verbal interaction starts to unravel or go south, nonverbal communication can help to "save" the interaction if a miscommunication has occurred. For example, touching someone in a comforting way or moving the body to communicate submissiveness can be a quick way to disarm an unintentionally offended interlocutor, but "comforting touching" and "submissive body posture" are not defined the same way in all parts of the globe. Strategic competence is of particular importance to learners in the early stages of L2 acquisition who rely on it more than advanced learners do, so an emphasis on NVC during early stages of L2 acquisition could be of particular importance to learners.

1.5. Statement of purpose

NVC is particularly interesting for intercultural communication because it is the only communicative means available when two or more people do not share a spoken language and is usually relied on heavily if a speaker has a low level of proficiency in a language. However, even if interlocutors do share a verbal language, mutually incomprehensible or unshared nonverbal messages may frustrate the intended encoding and decoding of their messages. As Miller (2008: 57) states, "Misunderstanding of nonverbal communication is one of the most distressing and unnecessary sources of international friction." Although nonverbal communication is an important component of learning to communicate in a different culture, there is a gap in our understanding of people's ability to learn second nonverbal codes. (Here, the term *second nonverbal code* has been coined to refer to the nonverbal aspects of communication that need to be acquired to attain communicative competence in a second language.) There needs to be more effort dedicated to exploring people's ability to learn second nonverbal codes and to what extent doing so increases their communicative or cultural competence when using a second language.

To begin addressing this gap, I will explore the following questions:

(1) Which aspects of NVC are universal and which are culturally-constructed?

(2) Do cultural differences in NVC cause intercultural communication issues? If so, how?

(3) Which aspects of NVC are voluntary and which are involuntary?

(4) Is the study of second nonverbal code acquisition a worthwhile pursuit?

I argue that the answer to this last question is "yes" and conclude by proposing a framework within which further inquiry and empirical research on the acquisition of second nonverbal codes can be conducted.

2. Nonverbal communication: universal or culturally-constructed?

Is NVC universal or is it dependent on culture? If it is the former, then this whole discussion would be rendered moot. If it is the latter, then further inquiry can help uncover the extent to which NVC needs to be considered as part of what second language learners need to acquire in order to obtain

communicative competence.

2.1. A brief history of the debate

In 1872, Darwin published *The Expression of Emotions in Man and Animal* and claimed that mammalian NVC was innate. This launched a still ongoing debate over whether NVC is universal or culturally-constructed. In the 1920s, Wilhelm Wundt posited that gesture functioned as a universal language that allowed people to understand one another (Littlejohn & Foss 2009). From the 1940s through the 1960s, however, anthropologists such as Birdwhistell and La Barre argued that NVC was culturally-determined based largely on subjective, impressionistic data from observing other cultures (Eibl-Eibesfeldt 1979).

More rigorous and empirical study of intercultural gesture was first pioneered by David Efron in 1941, who found that it was sociological processes rather than race that influenced people's gestural repertoires. His work was followed by others such as Desmond Morris in the 1970s.

However, research started to emerge in 1970s that once again supported the universal / innate position, and this time it was empirically based. Work by Ekman (1977) found that six facial expressions were shared by cultures worldwide, suggesting that at least some facial expressions are universal or innate: fear, anger, sadness, disgust, happiness, and surprise. Eibl-Eibesfeldt (1979) provided further evidence of the universality of some facial expressions when he found that even congenitally blind and deaf children with no arms produced the expected patterns of facial expressions. However, things were still not so straightforward. Even though some facial expressions were demonstrated to be universal, different cultures were found to have different rules for when and how the facial expressions are displayed or used. These cultural conventions are called display rules.

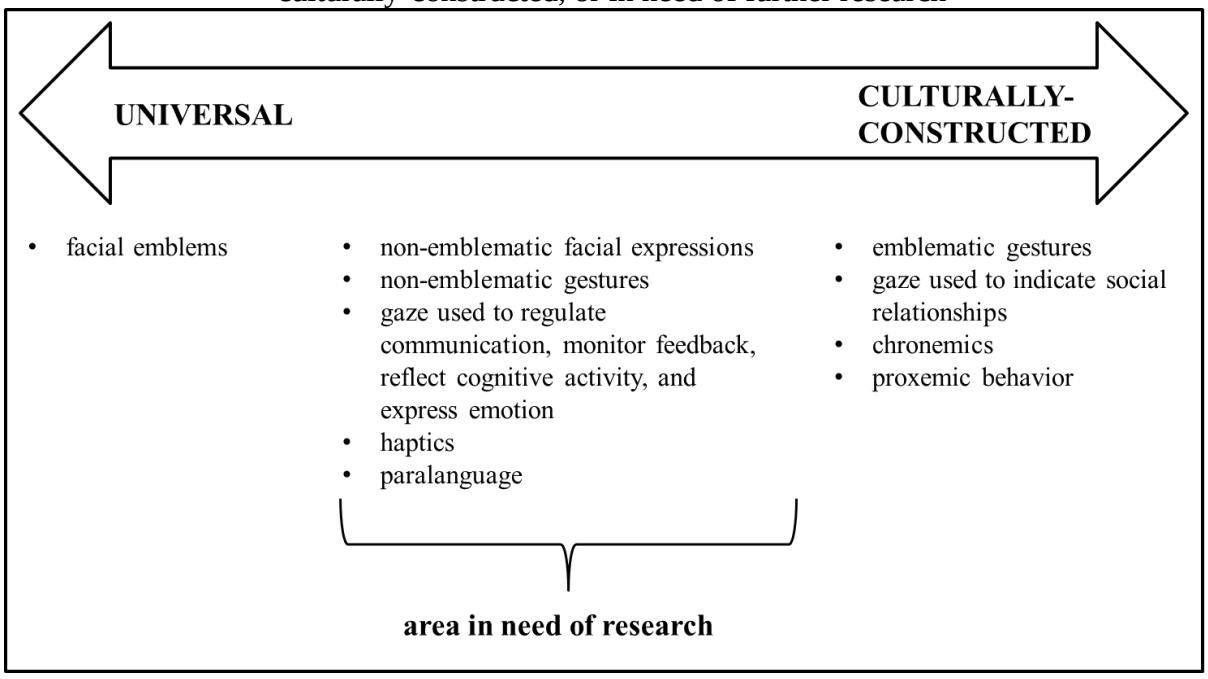
For example, although two cultures may share an emotional reaction "norm" such as that a loved one dying results in feelings of sadness, one culture's display rule may "prescribe that the chief mourners must mask their facial expression with a mildly happy countenance" while the other's culture does not (Ekman 1977). So, even though the forms of some facial expressions were found to be universal, their use was shown to vary across cultures.

2.2. Classification of forms as universal or culturally-constructed

The question of whether nonverbal communication is universal or culturally-constructed is still unresolved, in part because it is clear that there are at least some aspects of NVC that are culturally-determined and some that are more (if not completely) universal. Figure 1 below shows the different forms of NVC categorized as "universal" or "culturally-constructed" based on findings in the literature or as "area in need of research" if no data was found for a form in the literature. Here, *universal* means that the form of NVC is encoded and decoded across all cultures in the same way and mutual intelligibility likely exists because of some sort of biological origin/innateness of the form. (Note: This does not mean that the form is always displayed / realized to the same extent in all situations across cultures – see discussion of display rules above.)

Please note that while Figure 1 appears to use discrete categories, this was done simply to create a preliminary, simple model – it is more likely the case that instead of a binary classification of universal or culturally-constructed, a better representation would be a spectrum. 2.3, 2.4., and 2.5. below give more detail on the "universal", "culturally-constructed," and "area in need of research" sections of Figure 1, respectively.

Figure 1: Preliminary classification of the forms of nonverbal communication as universal, culturally-constructed, or in need of further research



2.3. Universal forms

As discussed in 2.1. above, there is only one form of NVC that has been empirically demonstrated to be universal: facial expressions. These expressions are sometimes called facial emblems since they have definable form-meaning associations, and since Ekman's (1977) original findings of six universal facial expressions (fear, anger, disgust, sadness, happiness, and surprise), two additional facial emblems have been identified: interest and contempt (Ekman & Friesen 1986; Matsumoto 1992). However, not all movements made with the face can be classified as universal. As only the expressions empirically demonstrated to be consistent across cultures can reliably be placed in the universal category at this point, the phrase "non-emblematic facial expressions" has been categorized as an area in need of future research and refers to any movement / expression formed by the face that is not considered a facial emblem.

2.4. Culturally-constructed forms

The forms of NVC that can currently be categorized as culturally-constructed are emblematic gestures, gaze used to indicate social relationships, chronemics, and proxemic behavior. It is no surprise to find that emblematic gestures are culturally-constructed because, by definition, emblematic gestures have conventionalized form-meaning associations. Ekman & Friesen (1969a: 63) define emblems as "those nonverbal acts which have a direct verbal translation, or dictionary definition, usually consisting of a word or two, or perhaps a phrase. This verbal definition or translation of the emblem is well known by all members of a group, class, or culture."

Emblematic gestures are similar to the sounds and structure of most verbal components of communication in that for the most part the forms have an arbitrary relationship with meaning and, because they are not self-evident or intuitive, can result in miscommunication if communicators lack a shared code. For example, in the U.S. sticking out the tongue signifies ridicule or contempt while in other cultures it is a sign of self-castigation or admission of a social mistake.

Gaze patterns that function to indicate social relationships are the only type of oculesic behavior

that can be categorized as culturally-constructed. For example, the norm in many Latin American and Asian cultures is for children to avoid eye contact with people of authority such as teachers, which could be interpreted as disrespectful or dishonest in other cultures. Several studies have demonstrated that gaze patterns related to social relationships are culturally-constructed. For example, the gaze heights of African-American and Anglo-American of speakers and addressees exhibit opposite patterns when it comes to which conversation partner holds a higher gaze (LaFrance & Mayo 1976; Erickson 1979). Additionally, people of some cultures, such as Bosnian Muslims and some traditional Vietnamese, do not look at people of the opposite sex or at the elderly (Galanti 1997). However, the fact that these studies are fairly dated should highlight the importance of revisiting gaze patterns that communicate information about social relationships with more modern methods, such as videography.

Gaze patterns indicating social relationships are just one of the five different functions of gaze patterns outlined by Knapp & Hall (2002): regulating conversation, monitoring feedback, reflecting cognitive activity, expressing emotions, and communicating social relationships. As there has been little research on cross-cultural gaze patterns when it comes to the other four functions, modern methods should also be extended to include the other functions of gazing as well.

Chronemics, or the way that people use time, is considered a form of NVC because the way that people use time "communicates." Just consider the contrast in the messages sent by people who always seem to be in a rush and those who behave in very slow, non-urgent ways. Many elements of chronemics exhibit cross cultural variation. For example, punctuality is conceptualized differently by different cultures. Brazilians define "late" at 33.5 minutes but "early" at 54 minutes ahead of schedule. On the other hand, Californians define "late" at 19 minutes, with the average American considering "early" as 25 minutes ahead of schedule (Malandro et al. 1989). Another way in which the use of time is culturally-constructed is that some cultures are considered monochronistic (e.g. they schedule only one thing at a time) while others are polychronistic (e.g. they schedule multiple things at a time) (Hall 1959, 1983).

The last form of NVC classified as culturally-constructed in Figure 1 is proxemic behavior, or the use of space. This is because the four different zones of space that people use when interacting (Hall 1959, 1966) – intimate, personal, social, and public – are defined at different distances by different cultures. The norms for the different types of spaces exhibit cross-cultural variation to the extent that, for example, the Arab "social" space is the American "intimate" space (Xiong 2003).

2.5. Forms in need of research

The middle section of Figure 1, labelled "area in need of research" highlights a gap, as there is not yet enough data on many forms of NVC, such as non-emblematic facial expressions, non-emblematic gestures, four of the five functions of gaze patterns, haptics, and paralanguage, to classify them according to universality.

A brief note on haptics: while there have been demonstrated differences between cultures in the frequency / amount of touching in given situations, such as between couples in public (Jourard 1966), there has not been much inquiry into more of the specifics of haptics such as what different types of touching mean and how they are used across cultures. Does touching "mean" the same in all cultures (i.e. is a kiss always a sign of affection?) with display rules prescribing different rules of use, or are there different forms of touching in different cultures that are used to express similar sentiments? Are there meta-differences such as some cultures using haptics to express something that is not expressed by haptics in another?

As a final comment on Figure 1, it would be remiss to not draw attention to the fact that the picture is not as straightforward as it would seem for those forms that have already been classified as universal or culturally-constructed. Just as facial emblems, the only form to yet be demonstrated as universal, can exhibit cultural variation via display rules, so too do we find surprising cross-cultural

similarities in some emblematic gestures. For example, Americans and Colombians both nod heads for agreement, shake fists in anger, wave hands good-bye, and indicate disapproval with a thumbs-down gesture (Rowe & Levine 2012). This highlights the need for additional work, not only descriptive but also explanatory. Can insights be drawn that explain why some cultures share certain emblematic gestures? Can theories be posited to explain how, on the basis of linguistic typology, cultural typology, or maybe even something else such as geography or climate, differences in gaze patterns, chronemics, and proxemic behavior arise?

3. Nonverbal communication and intercultural communication issues

The existence of cross-cultural variation in the forms of NVC does not automatically imply that problems with intercultural communication will arise, yet we do see several situations in which NVC causes intercultural miscommunication or tension. One situation ripe for conflict is when cultures share an identical gesture but assign it different meanings. "Gestural gaffes" can occur when people use a gesture that means something different in a culture that is not their home culture or when they fail to interpret a non-native gesture correctly (Archer 1997: 80). For example, the emblematic gesture for "OK" in the U.S. means "money" in Japan, "sex" in Mexico, and "homosexual" in Ethiopia (Archer 1997: 81).

Second, miscommunication or tension can occur when there are slight differences in gestures that result in huge semantic differences. For example, holding a finger to one's forehead means "stupid" in many European cultures, but moving the finger just a small distance to the temple means the exact opposite in America, where it signals "smart" (Archer 1997: 95). Given these two examples, it is important that intercultural communicators do not assume they will be able to encode and decode another cultures' gestures correctly, and it would be prudent to extend this cautious approach to the other forms of NVC as well. With gesture, we are starting to get a grasp of what we know that most people do not know about each other's gestures, but with the other forms of NVC we still do not know what we do not know.

There are also more covert factors in which lack of communicative competence in another culture's nonverbal behavior causes miscommunication. One is when cultures have meta-differences in NVC. Archer (1997) found that categories of gesture are not invariant across cultures: some have a rich collection of obscene gestures while others have none, many cultures have a gesture for male homosexuality but only one has a gesture for lesbianism (Uruguay), and some cultures have highly distinctive categories of gesture based on the concerns of that particular culture that are not found in any other culture. In these sorts of situations, miscommunication can occur because non-native communicators will not only not know what gestures are being used, but they will also have little ability to anticipate what they may mean because of the meta-differences.

Another covert factor is when cultures share the same form and assign it the same meaning but have different conventions that prescribe when it is appropriate to use. For example, a smile is a universal sign of happiness or general positive feelings, but smiling in school pictures is common in the U.S. but not in Russia. And, finally, in at least one culture, gesture is a requirement for a complete message. Wilkins (1999) documented that the Arrernte people from central Australia use a fully integrated speech-gesture system for demonstrative expression, and one can imagine how a foreigner could easily focus on just the verbal language in this situation and either fail to comprehend or produce a message accurately.

In addition to gesture, there are many other documented differences in forms of NVC that can cause miscommunication or tension. For example, greeting ritual behavior differs greatly by culture: it is common for Americans to shake hands, for Polynesians to rub each other backs, for Northwest Amazonians to slap each other on the back, and for the Andamanese to sit in each other's lap, wrap arms around each other's necks, and weep (Malandro et al. 1989). It is easy to see that employing the

"wrong" greeting ritual in a different cultural context might unintentionally communicate standoffishness, romantic interest, aggression, or weakness.

Another often overlooked area of NVC that can cause tension during intercultural interaction is chronemics. Chronemics can become an intercultural communication issue if cultures share different notions of punctuality. Since being late can imply disrespect or disinterest, tension can arise if someone arrives late by another's standard but not their own and does not apologize or show acknowledgement of the social gaffe.

Like chronemics, proxemic behavior is another form of NVC that can cause intercultural communicators to think that the other is being "rude" even though they are just following the norms of their own culture. By studying a group of healthy, middle-class American adults primarily from the Northeastern United States, Hall (1966) defined four physical zones of spaces used by Americans in communication: intimate distance (0-18 inches), personal distance (18 inches-4 feet), social distance (4-12 feet), and public distance (12-25+ feet). Standardized behaviors occur at the different zones of space. For example, the intimate zone is reserved for lovers and close personal contacts for behaviors like lovemaking and comforting, and Hall (1966) found that people became fidgety and uncomfortable if a stranger entered their intimate zone of space; participants would even attempt to remedy the violation by attempting to reestablish the proper distance. However, the types of behaviors that occur at different distances vary across cultures.

Generalizing on his findings, Hall (1969: 183) stated,

> People of different ethnic origins need different kinds of spaces, for there are those who like to touch and those who do not. There are those who want to be auditorially involved with everybody else (like the Italians), and those who depend upon architecture to screen them from the rest of the world (like the Germans).

More specifically, Hall (1966) lists some of the ways in which it is common for Arabs to use space that would likely make many Americans uncomfortable: crowding levels in public places, pushing and shoving in public spaces, and conversing at close physical distance. Given these differences in norms of proxemic behavior, Americans might perceive Arabs as hostile or aggressive while Arabs might perceive Americans as aloof or standoffish.

Still, caution must be taken not to overgeneralize. In addition to individual variation, not everyone within an ethnic group will share the same patterns of proxemic behavior. Variables like sex, status, and social role, to name a few, all contribute to shaping an individual's behavior.

3.1. Nonverbal competence

It seems intuitive based on the section above that, at least for some forms, NVC is an important component of smooth and efficient communication between cultures, but is there data to support this? A small amount of empirical research has moved beyond concerns of whether NVC is universal or culturally-determined and has explored questions of cultural competence related to NVC. Findings do support the idea that better "proficiency" in NVC is correlated with increased intercultural competence. Rosenthal et al. (1979) developed the Profile of Nonverbal Sensitivity (PONS) Test to test the abilities of people from 58 different cultures to decode multi-channelled NVC of American English. They found that there was variability in decoding ability across cultures and that subjects whose backgrounds were culturally and linguistically similar to the US did better than those who were more distant. Molinsky et al. (2005) found that the ability to distinguish between real and fake gestures in a foreign setting was positively correlated with self and external rankings of intercultural competence.

This is a good start, but still the primary focus has been on gesture. Further inquiry into the diversity (and its source) of the different forms of NVC and the role they play in communicative

competence must be done to gather more insight into the nature of the second nonverbal codes that second language learners need to acquire.

4. Nonverbal communication: voluntary or involuntary?

Keeping in mind that the end goal is to determine if and then how exactly the acquisition of second nonverbal codes can contribute to second language learner's communicative competence, it is important to acknowledge that simply refining the placement of all the forms of NVC in Figure 1 would not be sufficient. In addition to determining what cultural variation there is in the forms of NVC, it is also important to acknowledge that not all forms of NVC may be entirely under a learner's control.

With this in mind, I propose that in addition to the dimension of "universality vs. culturally-constructedness," another dimension needs to be included to direct further nonverbal code acquisition research: involuntariness. It seems fruitless to attempt to learn second nonverbal forms that are involuntary – how can one force oneself to change involuntary behaviors?

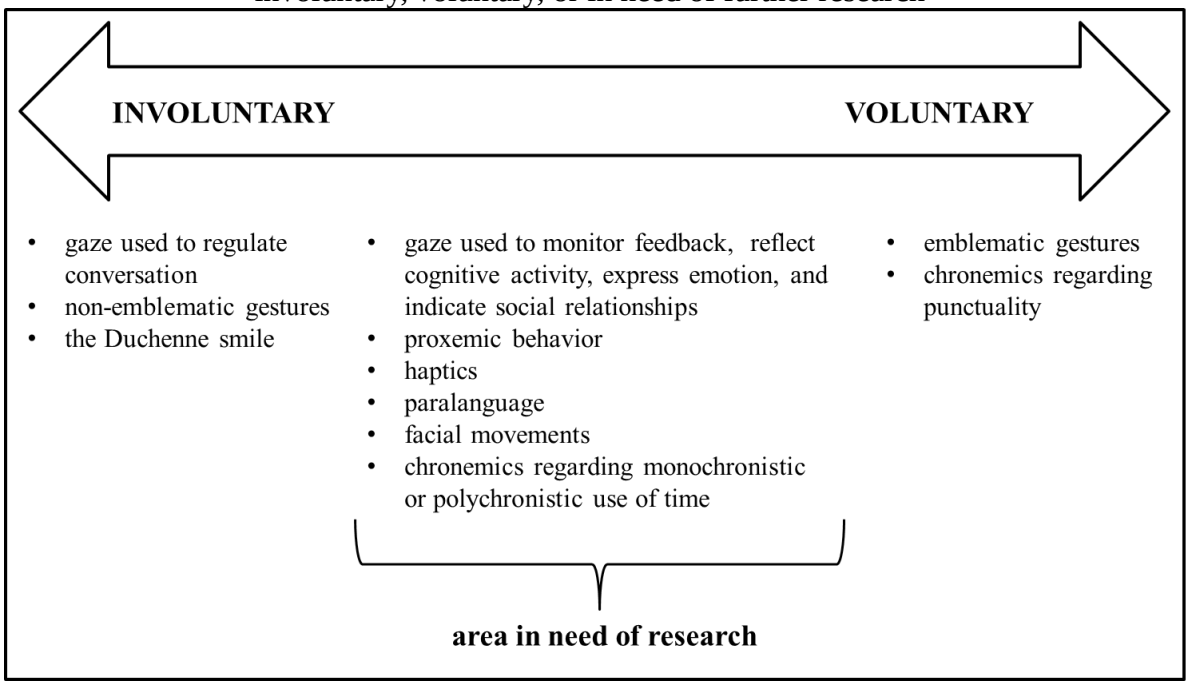
4.1. Classification of forms as voluntary or involuntary

As an attempt to begin assessing the voluntariness of the many forms of NVC, I propose Figure 2, which classifies forms of NVC as "involuntary," "voluntary," or "area in need of research" based on a review of the literature. The definition of involuntariness I used to create Figure 2 is as follows: a form of NVC is involuntary if it is encoded both *involuntarily* and *unconsciously* by the producer. To explain these two terms further, here *involuntary* production of a form of NVC by an encoder entails two characteristics. First, the form of NVC was not *intentionally* begun by the encoder, and second, the encoder does not have *control* over the form (e.g. either cannot stop producing or cannot alter the form). On the other hand, *unconscious* means that the producer has no *awareness* that the form is being encoded[4].

While not everything performed involuntarily is necessarily unconscious (for example, a sneeze is produced involuntarily but is still conscious), for the sake of concision I intend for the strongest classification of involuntary to also imply unconsciousness. However, I believe that with the proper training or exposure, namely consciousness-raising, there will be some forms of nonverbal communication that can move from "unawareness" to "awareness" and in the process will also move from "unintentional and uncontrollable" to "intentional and controllable."

[4] Awareness, intention, and control are three components that have been used to distinguish automatic behaviors from controlled behaviors, which roughly parallel the terms involuntary and voluntary used here. See Bargh (1994, 1996), Posner & Snyder (1975), and Shiffrin & Schneider (1977) for additional information.

Figure 2: Preliminary classification of the forms of nonverbal communication as involuntary, voluntary, or in need of further research



My intention is that Figure 2, like Figure 1, be interpreted as a gradated spectrum rather than as a binary classification, and this is consistent with others' interpretation that there is a continuum of involuntariness (Bargh 1996, 1997; Bargh & Chartrand 1999)[5]. This is because awareness, intention, and control can appear to different degrees and in different combinations with each other – thus the continuum. 4.2., 4.3., and 4.4. below detail the involuntary, voluntary, and area in need of research sections of Figure 2, respectively.

4.2. Involuntary forms

Despite claims in the literature that certain types of NVC are involuntary, it is hard to find supporting empirical evidence. Miller makes the following claim about regulating eye moments but does not substantiate it with any data, "Whatever the pattern of eye signals that two people are using, they use them unconsciously" (2008: 55). He goes on to make a similar statement about non-emblematic gestures, "If you take a moving picture of someone who is deeply engrossed in a conversation, and later show it to him, he will be quite surprised to see many of the gestures he used and the subtle effects they produced" (Miller 2008: 57). Non-emblematic gestures seem to parallel regulating eye movements in that they seem to serve some regulating function in conversation, all unconsciously to the producer.

Perhaps as a result of their regulating, unconscious nature, both forms also carry relatively little content information. Perhaps this is why these forms are involuntary – it makes sense that communicators should dedicate their working memory to the content they are producing or receiving and that regulating behaviors are implicitly learned when young but later controlled subconsciously, like walking or following the grammar of one's native language. Similarly, all humans know how to breathe even though they likely cannot articulate the rules or mechanisms they are following to do so: breathing occurs without conscious control. Just as discomfort and awkwardness can arise when

[5] The literature cited here uses the term *automaticity* instead of *involuntariness*.

a person attempts to control natural breathing, so too do things become unnatural when attention is paid to eye moments. "If you try to become aware of your own eye moments while you are talking to someone, you will find it extremely frustrating. As soon as you try to think self-consciously about your own eye moments, you do not know where you should be looking" (Miller 2008: 55). Just as we are better at subconscious rather than conscious walking, breathing, and using native grammars, so too are we not as adept at consciously performing regulating eye moments and non-emblematic gestures. Regulating eye movements and non-emblematic gestures seem to be learned but unstudied. Perhaps because they are implicitly learned they are better implicitly produced as well.

The Duchenne smile, the last form classified as involuntary in Figure 2, is a specific type of smile that involves movement of the muscle that surrounds the eye (orbicularis oculi) in addition to the zygomatic muscles that pull up the corners of the lips (Ekman 1989; Duchenne & Cuthbertson 1990). The Duchenne smile is separated from other types of smiles because it is purported to evidence genuine positive feelings of enjoyment (Ekman et al. 1980) and cannot be faked or produced voluntarily; the outer ring of the eye muscle can be contracted voluntarily but the inner ring cannot (Hager & Ekman 1985; Ekman et al. 1980). Despite being involuntary like regulating eye movements and non-emblematic gestures, it has some notable differences from these other two forms. First, it carries a large amount of content information, both positive and negative, because genuine smiles as well as forced smiles are both recognizable.

Second the Duchenne smile is not learned, even implicitly, as congenitally deaf and blind children produce it (Eibl-Eibesfeldt 1979). However, an explanation that would resolve this second difference is that all three involuntary forms are innate and it just appears that regulating eye movements and non-emblematic gestures are implicitly learned because they are not mastered fluently by children until later than the Duchenne smile, possibly due to the timing of motor control development.

Even though there are involuntary forms of communication and they do not always appear to contain a lot of content information, they are still important to the study of second nonverbal codes. Alibali et al. (1997) claim that speakers are not usually aware of the gestures they produce during speech, but that they likely still have a sense of which gestures are acceptable and which are unacceptable, which implies that there are "grammatical" and "ungrammatical" uses of nonverbal communication just as there are of verbal language. Abner et al. (2015: 442) suggest that a promising area for future study would be "…the extent to which speakers have firm intuitions about the forms of gestures and the timing of gesture and speech. Such intuitions would be akin to notions of grammaticality and acceptability…" So, even if the knowledge is unconscious (just like most people's knowledge of the grammar of their L1), knowing the correct forms and timing of gestures that accompany a language are important parts of communicative competence.

4.3. Voluntary forms

Moving to the right-hand side of Figure 2, we find emblematic gestures and chronemics as the two forms of NVC that can be classified as voluntary. These classifications were not made based on evidence from the literature but rather from reason. A person of good psychological health does not involuntarily stick out their tongue or move their fingers in specific ways to form the signs that are emblematic gestures. Theoretically, with the proper training and skill, people should be able to acquire second nonverbal forms that are voluntary or at least suppress formation of their native ones when using a foreign language. As for chronemics, it is also reasonable to assume that people are in control of their punctuality (arriving at a scheduled time or a certain amount of minutes before or after), but admittedly the way that people use time (monochronistically or polychronistically) might not be as voluntary, so this has been categorized as an area in need of further research.

4.4. Forms in need of research

There has not been much said in the literature as to the voluntariness of the other four functions of gaze, proxemic behavior, haptics, paralanguage, facial movements outside of certain types of smiles, and monochronistic or polychronistic use of time. There have been several research efforts investigating the automaticity of the encoding and decoding of psychological constructs such as social relationships, emotional expression, prejudice, personality traits, and expectancies, of which nonverbal communication is an important part, but the research pays minimal if any attention to analyzing the use of specific forms of nonverbal behavior to communicate them. When the research has paid attention to the use of nonverbal communication, it has only been able to demonstrate indirectly the automaticity of a few nonverbal behaviors such as the Duchenne smile, blushing, and tone of voice (see Choi et al. 2005 and Lakin 2006 for reviews).

For example, studies on deception have revealed the phenomenon of "leakage," or uncontrollable and unconscious nonverbal behaviors that give people away (Ekman & Friesen 1969b, 1974; Rosenthal & DePaulo 1979a, 1979b). Tone of voice is often the most revealing channel of nonverbal communication, followed by the face and body (Rosenthal & DePaulo 1979a, 1979b; Scherer et al. 1985). Interestingly, even people conscious of leakage cues who try to control them have been found to be unsuccessful. For example, Feldman & White (1980) found that because people are often more aware of the face's ability to give away true feelings, attempts to control facial movements often result in leakage cues being unknowingly "shunted" (Choi et al. 2005: 316) to the body.

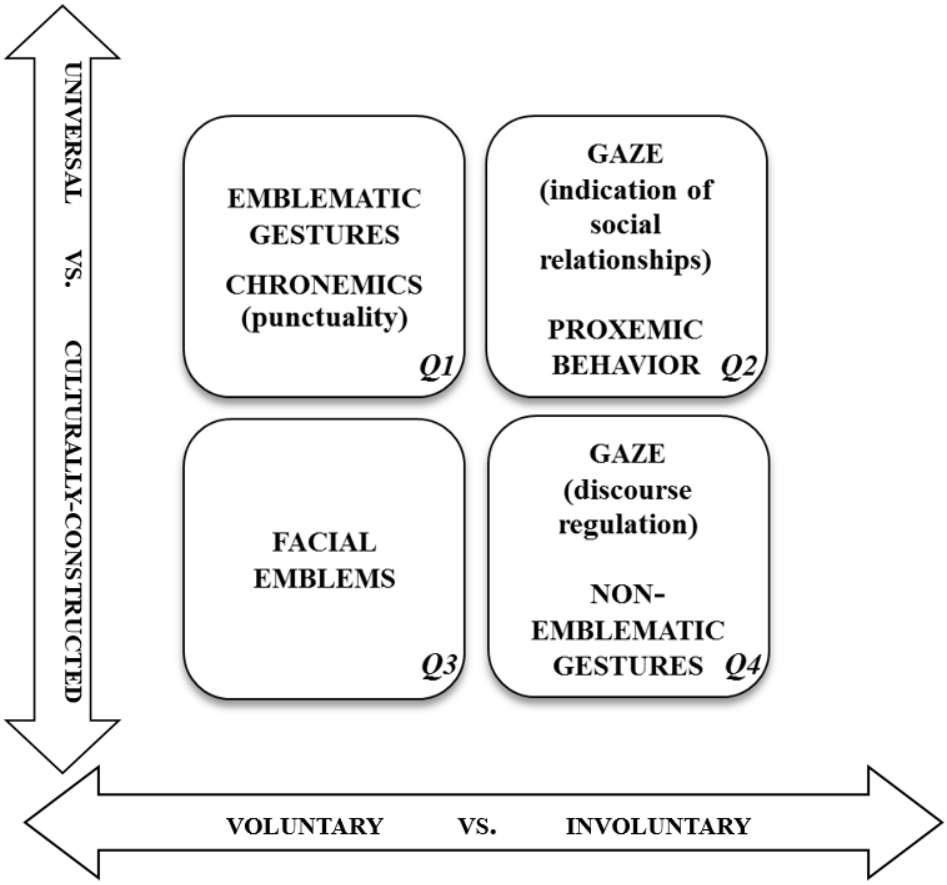
All of this work constitutes a solid foundation, but targeted inquiry into the different forms of NVC that produces definitive evidence of the extent to which humans have control over them is an important component of investigating the acquisition of second nonverbal codes. To solicit such evidence, Lakin (2006: 71) suggests methods such as reducing the level of consciousness involved, using funneled debriefing procedures, and performing awareness checks and concludes that "future work in nonverbal communication would benefit from explicit acknowledgement of the role that both automatic and controlled processes play in the encoding and decoding of nonverbal behaviors." Without this, teachers and learners of second languages will not be able to make informed decisions about where and how to target efforts to learn NVC forms.

5. A research framework for second nonverbal code acquisition

By exploring how forms of NVC can be classified as "universal vs. culturally-constructed" and "involuntary vs. voluntary" based on past scholarship, this paper has revealed several gaps. In order to start addressing these gaps and encourage that the intersection between NVC and SLA include attention to a wider variety of forms than just gesture, I now introduce a framework that unifies the forms of NVC in a way that makes future empirical research into the acquisition of second nonverbal codes possible.

The framework suggests that future research on second nonverbal code acquisition should begin by segmenting forms of NVC into a matrix that simultaneously organizes them on scales of "universal" to "culturally-constructed" and "involuntary" to "voluntary." See Figure 3. The resulting matrix makes possible an analysis of the feasibility and value of second nonverbal code acquisition. Theoretically, the more voluntary a form is, the more feasible it will be to acquire, while the forms that are the most involuntary may not be able to be acquired at all. Similarly, the forms that are the most universal will be of the least value to acquire because they cannot cause intercultural miscommunication if they are shared between all cultures, while those that are the most culturally-constructed will be the most valuable to acquire. Each quadrant will have its own set of research questions and implications for the acquisition of second nonverbal codes.

Figure 3: A research framework for second nonverbal code acquisition



Two notes of clarification are appropriate here:

1. the axes are not binaries but rather continuums – a form may not fall neatly into a single quadrant in the matrix; and
2. the forms in the matrix in Figure 3 are exemplary only. Before being able to fully explore the research questions suggested by each quadrant and understand the implications associated with each, it is first important to gather more empirical evidence to refine the position of these exemplary forms and to classify more forms into their correct quadrants.

The matrix is useful because it provides a comprehensive framework by which to approach all the forms of NVC in terms of second nonverbal code acquisition. The comprehensiveness of this approach makes it unique. Most work on NVC has been done in isolation of some sort: focusing just on one form of NVC, just on trying to prove the universality of or the role of culture in shaping NVC forms, just on the importance of NVC as relates to verbal language, just on whether or not an L2 learner uses L1 or L2 gestures, etc. Under the assumption that NVC plays an important and complementary role to verbal language, this framework offers a way to examine people's ability to learn different components of second nonverbal codes, to assess the value of doing so for each, and ultimately to prioritize which forms should be given the most attention.[6]

[6] One implication of the matrix is that second language learners will eventually be able to code switch nonverbally.

In 5.1. through 5.4., I will explain the placement of the exemplary forms in Figure 3 into their different quadrants, pose some research questions for each quadrant, and hypothesize what potential findings for each quadrant might mean regarding the feasibility and value of nonverbal code acquisition. However, this is intended only as a starting point. My hope is that further research would classify more forms of NVC into their appropriate quadrants, explore and be able to represent in the framework how forms do not fall neatly into a single quadrant, make new recommendations about the feasibility and value of nonverbal code acquisition, and provide more insights into the relationships between the forms of NVC, language, and culture.

5.1. Quadrant 1 (Q1): voluntary and culturally-constructed

Forms in Q1 should be the most feasible for someone to acquire, as they are both voluntary and learned. Emblematic gestures should be especially accessible to learn because they are semiotic. Theoretically, acquiring emblematic gestures should just be a matter of learning how to form the signs, what their attached meanings are, and when and how it is appropriate to use them. But, are Q1 forms indeed the most feasible for someone to acquire because they are voluntary and learned? Does this necessarily imply ease of acquisition? Using the vocal tract to produce phonemes is also voluntary and learned, but there is often great difficulty when it comes to learning the phonemes of a new language. There might also be similar difficulty when it comes to learning different forms of NVC.

Perhaps examining how exactly children acquire culturally-constructed and voluntary forms of NVC would help us understand how second nonverbal code learners need to go about the process. If children learn them explicitly, then there might be hope that acquisition will be fairly straightforward for second nonverbal code learners as well. If it is implicitly, then acquisition will be harder and time spent immersed in the culture will be essential to acquisition of these forms. Archer (1997) observed that young children, despite knowing correct gestures, are not often able to produce or use them fluently until late adolescence – in early childhood they have been shown to use a second hand to manipulate their fingers into the correct configuration. Archer (1997: 90) concludes that since these behaviors are never taught explicitly they must be acquired through direct observation, yet he acknowledges that "we have very little exact understanding of how this learning occurs."

Already with this first quadrant, we see that grouping forms together by universality and voluntariness might not readily result in a very clear or unified picture of how they should be approached in terms of second nonverbal code acquisition. Ideally, all the forms in a single quadrant of the matrix should be able to be approached in the same way when it comes to second nonverbal code acquisition, but we can already anticipate how that is not the case for Q1 forms. For example, even if simply explaining to learners a culture's notions of punctuality and outlining the consequences of not adhering to them might be sufficient for acquisition of punctuality norms, this surely will not be the case for emblematic gestures. Learners undoubtedly will have to watch gesture several times and then engage in a sufficient amount of practice because not only the form but also the timing (in

Anticipating this does bring up a few concerns. First, nonverbal code switching will likely be trickier than verbal code switching because not only do code switchers make choices about which code to use "to achieve certain social ends… but speakers make choices with the expectation that addressees will recognize a choice as carrying a particular intention" (Myer-Scotton 1998:19). When code switching verbally, the communicators involved can recognize which language, dialect, or register is being used due to grammatical and phonological characteristics – these cues are not available when it comes to nonverbal messages. Thus, there arises the issue of proper decoding of the nonverbal messages. If two people from different cultures are communicating and it is obvious which culture's NVC forms would be more applicable, proper decoding seems more likely. For example, when a tourist visits a foreign country it seems more likely that the responsibility lies on the tourist to adopt the behaviors of the foreign country. In other situations, as in international political or business meetings, it may be more ambiguous. What if both parties communicating attempt, with inconsistent levels of success, to use the others' NVC patterns? This might result in frustration and confusion for all parties involved.

relation to speech) and the pragmatic norms of use will need to be mastered.

There are still many other questions suggested by Q1. How does the "lexicon" of emblematic gestures differ between cultures? If there is not a "1-to-1" translation then acquiring second nonverbal forms in this quadrant might not be as simple because learners will need to build new semantic categories. What relationship is there between gesture and language typology? Are gestures determined by language typology, non-linguistic factors, none, or both?

Acquiring Q1 forms seems the most valuable, as they have the most potential to cause cross-cultural tension and miscommunication (see 3. above). For this reason, probably the most urgent task related to Q1 would be to determine what other forms of NVC fall into this quadrant.

5.2. Quadrant 2 (Q2): involuntary and culturally-constructed

Next, Q2 forms are involuntary and culturally-constructed. Because they are culturally-constructed, they have to be learned in some capacity. However, because they are involuntary they will be harder to acquire and use "fluently" than Q1 forms. It seems that one should have control over where one looks (gaze) and how one uses space (proxemic behavior), but it could be possible that Q2 forms become involuntary because they are more strongly linked to cultural values and somehow become more engrained. In other words, because these forms are not biologically hardwired, it is possible to learn to exercise some amount of control over them, but because they are learned implicitly over time and have connections to cultural values, it may be difficult to learn to do so.

Emblematic gestures are arbitrary signs, but things like looking or not looking at others and how close we stand to others reflects a view of the world that encodes ideals of respect, relationships, politeness, etc. Learning these forms is more than just learning new arbitrary sign-meaning associations. If a person does identify with the values of the culture from which they learned native display rules, then learning to adhere to new display rules might feel like violating some internal principles. It is probably at least somewhat involuntary to perform those nonverbal forms that match "gut values," and consciousness-raising and a fair amount of practice will likely be required to change a person's use of these forms.

In fact, Archer (1997: 98) argues that there are some types of nonverbal behavior such as appropriate speaking distances and eye contact norms that are different from gesture in that not only are they unconscious, but, even if prompted, cultural natives would likely be unable to articulate the "rules" for them. Like Q1, it would be helpful to determine how exactly children acquire culturally-determined and involuntary forms of NVC and if this differs for adults. It seems likely that children acquire these forms implicitly since the forms are involuntary and since explicit discussions of things like how close to or far away from others to place oneself in different social situations is not commonplace. In fact, inability to pick up on these things is considered pathological, as in the case of autistic children. Can adults also learn these implicitly if they are immersed in another culture, or is there some sort of sensitive or critical period after which learning becomes more difficult, as hypothesized for learning some components of verbal language?

Another area to explore would be how empirical evidence might prove that some gaze patterns or proxemic behavior is actually involuntary. Because of claims that regulating eye movements are involuntary, I have placed gaze patterns that communicate information about social relationships as involuntary as well. This was done under the assumption that whenever the eyes are used to communicate non-content related information, the movement is involuntarily. However, another important question would be whether gaze patterns can be classified wholly as either involuntary or voluntary, or if it differs based on the function of the gazing.

Can involuntary forms somehow be "raised" to the level of voluntariness? For example, can people eventually learn to control forms that might initially be involuntary if they are given the proper training and consciousness-raising tactics? If people simply cannot learn to control involuntary forms of NVC, then the focus should be on consciousness-raising regarding intercultural differences.

However, Lakin (2006) suggests that people can indeed learn how to control behaviors that are usually automatic or unconscious:

> We may be unaware of the nonverbal cues that we encode typically, but we can direct our "internal eye" easily onto these behaviors and therefore become more aware of them. People may not process the nonverbal messages they receive from others consciously, but if something causes a disruption in their automatic processing (e.g., an unusual event), or if people are motivated to learn about another person, that process can easily become conscious. Finally, people may even try to control (i.e., with intention and awareness, and with varying degrees of success) their nonverbal behaviors. (Lakin 2006: 71 [quotations and parentheses in original])

Finally, because there are some demonstrated "default" gaze patterns, is it possible that there are unmarked and marked forms in Q2? Perhaps unmarked versions are when natural responses are "allowed," and marked versions are when display rules modify the expression of natural responses. For example, while it is "natural" to feel sadness at the death of a loved one, not all cultures allow the expression of it. And, unless culturally socialized otherwise, people tend to gaze or even stare at people and things they either strongly like, dislike, or have interest in (Rowe & Levine 2012). So, while a student might naturally want to look at a teacher during a lecture because they are the focus of their interest during class, as stated above cultural conventions can change this: many Latin American and Asian children are told not to look directly at authority figures.

In addition to determining if there are other forms that belong in Q2, future work should explore the classification of unmarked and marked forms, their origin, if there is a difference in involuntariness between both, and people's ability to go from unmarked to marked or marked to unmarked forms when it comes to second nonverbal code acquisition.

A last important consideration for Q2 forms is their great potential to cause intercultural miscommunication because they exhibit cross-culture variation but are also involuntary – one might mistakenly assume that one's native form is the only "natural" form. One does not know what one does not know – namely that one's behavior may not be the appropriate natural behavior to someone from another culture and vice versa. This makes Q2 forms very valuable to study in terms of second nonverbal code acquisition, particularly regarding the extent to which these forms are perceived as indicators of cultural / communicative competence.

5.3. Quadrant 3 (Q3): voluntary and universal

Q3 forms, being universal, are probably some of the least valuable to study in regard to second nonverbal code acquisition because there should be less need to study or examine forms of NVC that are shared by most cultures. One exception to this would be when display rules differ across cultures. Understanding differences in and practicing use of display rules would be the most productive activities for second nonverbal code learners attempting to master forms from this quadrant.

In fact, the only form of NVC that has been empirically demonstrated to be universal is facial emblems, which are indeed affected by display rules. This must mean that humans must have at least some sort of voluntary control over forming them. Understanding the nature of display rules and how they are learned would be an important avenue of inquiry for Q3. Are all display rules actually voluntary? Might they actually be more involuntary like Q2 forms because display rules often are linked to cultural values? How are display rules learned by children? When do children begin to produce "fluent" use of display rules? The answers to these questions would be a good start for uncovering if and how to teach non-natives of a culture a new set of display rules for Q3 forms.

There are several additional areas of research indicated by this quadrant. For a start, one interesting observation is that even the only form that can be placed in Q3 does not necessarily fall cleanly into a single quadrant. Why is it, for example, that forced or faked smiles are detectable (i.e. that the Duchenne smile is involuntary), but that other facial emblems can be faked? In this case, the Duchenne smile would fit better in Q4 rather than Q3 even though other facial emblems belong in Q3. Research should investigate which facial emblems are voluntary and which are not and attempt to determine what the cause of this is. If a cause were to be found, it might end up being a better way to segment NVC for placement in the matrix than the current forms. Research should explore if some facial emblems are more voluntary than others, and more attention should be given to those that are voluntary than those that are involuntary, since involuntary forms will be harder to master.

Additionally, what other forms besides facial emblems might also be universal and voluntary, and what is the origin of the universality? Is it because of biological development or is because of some sort of Universal Grammar for NVC (see 5.4. below for more on this)? Finally, is there anything that is truly universal and voluntary and not impacted by display rules? If so, we could rule out those forms as something that learners need to acquire as part of second nonverbal codes.

5.4. Quadrant 4 (Q4): involuntary and universal

Forms in Q4 are involuntary and universal. I have placed non-emblematic gestures in Q4 because people are usually not aware of the non-emblematic gestures they produce while speaking (making them involuntary) and because they are not often cited as major causes of intercultural miscommunication (a point in favor of them being universal). However, given the paucity of empirical research on the involuntariness of forms of NVC, modern methods should be used to gather data on this claim. And, admittedly, there have been some demonstrated differences across cultures in the pace and amount of space used to gesture (Efron 1941) and the gestures used for path of motion verbs (Stam 2001, 2006, 2010; Kellerman and Van Hoof 2003; Negueruela et al. 2004).

Perhaps the situation for non-emblematic gestures is similar to the placement of facial emblems into Q3 (as in the Duchenne smile versus other facial emblems), in that there are sub-categories of forms that do not all fall cleanly into a single quadrant. It seems that non-emblematic gestures might fall into three sub-categories: 1) universal, 2) culturally-constructed and cause intercultural miscommunication, and 3) culturally-constructed but unlikely to cause intercultural miscommunication. Modern methods should be used to investigate which non-emblematic gestures (or which aspects of them such as pace, space, form, frequency, etc.), if any, fall into each of these three sub-categories.

If any findings do yield cross-cultural differences, the origin of the differences should be explored (language typology? social factors? geographical factors? etc.). Current research in gesture has focused on differences in manual gesture based on typological language differences, namely on path of motion verbs. Additional research should explore differences in other manual gestures related to other typological features of verbal languages as well as non-manual gestures.

Regulating eye movements have also been placed in Q4 because they are purported to be done involuntarily and not much has been said cross-culturally about different ways of using eye movements as regulators. One interesting question for Q4 forms would be to determine if they all share the function of being discourse regulators and if parallels to verbal discourse regulators can be found.

One interesting observation about Q4 forms is that there seems to be the least amount of data on the types of forms that would fall into this quadrant. Perhaps these have been the least empirically studied because they are the least likely to have an impact on intercultural communication as they contain less "content" than forms in the other quadrants. Or perhaps they are the least studied because they fall into a sort of double blind spot. By double blind spot I mean that people pay little attention

to them because 1) they are produced involuntarily so people are unaware of them and 2) since they are universal, there has never been cause for them to arise as an object of study because of cross-cultural differences.

On the one hand, forms in Q4 could be considered the least worthwhile to pursue in terms of second nonverbal code acquisition because, being universal, they will not cause intercultural communication and, being involuntary, it will be hard to change a person's use of these forms. On the other hand, identifying forms that are universal and involuntary in all cultures could be a very important step in starting explanatory work on NVC that could then be extended to verbal communication. If there are any forms that are truly universal and involuntary these would be evidence of a truly universal human communication code, the study of which might reveal interesting findings about the evolution of human communication. If there are no universal and involuntary forms, this quadrant would cease to be relevant to the study of the acquisition of second nonverbal codes.

An important area of study for both Q3 and Q4 is determining the nature of the universality in question. When it comes to NVC, can innateness be used synonymously with universality? To answer this question, the notion that there may be more than one type of innateness must be considered. Or, rather, there may be several different paths by which a certain trait or structure *becomes* innate. While innateness is a notably difficult term to define, Cofnas states that "where the innateness concept has been usefully employed in science, it has generally been used to refer to something like Lorenzian innateness" (2017: 6). A Lorenzian definition of innateness means that "a trait is innate if the information underlying it is…stored in the genome," and it also assumes that the only way a species adapts to its environment is through genetic change over the course of generations (Cofnas 2017: 9).

However, this is not the only way to conceptualize innateness. For example, Cofnas (2017) argues that it is not just phylogenetic experience, or the process of natural selection that causes modifications to the genome over the course of generations, that can result in changes to the innate information stored in the genome. He argues that adaptive information, even that which is genetically-based, can "require cultural inputs and scaffolding to develop and be expressed" (Cofnas 2017: 2). In other words, adaptive information such as "knowledge and traditions" can be accumulated and transmitted between generations via "cultural evolution" (Cofnas 2017: 9).

So, if a form of NVC is universal, then this implies that it is innate. This is because if a form exists across (all) varied cultural backgrounds (i.e. is universal), it must be innate to humans in the same way that walking and growing different types of hair on different parts of the body is hardwired into our genetic endowment. However, if a form of NVC is innate, it is not necessarily universal. It depends on the route by which the innateness arose. If the innateness arises from something in the environment, a form of NVC will of course not be universal unless all humans experience the same environment. Several possible routes to innateness in regard to NVC will be explored below.

First, one type of innateness stems from a biological origin; this aligns with the Lorenzian definition of innateness above. The fact that the universal facial expressions (facial emblems) for the emotions of fear, anger, happiness, and potentially sadness (Ekman 1989; Redican 1982) are shared with other nonhuman primates suggests that at least some forms of NVC have a biological evolutionary origin and that perhaps the two terms (universal and innate) can be used synonymously for at least some forms. For example, the fact that congenitally blind children spontaneously produce smiles similar to those of seeing children (Eibl-Eibesfeldt 1979) and that nonhuman primates produce similar expressions suggests some sort of genetic hardwiring (Chevalier-Skolnikoff 1973). The forms of NVC that are "reflexlike" (Choi et al. 2005: 314) and seemingly hardwired physiological processes are argued by some to have been adaptive and strategic to survival since they resulted in the quick display of critical emotions like anger and fear (Ekman & Davidson 1994; Etcoff 1986). In this case, universality can be equated with innateness.

But what types of (or routes to) innateness might not equate with universality? Ekman (1989)

considers that some facial expressions might have originated not through genetic evolution but through "species-constant learning." He uses the examples of brow raising and brow lowering to illustrate the process of species-constant learning: brow raising increases visual input by increasing the superior visual field, while brow lowering decreases background light, reduces glare, and protects the eyeball. Brow raising would have been learned as a response to emotions of surprise because it increases visual input, and brow lowering would have been learned as a response to anger or sadness because it serves as protection from outside "threats," such as glaring light or an imminent blow to the face by someone else. According to this explanation,

> The genes may determine only how the equipment works. The signal value of such an action and its association with emotion (surprise) may depend primarily upon early experience, experience common to all members of the species who have functioning visual apparatus. (Ekman 1989: 158 [parenthesis in original])

However, what if some forms of NVC did originate through learning but the learning was not actually species-constant and thus resulted in cross-cultural variation of NVC forms? Would this be a different type of innateness than biological innateness? Epstein's (2016) article seems to argue that it is not. Epstein's central point is that the often dichotomized "nature vs. nurture" issue is incorrect because "nurture" (or the environment / external stimulus / input) can really only be understood in regard to nature. Framing his argument in terms of language development, Epstein argues that the fact that two infants exposed to two different languages' input (in his terms: different "acoustic disturbances hitting the eardrum") come to develop different language capacities is not due to

> …'*the environment*' as is usually confusingly stated—but to a species level property by which these variant exposures are mapped to those particular developmental trajectories resulting in particular anatomical (including mental) states. (2016: 199 [italics in original])

In other words, it is not that cross-cultural variation implies different sorts of innateness when it comes to language or NVC. Rather, it is more that there is a specifically human innate ability to learn language (and by extension possibly nonverbal codes), and the specific language or nonverbal code that develops for a given individual depends on the set of sound-meaning (for language) and movement/form-meaning associations (for NVC) they are exposed to through audio and visual input. The type of innate, biological endowment humans possess determines the range of possible development paths, and the input a given human experiences defines the path taken and the resulting anatomical and mental states. "That is, it is a defining property of the species that the possible class of variant developmental trajectories is determin*able* by the variant experiences of a particular type" (Epstein 2016: 199 [italics in original]).

For example, people living in very different climates would have had very different early experiences and thus would have learned and then shared, through cultural transmission, different forms of NVC for the same expressions of emotion. Importantly, this does not imply that only people of a certain race (i.e. with a certain genome) can learn certain nonverbal codes. This parallels the situation when it comes to language acquisition: it is not the case that only Korean people are able to learn Korean. So, although a variety of environmental or cultural factors might have led to the development of different nonverbal codes over time, this does not mean that different members of the human race have different innate abilities to learn different languages or nonverbal codes. It is the same innate ability that happens to take different development paths (Epstein 2016).

Just like an innate Language Acquisition Device (Chomsky 1965, 1981; Pinker 1984, 1994) and Universal Grammar (Chomsky 1980) are theorized to be the means by which people learn how to verbally express themselves based on the language(s) that surrounds them as they grow up, so too might there be another innate device that allows people to learn the appropriate nonverbal code of the culture and / or language that surrounds them.

If the innateness is indeed similar to Universal Grammar, there might be a certain time frame within which forms in this quadrant must be learned (both as a first and second code) if they are to be used naturally / fluently. However, if the innateness is similar to walking (in that if the code is not acquired within a certain time frame then it can never be learned at all), then forms in this quadrant may be impossible to acquire at all as a foreign nonverbal code. Still, yet another sort of innateness can be invoked by comparison to the process of breathing. Breathing is quite innate to all humans, yet it cannot be voluntarily done naturally. Only when one "surrenders" control can natural breathing occur. The point here is that much more work is needed to determine if there are other universal forms of NVC, to what extent this universality overlaps with innateness, and what the exact nature of the innateness is.

Finally, another type of innateness could be that humans have a penchant for NVC that must be fulfilled, a sort of "generalized need" to use parts of the body in addition to the vocal tract during expression (and here again the specific forms learned are based on the surrounding culture and language). This would be similar people's need to verbally express themselves.

Another intriguing question is the intersection between involuntariness and universality / innateness. Perhaps the notion of how tightly connected these two aspects are depends on the type of innateness of a given form. If there is genetic evolution and therefore hardwiring of the form, the form will likely be highly involuntarily. If, instead, the innateness is akin to Universal Grammar in that the specific manifestation is dependent on learning based on culture or language, then the form should be more voluntary (but by no means completely voluntary based on what we know about people's use of their native language(s)). Given the indication research in the field of SLA has given us of the complexity and difficulty of acquiring verbal languages, it is likely that the acquisition of second nonverbal codes will similarly be a significant challenge to both practitioners and researchers.

Further research should seek to better understand the qualities of and relationships between universality, innateness, and involuntariness and to refine the matrix as needed.

5.5. Methodologies for testing the framework

In order to begin refining the placement of forms onto the matrix, much descriptive cross-cultural work needs to be done. Ethnographic approaches would be an effective way to gather data on different cultures' rules *and* rules of use (communicative competence) of the different forms of NVC, after which grammars of NVC could be written and then compared to create nonverbal typological inventories. An important note here is that the use of the term culture throughout this paper does not refer strictly to political entities. Just as dialect variations persist within and across geo-political borders, so too should cultural differences in nonverbal repertories be considered by keeping in mind that cultures and sub-cultures are also associated with factors such as ethnicity, race, gender, socio-economic class, age, etc. Furthermore, as with the study of language, it is essential to keep in mind that there will be individual variation as well.

Additionally, methodologies to test the involuntariness of different forms need to be exploited. For example, participants could be put under cognitive load, asked to make snap judgments or decisions to reduce the amount of control they have over behaviors, and engaged in awareness checks or funneled debriefings (Lakin 2006).

As the framework assumes that where a given form falls on the involuntary to voluntary axis indicates that form's feasibility of acquisition, one way to start testing this hypothesis would be to

compare how learners who receive explicit instruction on forms do in learning to produce the form compared to those who receive no explicit instruction. This method would work well for testing whether consciousness-raising results in the ability to control forms that are initially involuntary. Regarding gestures tied to language typology, Gullberg says:

> Gesture theory would suggest that shifts in these gestures follow from shifts in the underlying linguistic representations used. These may not be open to explicit learning. It is an empirical question as to whether instruction could affect this side of L2 gesturing. (Gullberg 2006: 110)

So, explicit instruction could be given on the linguistic form, the gesture form, or both, and assessment should include tests of shifts in gesture as well as shifts in linguistic representations. To assess receptive knowledge, grammaticality judgment tests could be used for both linguistic representations and nonverbal forms (Abner et al. 2015), while productive knowledge could be assessed by videotaping participants narrating stories and then analyzing the audio for linguistic forms and the video for nonverbal forms, as well as the two in conjunction with each other to analyze the timing.

As for testing the assumption that the more cultural variation a form exhibits the more valuable it will be to acquire, self and external ratings of cultural or communicative competence could be used to determine if there are correlations between receptive and / or productive knowledge of forms and performance on self or external ratings.

Finally, while this discussion has primarily focused on the acquisition of productive knowledge used to encode NVC, abilities to decode NVC need further consideration as well. Encoding and decoding are two processes that occur practically simultaneously during communication, so receptive knowledge should also be considered when it comes to second nonverbal code acquisition.

6. Conclusion

The matrix above is a first attempt at unifying the forms of NVC for empirical study in terms of second nonverbal code acquisition. This framework is not just theoretical; it is also practical. Because it links empirically measurable features of forms of NVC (universality and involuntariness) with practical traits (value and feasibility of acquisition), the matrix can provide second language learners and teachers with actionable information about where and how to focus attention when it comes to second nonverbal codes. For example, although some teachers may currently include instruction on NVC in their second language classrooms, this is not the norm and the focus is typically only on a few token voluntary forms. The hope is that this framework provides motivation to focus on other forms, such as involuntary ones that may require more dedicated effort (e.g. consciousness-raising efforts and regular practice sessions) but that result in a valuable gain in communicative competence. However, while it is essential to highlight the importance of focusing on other forms of NVC in the classroom, at this point this is not the primary motivation of this paper.

This is because the principal goal of introducing this framework is not to motivate or urge direct inquiry into the *teaching* of second nonverbal codes. Rather, it is a draft of a model for research into second nonverbal code *acquisition*: it provides a unified picture of all the forms of NVC while also suggesting smaller, more approachable programs of research from biological, psychological, linguistic, and cognitive perspectives. In other words, the value of the ideas and the framework proposed here are that they not only highlight gaps in knowledge regarding NVC but also lay out a model to begin addressing those gaps. Further research should be motivated to empirically verify the voluntariness of the different forms, to investigate the uniformity or diversity of the forms across the

globe, and to understand the communicative value that the different forms possess. The value of the framework also stems from some of the similarities it draws between second nonverbal code and second language acquisition. Many of the issues related to second nonverbal code acquisition for each quadrant (e.g. explicit vs. implicit learning, age of fluent mastery in children, the existence of a sensitive or critical period, the innateness debate, affective factors such as identity and social motivation, typologies and marked vs. unmarked forms, etc.) parallel themes in SLA research and thus encourage collaboration between those who study NVC and those who study language, as these systems are, after all, intertwined.

The relationship between SLA researchers and second language teachers has been in flux since the emergence of the field of linguistics. While it is important that the two collaborate, it is not wise to assume that findings in SLA research are immediately translatable or can be implemented in a straightforward way into the classroom. The same caution should be taken with the study of second nonverbal code acquisition. Although many research questions are proposed here and potential implications for NVC instruction are suggested, it is vital that theoretical and empirical work be carefully tested for applicability to the classroom. So, while this paper attempts to extend the idea of communicative competence (a concept central to a good proportion of second language instruction practices today) to include NVC, the ideas throughout are not meant to be interpreted as "ready for implementation" suggestions for second language teachers. Theories about NVC acquisition need to be empirically tested and the findings then formulated into hypotheses about NVC instruction—which then also must be empirically tested.

The framework is still rough: it provides more questions than answers, and not even all of the exemplary forms mapped onto the matrix can be cleanly categorized into a single quadrant. Additionally, it is important to remember that factors like culture and language are likely not the only causes of variation in nonverbal forms. Other factors like individual variation, gender, and age should also be considered. Furthermore, all of the "messiness" uncovered throughout the course of this paper reflects the normal process of critical analysis—bits and pieces of the object of analysis (in this case, nonverbal communication) usually need to be deconstructed, broken apart, and critically examined in relation to each other and in relation to the whole before a clearer picture emerges of how all the individual parts fit together. For example, the relationship between the typology of language and the typology of NVC, the relationship between universality, innateness, and level of voluntariness of the different forms of NVC, and the relationship between the origin of unmarked and marked forms of NVC and biological or other historical factors are all currently unanswered questions that have the potential to yield information critical to understanding what role NVC plays in communicative competence and the nature of humans' capacity for second nonverbal code acquisition.

Before the parts can all be fitted back together and a theory of second nonverbal code acquisition begun, more descriptive work is needed to refine existing and map additional forms of NVC onto the matrix. Also, the model should be refined to more accurately represent the fact that the two axes are not binaries but rather continuums. Further, explanatory work is needed to deepen our understanding of nonverbal communication, particularly regarding the exact nature of the universality or innateness of some forms and how and why forms are voluntary or involuntary. Ultimately, the hope is for such findings to not only further our understanding of how biology and culture might have influenced the development or evolution of nonverbal communication codes but also to translate into recommendations about the feasibility and value of second nonverbal code acquisition that inform the second language classroom.

Edward Sapir (1927: 556) once described nonverbal behavior as an "elaborate and secret code that is written nowhere, known by none, and understood by all." I hope that the framework proposed here will serve to motivate and direct further research on second nonverbal code acquisition, or at the very least that it provides a new lens through which to view what is already known today about nonverbal communication and its cross-cultural implications. Perhaps if we just start with the

descriptive steps of writing it all down, we may eventually come to know – instead of just understand – the elusive nonverbal codes we all use.

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