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The Emotional Effects of Life Experience on Bilingual Speakers'
Nonverbal Communications

Sarah Marie Webb

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

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ABSTRACT

The Emotional Effects of Life Experience on Bilingual Speakers' Nonverbal Communications

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This research is intended to demonstrate that bilingual speakers exhibit nonverbal behavior and emotional expressions that affect their ability to communicate in their intended manner. I argue that these changes are linked to the emotional ties to experiences in those languages. The nonverbal traits that appear when bilingual speakers share personal narratives in different languages are measured through facial recognition and emotion sensory software for evidentiary support in establishing intent versus actual self-presentation. New methods of self-analysis are discussed and utilized to determine if the speakers are inherently aware of these changes or can notice them through cross linguistic self-analyses.

Keywords: communications, bilingual, discourse, self-analysis, emotion, identity

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I would be remiss if I did not also thank God for His love and grace. Life is an incredible, mysterious, and beautiful journey. I was dealt some harsh blows to my health throughout the process of this research and I would not be here today were it not through the preservation of my life from Him; I have received miracles. I am eternally grateful and will do all within my ability to serve and achieve what I am meant to in gratitude of the opportunity to keep going.

TABLE OF CONTENTS

TITLE PAGE	i
ABSTRACT.....	ii
ACKNOWLEDGEMENTS.....	iii
Introduction.....	1
Literature Review.....	3
Research Questions.....	28
Methodology.....	29
Findings.....	43
Conclusion and Future Research	68
Limitations	74
References.....	75
Appendices.....	81
A. Consent Form	81
B. Video/Audio Release.....	82
C. IRB Approval	83

Introduction

“Not, then, men and their moments. Rather moments and their men.” – Erving Goffman

The above quote, from the introduction of Goffman’s ground-breaking book *Interaction Ritual* (1967), was intended to be an explanation of what he planned to study and express through his writings. Essentially, he stated that he would not explain the behaviors of all human beings, but would instead focus on specific kinds of interactions and how they alter the behavior of an individual. The quote is effective in introducing an idea that opens the mind to new perspectives and invites exploration of new thought. The moments people experience in their individual lives as human beings inadvertently play a larger part in who they are and how they communicate than is expected.

Goffman posited that, whether intentional or not, gestures and glances are among the ultimate behavioral materials, “states of mind and body not ordinarily examined with respect to their social organization” (1967, p. 1). This raises an interesting thought that, while seemingly mundane, can become increasingly complex: In social interaction, is it possible that a person’s intent to communicate can be overshadowed, whether to help or hinder, by nonverbal expressions? Further, what contributes to these unintentional or unconscious expressions?

While valuable studies have been conducted on social interaction, even cross culturally (Cupach & Imahori, 1993; Croucher & Kramer, 2016; Kramer, Callahan, & Zuckerman, 2013), and have taken language into account (Koven, 2007, 2017 and Pavlenko, 2006, 2011, 2012, 2014), something is still missing. Perspective is a key element in communication, and while many of these studies look at how individuals interface while they communicate, even bilingually, it may be important to take a step back and focus on the individuals producing the dialogue. This study delves into the perspective of the “producer,” the individual from which a

discourse derives, explores how the person feels while they communicate a personal story, and who they see themselves as. Many studies suggest that identity is formed through interaction with an Other, yet this study attempts to find a perspective of the “self” without interaction with an Other, potentially gaining a better perspective of the “natural self.” I use this phrase in reaction to studies claiming that the self is created by Others (Buber, 1958; Imahori & Cupach, 2005; Levinas, 1979; Mead, 1934), while attributing theory from James Carey (2009) which would suggest that identity would occur before such interactions.

To further study changes in identity and self- perception, this study will explore the expression of emotion from each participant through the use of two languages. This inclusion of another language is in an attempt to show that an individual’s nonverbal communicative behaviors may change during discourse with the change of a language, further showing changes in identity. It is suggested that the window into a person’s identity is the face (Ting-Toomey & Kurogi, 1998). Exploration into this idea will be accomplished through facial recognition software to analyze the emotions individuals express while telling a story in two languages, and comparing the results to how the individual expresses feeling. This will be a foundation in exploring intent during communication, and whether or not the bilingual individual actually expresses themselves as they intend to.

In moving forward with an investigation into the phenomena occurring, it is important to explore why such changes occur in an individual, the ways in which they can be observed, and the self-perspective a person may have in accordance with the variations that occur with the change of the language. Through a deeper investigation of such factors as intent and the creation of identity, self-perception, affect, and emotion, one can gain a clearer understanding of these phenomena.

Literature Review

Theory

Language is a tool used every day in order to communicate with one another; however, the complexity of what occurs when we speak is so second nature for us that we take it for granted. The word “communicate” is derived from the Latin *communicare*, meaning “to share” (Harper, 2001). As people speak, they share something—a thought or feeling—while simultaneously sharing a part of themselves as well. While certain commentaries or discussions with others may be deliberate in our social interactions, it is possible that we are sharing more with others than intended as we communicate. Questions regarding this concept have been raised in the realms of language and identity as researchers have investigated whether or not the language one speaks plays a part in who that person is (Budwig, 2000; Kinginger, 2004; Koven, 2007; Sapir, 1934).

Native speakers of a language often take their language for granted. They use it every day, but do not take the time to think about the effects it has on their existence, who they are, and how they behave and interact with others (Pavlenko, 201; Sapir, 1958). This is comparable to Marshall McLuhan’s assertion of a fish being unaware of being in water, the very medium that forms its ambiance and supports its existence (McLuhan, Fiore, & Agel, 1968). Carey (2009) explained that it is due to the fact that some aspects of our lives are “so ordinary and mundane that it is difficult for them to arrest our attention” (p. 19).

Interaction Ritual, a theory developed by the well-known sociological theorist Erving Goffman (1967), described people as actors who must battle between the needs of their inner self and the societal norms set by the world in which they find themselves. The theory provides reasoning for behavior implemented in the daily interactions one may experience. He suggests

that nonverbal behaviors are among the strongest tools for understanding a person and who they are, at least in their current situation.

William R. Cupach, with his colleague Tadasi Todd Imahori, utilized the conceptual foundation established by Goffman as a springboard to create a new theory, Identity Management Theory (IMT), in the 1990s. Their work is an adaptation of the ideas introduced by Goffman, but is grounded in communications and unintentionally answers the challenge issued by Carey (2009) to implement material from other fields into communications. The theory is used to distinguish differences in behavior among interactions between speakers from different cultures and speakers from the same culture. They claimed that aspects of a person's identity can be found in the display of their face and that people stand in need of cultural competence to understand how to appropriately interpret the nonverbal interactions of others (Cupach & Imahori, 1993). It is important to note that identity, in the cultural sense, is being viewed not only as a belonging to a social group, but also as part of an individual's self-perception (Imahori & Cupach, 2005). They proposed that cultural competency in a social context is generally developed through trial and error, a misinterpretation of identities, and reevaluation. The idea is that the risks of changing one's self-image causes altered expectations for future social interaction and how individuals may feel about themselves. The notion that self-sentiment, or the way individuals feel about themselves, can change based on self-presentation through the expectations of others carries with it a demand for investigation of affect.

Affect is understood to be a form of thinking that affects or contributes to how people communicate (Cupach & Imahori, 2005), and tells us that there are links to certain events beyond the outside observer's purview. While not obvious to another, affect may also factor into the feelings a person may develop or express, whether consciously or unconsciously. While affect

can be a vehicle of emotion for past events within a language, language can also drill into the thoughts and draw out affect from old events to link them or create association to current events. This affects how a person communicates in present circumstances based on what once was experienced in that language (Webb, 2015). While affect contributes to communicative ability and the formation of identity, Cupach and Imahori further argued that one unique trait of IMT is a focus on an individual's ability to effectively manage relational and cultural identities (2005).

While it is important to be able to alter the self to project an identity that is socially acceptable among different cultures, in both the social and attributional sense, a factor to this communicative interaction seems to have been overlooked (Cupach & Imahori, 1993; Imahori & Cupach, 2005). An assumption is being made here that people can make conscious changes in how they present themselves. While this may be true, a vital step is missing that needs to be explored: Individuals must first have a basic comprehension of how they are presenting themselves and what their nonverbal expressions are in order to maintain or alter them. Further, in discussing cultural communications the speaker must also have an understanding of his or her own personal competence and how it affects the portrayal of their image. This is especially true in the social sense of world cultures, which competency requires knowing the expectations of how it is socially acceptable to behave. The speaker must also have an understanding of his or her own personal competence and how it affects the portrayal of their image.

In looking at cultures of the world, it would seem appropriate to investigate those who speak multiple languages and the crossovers that may occur as an individual communicates in the respective languages they speak. It is then important to understand not just how it is socially acceptable to behave, as designated by the outside world, but how the individual themselves communicates in each language as determined by the personal, internal culture created within

them by their past experiences in those languages. Could this too have an effect, unconsciously altering nonverbal behavior and eliciting emotions not intentionally shared by the speaker?

While people may feel a sense of being somehow different when using other languages, the bilingual speaker does not have enough of a grasp on who they are in each of their languages to effectively change selves to support intended portrayals. This deficiency in Cupach and Imahori's theory requires further investigation into how people can first understand who they are in a language and how they present themselves through communication to others so that projected selves may then be more controlled through such means as IMT.

Intent and the Unconscious Creation of Identity

Intent. Intentional analysis is an investigation into the concrete. Anna Strhan (2012) offered that "notions held under the direct gaze of the thought that defines them are nevertheless, unbeknown to this naive thought, revealed to be implanted in horizons unsuspected by this thought; these horizons endow them with a meaning" (p. 21). In other words, we look and see the effect of something that is occurring, but we do not see the root cause, the personal history of the individual that created what now exists. This blindness or unawareness could be linked to the leaking out of emotions, the unintentional expression of feeling as one communicates, due to the affect that is associated with attributes of the discussion. A speaker may share more than intended if associations from the past affect one's feelings in current circumstances and escape into conversation before the speaker even knows they are present. This raises how and why questions, the how being in regard to the possibility of unconscious action, and the why being in regard to emotional affect appearing and playing a part in one's communication when it may not have been desired. If one can discover the horizon, as Strhan (2012) posed it, the beginning of

what now is, it might be possible to discover the cause of the event, the affect associated with current presentations.

Intention is a factor that is so seamlessly calculated that one must know with a certainty what produced it before discussing it. However, requirements of certainty cannot, or rather should not, hinder exploration. Further, there is another perspective that must be addressed, and this is the idea that the act of doing or speaking may be unconscious. In not acknowledging that speaking and doing can be done unconsciously, and only looking at what individuals produce as intentional, Levinas posited that there is an “overflowing of objectifying thought by a forgotten experience from which it lives. The break-up of the formal structure of thought into events which this structure dissimulates . . . constitutes a *deduction*—necessary and yet non-analytical” (1979, p. 28). Here, Levinas suggests that an individual can speak or act in ways that are unexpected, even to them. He calls for a deduction of intent and alludes to the idea that one’s intentions may stem from forgotten experiences. Such circumstances of past creating the present are common, but still require investigation as something beyond consciousness is occurring as an effect.

Deeper investigation as to how one can produce something so important as to alter the perception of self unconsciously is greatly warranted. On the notion of unconscious action, Thrift (2008) introduced an idea originally articulated by Wilhelm Wundt, a “period of bodily anticipation,” which argues that consciousness is constructed over a period of time (p. 67). Such claims were later formalized by Libet in the 1960s through the use of body recording technology. It was confirmed that “action is set into motion before we decide to perform it” with delays of 0.8–1.5 seconds recorded (Thrift, 2008, p. 67). McCrone (1999) claimed that any notion of instantaneous consciousness during an experience is an illusion, which was further backed by Gray, who stated that “the brain makes us ready for action, then we have the experience of

acting” (as cited in Thrift, 2008, p. 67). This could also point to affect, a feeling of something, an essence, that precedes action and sets it into motion without intentional effort.

While these claims point to a delay in awareness of an action before it occurs, the same might be said of speech, or at least the nonverbal actions that are linked to them. My past research (Webb, 2015) showed that many multilingual speakers were surprised to learn not only of their behavior, but also the manner in which they expressed topics. From the findings of that research, I concluded that much of the communication within those interviews had been accomplished unconsciously, or through a reality that existed in only the frame of mind associated with that particular language. Tying in Thrift’s (2008) example of the body’s capability to act before an individual realizes, it can be surmised that the brain has been conditioned to act, pulling from what it knows and what has been learned or experienced through an availability heuristic of sorts. In the case of determining nonverbal expressions within communication, such unintentional action could be an unconscious pull, triggered by specific language, of the subconscious history of occurrences in that language that attribute to a way of being, a reaction to the past which forms the self in the here and now. So while an individual may intend to speak or act in a particular manner while communicating, that intention can be altered by an unknown pull of the person’s personal history, presenting a self even the speaker isn’t expressly aware of.

The formation of self. As an individual goes through life, they begin to form a sense of self. Goffman provided two definitions for self. He claimed that there was a self that is pieced together “from the expressive implications of the full flow of events in an undertaking” (1967, p. 31), and the self as an actor or player in a game, a social role that can respond favorably or unfavorably according to the situation at hand. For the purposes of this paper, I focus on the

former definition as it maintains a *producer view*, or a perspective of the individual who is creating the initial verbal and nonverbal behaviors without the inclusion of their reactions to current social interaction cues. In truly understanding the self and self-perception, it is important to maintain the focus of what is happening introspectively and not just what is occurring between two individuals.

Who an individual identifies him or herself as can be very different than how someone else may view the same person. Edward Sapir (1927) believed that “personality is largely reflected in the choice of words” (p. 903), and defined personality as the “aspects of behavior which differentiate [a being] from other human organisms” (1934, p. 410). This defining of the self is more outsider based. However, Sapir (1934) also expressed the importance of finding a separation of societal norms and personal choices to determine where one concludes and the other begins. Yet, separating these two important roles in self-making is a difficult task. Sapir’s work looks solely at the monolingual speaker, but suggests one’s first language contributes to their behavior and how they are perceived. This raises the idea that language can be used as an identity marker in helping others determine who an individual is. However, one could then question if a speaker of more than one language has different identities in each language, and further, if the speaker is aware of them.

Discourse conducted by bilinguals may unconsciously be formulated through a structure of complex affects (Bakhtin, 1981; Goffman, 1981). From interviews conducted with bilingual women, Koven (2007) gained a unique perspective centered on personal reflections of feeling “different” between two languages. Koven first explained that understanding how someone is different across languages requires an investigation of two viewpoints: first, how others identify the person within each of his or her languages, and second, by the individual’s self-perception in

each of his or her languages. It is vital to gain the *emic*, or insider view, from the individual (Morris, Leung, Ames, & Lickel, 1999). Since people are putting a part of themselves out for the viewing of others when they communicate, understanding who individuals think they are or what they believe they are producing is important. This perspective is of particular curiosity for a bilingual speaker as the self-perception may or may not change between languages, even if an outsider, someone being spoken to, may detect variations in projected self. The point is that more research is needed in order to gain further knowledge on bilingual speakers and personal identity comprehension amongst their languages. Pavlenko reported that

inquiries into language and identity have mostly remained unanswered because the research on language and thought had focused solely on the monolingual mind.

Bilinguals were either excluded from this research as ‘unusual’ or ‘messy’ subjects, or treated as representative speakers of their first languages. Only recently did bi- and multilinguals become research participants in their own right. (2014, n.p.)

While I agree that such research can be messy, it is no less essential. If we dive into one assumption of culture fusion by Kramer, a theory I believe runs parallel to the phenomenon happening in this study, we will find the belief that “newcomers to a culture continually build upon their knowledge base/repertoire and fuse/integrate their previous cultural knowledge with newly acquired knowledge” (Croucher and Kramer, 2016, p. 2). It is quite possible that adding languages to one’s repertoire of communication, like new culture, fuses traits that came with the learning of those languages to how one presents their self to others. The all-encompassing individual may be elevated with the addition of language, or a new self altogether could be introduced within the whole of the individual. This is not yet clear. Pavlenko (2011) offered that, rather than adding to what is already in existence, each new language offers development and the

restructuring of self. There are questions here worth researching: What impact is the acquisition of these additional languages actually having? Is one's self being elevated or changed all together? Further, does it have an effect on the individual's perception of and communication within the world around him or her?

Carey (2009) explained that "communication is a symbolic process whereby reality is produced, maintained, repaired, and transformed" (p. 19). This concept forms an image of something malleable that can be changed; however, this would require an understanding of the reality that has already been formed. I then offer this question: Do bilingual speakers have an awareness of the realities formed in their life through each of their languages? Further, do those realities change and affect how the bilingual speaker communicates and/or presents their self to others? In regard to transmitting such realities to others, Carey stated that "there are always new generations coming along for whom our productions are incipiently problematic and for whom reality must be regenerated and made authoritative" (2009, pp. 23–24). This requires an understanding of the reality, a consciousness of its existence. Others' ability to see the effects of one's reality dictates that there must be a control or "authority" over it by the individual who "created" it, from whom it stems. The fact is that it's a personal reality. We as outsiders can see the effects, but only the insider knows the potential causation. However, in order to explain it, they need an opportunity to study it for themselves, and to have a cognizance of its existence.

As previously mentioned, Sapir (along with his student Benjamin Lee Whorf) believed that human beings' perception of the real world is determined by language. I argue that in addition to changing the perception or conceptualization of the real world, communication also changes the perception of the self within it. However, defining that concept of self is a little more difficult to do. George Herbert Mead (1934) explained that one's sense of self is formed from

interactions with others and learned from the expected norms in any given society. This sense of self is not established by the individuals themselves, but is formed by those the individual associates with in any societal setting. Pierre Bourdieu's notion of habitus (1991) (socially constructed modes of behavior which are experienced as natural), implied that an individual cannot be relied upon to define their own culture due to the idea that culture is taken for granted by those for whom it seems natural. We can therefore start to gain an understanding of why people may have difficulty describing themselves.

Just as someone automatically changes their behavior, or the way in which they speak about various topics, to match the expected norms of the various social groups to which they are accustomed to spending their time with (Bourdieu, 1991), bilingual speakers change their behavior to create a self that is socially acceptable within the bounds of the personal experiences they have had in each respective language. However, such changes are not necessarily conscious. Individual selves are formed over time, in each language, without having specific recall to the creation or knowledge of its existence. The affective expressions exhibited due to this identity of habitus are stowaways within the individual, making an appearance without the individual's realization. Altering one's self-portrayal becomes something so familiar that the speaker no longer consciously experiences the changes; it is simply the natural way of things, the established norm in a given situation or language, McLuhan's fish in water.

Sapir (1958) explained this phenomenon of different social reality occurrences and the effects they have on a speaker of more than one language. He stated that the medium for expression in any given society will dictate how one communicates. The language habits within a community not only affect how one participates, but also how one interprets what they see and hear, how they process an experience that has occurred. Whorf, further added that

the categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face. On the contrary the world is presented in a kaleidoscopic flux of impressions which have to be organized in our minds. This means, largely, by the linguistic system in our minds. (1956, p. 69)

Such a statement entails the notion that the world will be seen and understood differently depending on the language one is accustomed to, and, if I could add, changes for the bilingual and multilingual speaker by the language that is in use. I propose that this occurrence is due to the experiences one has had in a given language, that these experiences affect the views of the self and the world, and those experiences are drawn out by communicating in that respective language.

Discourse takes on a role as a catalyst to a person's "becoming." Levinas (1979) claimed that it is through discourse that a being is produced. He wrote "My being is produced in producing itself before the others in discourse; it is what it reveals of itself to the others, but while participating in, attending its revelation" (1979, p. 253). As with Carey, there is a sense that something is already in existence here. This belief provides a need to investigate both the rationale behind how or why someone has become who they are, and to acknowledge that identity is still a fluid and malleable thing in a state of becoming. In looking at what is, investigations are conducted based on what is said, rather than how it is said (including nonverbal behaviors) and how identity is shaped based on an interaction with the Other (Buber, 1958; Imahori & Cupach, 2005; Levinas, 1979). The mystery still stands as to from where the real creating of a being stems. While the self may be revealed through discourse, there seems to be an understanding that it already existed, that discourse is simply a vehicle of revelation for the identity to make itself known. Yet, this notion leaves one to wonder where an identity comes

from and how it might be possible to see it from the individual's perspective. Finding out how to reveal the individual realities that dwell within a bilingual person, without the stimulus of the Others, then becomes an important necessity in discovering answers.

Experience of Reality

In his book *I and Thou*, Martin Buber (1958) contemplated the idea that people experience a world unique to themselves, rather than experiencing the world as a whole. This is because individuals only travel the surface level, experiencing things and extracting knowledge. However, within that experience, Buber explained, there are inner and outer experiences. The situation doesn't change with how one looks at it, but its meaning does. Buber stated that the experience holds a secret that is reserved for the newcomer in a social setting and is brought out by others. He claimed that the experience is in the man and that the world should have no part in it. This calls for further investigation of the individual and their understanding of self and the experiences they have had.

In utilizing other fields of academic study as Carey (2009) had suggested, I look to Randall Collins (2014) who proposed that microsociology, in combination with Goffman's Interaction Ritual (1967), is "where intentionality and consciousness find their places; here, too, is the site of the emotional and unconscious aspects of human interaction" (p. 3). There is a clear theme surfacing in regard to the consciousness a person has from their experiences and emotional expressions, and how such deliveries of information play a part in shaping identity and communication. Collins (2014) provided a valid and problematic assumption about people, that while situations and circumstances may change, the individuals experiencing them stay the same. This would mean that the individual is not affected by the circumstances of their experiences. He expressed that what occurs with the individual is taken for granted, that there is a uniqueness that

has become second nature for all of our societal pleas to be who you are and not give into social pressures. This raises the question, who is the individual without the current influences of society? Collins suggested a look into “enduring individual essences,” which could possibly be a parallel with affect, and the need for chains of interaction rituals.

This idea of an enduring individual essence from Collins, tied with Goffman’s theory, suggests that people are unique due to the situations they have experienced over time and the fact that those experiences are different in their accumulation from the experiences of any other. He suggested that each experience is an “ingredient” in shaping the individual. Referencing the quote from Goffman at the opening of this paper, Collins (2014) stated that “incidents shape their incumbents, however momentary they may be; encounters make their encountees” (p. 5). Collins posited that being enabled to see the “common realities of everyday life” requires a reversal of perspectives, claiming that disciplining ourselves to think through the sociology of past situations would act as a key to unlocking the mystery of why we do what we do.

Self-perception and Learning About One’s “Selves”

Knowing two or more languages could have major effects on individuals. Through direct quotes from personal interviews, Koven (2007) provided understanding as to the perspective of self experienced by bilingual women and their own personal reflections of how they feel between their two languages. Koven explained that in order to start understanding how someone is different across languages, the researcher must first simply ask them how they feel.

Koven’s research offers great insight into the notion that bilinguals can observe that they are different in each of their two languages and raises awareness of the gap in information we have on bilingual speakers. Still, additional data is needed because statements regarding an individual’s feelings are subjective. Koven (2017) alluded to this same issue in later research

when she admitted that limitations exist in reporting relationships between experiences of self, languages, and emotions. She explained that emotions displayed in the context of specific languages don't always follow what the speaker claims they are. In applying affect, the individual may be making an attempt to express what they believe they are feeling, or could be presenting a personal ideal to what they hope they are expressing (Pavlenko, 2006). In either sense, what individuals express that they feel or mean to express, and what is actually felt and expressed could be polar opposites.

A number of scholars have raised the question as to how such reports of emotional experiences tie in with research participants' claims of feeling like they are a different person when using different languages (DeWaele, 2010; Koven, 2007; Pavlenko, 2006). To get to the root of the issue, an important question might be, "What circumstances cause feelings that instill the emotions and raise awareness of being somehow different?" I argue that, for a bilingual speaker, the notion of gaining an understanding of one's self is an experience that transpires in each individual language. As new "selves" are created through the learning of a language and the experiences that transpire in them, they become a natural part of the individual that cannot be separated as being anything other than a normal part of who they are. The individual is so accustomed to the changes that it becomes difficult to distinguish alternative behavior. Like fish in water, swimming through life and never questioning the surroundings in which they live, bilingual speakers do not reflect on the effects of the languages they speak every day on who they present themselves as. Multilinguals do not know how to define themselves as being anything other than who they perceive themselves to be, just as people may have trouble defining their culture as anything other than "mine."

Mead's Social Self Theory (1934) offers further insight into this matter, encapsulating the theories of Bourdieu (1991), Sapir (1934), and Whorf (1956). Additionally, it creates a catalyst from which to project my own theory on the multilingual speaker's lack of inherent knowledge of projected self-identity and the need for a way to help an individual come to see their selves as an outsider would. The "Me" Mead speaks of in his theory is similar to Bourdieu's habitus. It is a way of being created or learned through interactions with others and includes knowledge of the environment or society and the individual's sense of self. Yet, Mead explained that this sense of self is one that is not invented by the person, but by what others have treated him as. Mead believed that an individual creates a sense of self, or at least creates a "Me" that stems from observing the responses of others to his or her actions. Through this notion, it is possible to say that we largely act as we do because we have come to understand what is expected of us by society, and that extends to each language a person speaks. In each language, with each type of interaction attached to that language, the affect that has been generated through the experiences, there are certain expectations that are understood as the norm without being expressly thought about.

Mead's contrasting term of self-analysis is the "I". He attributes this form of self to the response of the individual to society's attitude, the part of the self that is creative while still acting within the normative bounds set by a community. Yet, this theory begs the question, how does one separate or come to respectively see "Me" or "I," and can an individual truly start to understand their "self" or "selves" to make such conclusions until such a separation occurs? Before one can determine how to appropriately interact with others, an understanding of how one presents their self must be achieved. One cannot correctly present what they do not know.

Mead expressed that, “It is only after we have acted that we know what we have done what we have said” (1934, p. 196). The following study is inspired by Mead’s research, as it offers a potential way for a person to identify who they are, who they have become due to social norms, and how they are perceived as by others. Such an analysis is perhaps the medium for truly separating out identities and their causes and enabling one to say, “this is who *I* am” or even better, “this is how *I* see my *self/selves*.” Yet, before coming to such conclusions, it is integral to investigate other factors of self-expression that are often unconsciously expressed. Categories that are difficult to define for such reasons, like affect and emotion, play a large role in a person’s being, in instilling life and sharing it with others on a personal level, but yet are not explored beyond surface level.

Affect

While the concepts of affect and emotion may understandably overlap or become muddled, affect has recently been theorized as being different than emotion, and both are different than feeling (Shouse, 2005). Feeling is something one can articulate, while emotion is a public act, a visual display of those feelings (Shouse, 2005). Yet affect, according to social theorist Massumi (1987), “is a prepersonal intensity corresponding to the passage from one experiential state of the body to another and implying an augmentation or diminution in that body’s capacity to act” (p. xvi). Affect is also understood to be “purely transitive, and not indicative or representative, since it is experienced in a lived duration that involves the difference between two states” (Deleuze, 1988, p. 49).

Ruth Leys (2017), supporting claims by Massumi and Shouse, declared that it is important not to confuse affect with either feelings or emotion, which are also separated as different subjects. Emotions are described as being something social or external, while feelings

are personal and internal, and affect is pre-personal. Leys (2017) expressed that a body is prepared for action in given circumstances through the intensity and quality of experiences that form affect. The Author claimed that affect is held in the body, which holds a grammar of its own, and that the effects it elicits fall beneath the threshold of an individual's consciousness.

While these explanations are helpful in understanding these topics and the roles that they play, only static definitions of affect currently exist (Thrift, 2008). However, it is perceived as a type of thought or unusual intelligence of the world where all spaces generated by it require being thought of in the same way, both "as means of thinking and as thought in action" (Thrift, 2008, p. 60). Linking these various ideas together, affect is a state of intensity within an individual caused by past experiences, linked to them, to people, to objects, to language and languages. It is something sensed by the individual who holds it within their self, a gentle awareness piqued in the annals of the brain, but not so strongly presented that the conscious mind can manifest it in the spoken word. Thrift (2008) spoke to this idea, stating that "one's sense of aliveness is a continuous nonconscious self-perception (unconscious self-reflection or self-referentiality). It is the perception of this self-perception, its naming and making conscious, that allows affect to be effectively analyzed" (p. 63). He continued by explaining that an individual would just need the proper vocabulary to appropriately express what becomes conscious and analyzable. Yet, even before the concern of whether or not such a vocabulary exists, the main problem is the ability to take conscious note of affect and its ties to one's potential for self-discovery.

Leys (2017) suggested that cognition comes too late to provide any meaning or rationale that would usually be attributed to action or behavior. She posited that this left affective dispositions responsible for them. Leys further provided that there exists a "disjunction or gap

between the subject's affective processes and his or her cognition or knowledge of the objects that caused them" (p. 322). This raises a question for the creation of personal affects. Thrift (2008) alluded to the "unconscious history of affect" and the need to engage it to produce an archeology of the past, which he claimed can be "transcendent and therapeutic and perhaps, in certain senses, redemptive" (p. 73). It would seem that affective awareness and its ability to shape self-identity in a more personalized mapping of the past holds the key to many beneficial traits for the individuals who are willing to discover them.

If a concern is that affect cannot be appropriately articulated by the individual, perhaps something could or already does occur beyond the human lexicon and base understanding of communicative self-presentation. Thrift (2008) has argued that "human language is no longer assumed to offer the only meaningful model of communication" (p. 59). In regard to affect and speakers of more than one language, the question has been raised as to whether people "do" affect, if there is a more solid or active experience or production of it than what is felt, and if it is done in different ways depending on the language being used (Koven, 2007; Pavlenko, 2006). At this point, I would caution that studies in communication and languages do not focus so much on what language is being used, in the sense of looking at the language itself, but rather looking at what that language means for the individual using it and what affect is associated to it and its usage through that individual's past.

Additionally, Koven (2017) questioned whether or not a speaker of more than one language can learn new ways of experiencing and interpreting affect and further expressing it. She explained that the affective target may vary and could be the language or could link to such factors as people, locations, or time. Studies have already shown that affects can be, and are,

attached to things, people, ideas, sensations, relations, activities, ambitions, institutions, and any number of other things, including other affects (Thrift, 2008).

Affect tells us that there are links to certain events, ideas, interactions, and much more. I make an argument for language affect, that the experiences which have occurred in a given language shape the mentality and perceived reality of an individual, effecting how they express themselves. It is something that has become a part of them and is called forth unconsciously with the change of a language. As different experiences occurred in alternate languages used by the individual, the reality called forth in each language is reflectively different. Without realizing, the speaker becomes someone new in the sense of emotions shared and experiences that mean more. While able to share stories of experience in any language, the memories and emotions will be stronger in the language of occurrences. As affect helps us feel something different with each language, we become different through the expression of those feelings, even if unconsciously done.

Languages act as a vehicle to transfer the events from the past into present memory, creating stronger emotional ties through the recounting of the said event in the language of occurrence. It has been established through past research (Koven 2007; Marian & Neisser 2000; Schrauf & Rubin 2000) that individuals may have a stronger affective intensity or emotional link to an event when it is told in the same language that the event happened in. Further curiosity extends to the question of whether this link is because the individual is actually re-experiencing the situation of affect when narrating in the language of occurrence (Marian & Neisser 2000; Schrauf & Rubin 2000). While Koven (2017) argued that she did not have corresponding results in her findings, her explanation, I feel, doesn't aptly diminish the possibility that it occurs. Of her 2007 study, Koven (2017) stated that the participants offered comparable levels of direct quotes,

which is a valuable factor in narrative reenactment, whether the narration was in the language of original experience or not. While the point of whether or not an individual can share the same details of a story in two languages is interesting, I do not believe the ability to do so provides conclusive evidence in determining whether or not more emotion or affective intensity was expressed. The question at hand is a matter of how the story is told, not what is told.

She provided that her French-Portuguese bilingual participants often expressed feeling different and having an increased emotional attachment to Portuguese as a language of their heart, while they believed French to be the language of their minds. This does seem to tie in to affect in regard to experiences in those languages, as the women interviewed in Koven's study expressed that Portuguese was the language used with family, while French was the language of their education and business. Such experiential affect would correlate to having such feelings about being different when using those languages. Koven (2017) suggested that further research on this matter be conducted.

As a number of questions have been posed, I turn to some examples from case studies to help provide some potential understanding. Stake (1995) expressed that case studies are useful in shedding light to contextually driven "how's" and "why's" of a given phenomenon. In my prior research (Webb, 2015), when multilingual participants were asked to share the same story of their choosing in each of their languages, they were able to share a perfectly clear and complete story in each language. However, more emotion was expressed in the language of occurrence, often without the speaker realizing they had become emotional. This was seen more when an individual shared a personal story, and emotional expression seemed stronger if the emotion triggered by the event was negative, such as sadness or confusion. For example, Andrea told a sad story that occurred during her childhood in China. When she told the story in Mandarin, the

language it had occurred in, she became overwhelmed with sadness. She explained that it was as if she were experiencing the situation over again. However, when she told the story in Cantonese, she was able to share the details of the story, but it was cold, with no emotion expressed at all. She expressed not feeling any emotion and declaring that she thought she seemed like a news reporter, telling a story that meant nothing to her.

Andrea also told her story in English, during which she was more analytical in her thoughts on the event. This finding raised the idea that not only does telling a story in the language of occurrence conjure affect and emotional expression, but that particular experiences of the past could also alter how a story is relayed due to its historical affect. This melds with findings from Keysar, Hayakawa, and An (2012), who found that people tend to think more analytically or objectively in their second language compared to their first. I would add to this concept the idea that it is not necessarily the second language that the individual is able to think more analytically in, but perhaps through the language that the situation being thought about did not occur in; it offers emotional space from the occurrence and the affect it carries.

Just as such research points to there being a stronger emotional link to events in the language of occurrence due to affect, there is a reverse to this: links to an event are not as strong in a different language. This suggests the possibility of distance from the event, enabling one to view the situation as more of an outsider, permitting greater awareness of what is being expressed and providing opportunity for more analytical thinking. This very notion led to the creation of a new experimental methodology. The idea is that an individual is too close to an event or a behavior in the language of occurrence. When asked to review a performance in the same language it was shared in, participants would be unable to see any oddities in behavior. Rather, they recognize themselves and their behavior as normal. However, change the language

to provide distance from that “created self,” and an entirely new analysis experience may occur.

In analyzing a recording in a different language than that of its creation, the individual is essentially looking at the recording as a different person. This “other” individual is someone with different affect links than the one in the recording, but who can still express the details and provide an explanation for why any changes may have occurred.

For example, Alexander told the same personal experience of an event in his life in Hungarian and English. He was able to tell the story with similar detail in both languages; however, his body language was very different. In Hungarian, his body language was closed, legs crossed, knee up into his chest, and he would not look at me as the interviewer and stared off to the side as if witnessing something he didn’t want to see but couldn’t help but stare at. There was a sense of sadness to his being and he didn’t smile once as he usually did freely in my communication with him. In English, his body language was open, he looked at me as he spoke, smiled, and interacted with me.

Alexander was given the opportunity to watch these two recordings of himself and to analyze them in English. While he did not express seeing anything unusual in the English recording, a very different reaction occurred when he watched the Hungarian recording. He expressed that he was learning something about himself, that he seemed insecure in Hungarian, that he had felt it, but didn’t want to admit it as it had surprised him since it was his mother tongue. In discovering that what he had felt was visible as emotion, he admitted that he had not told the entire story and explained situations of his childhood that would have cultivated an affective association with the language that could have developed such a feeling and emotional expression. Such strong emotional expressions associated with the use of languages, Pavlenko

(2012) expressed, invites further investigation regarding the personification of affective responses given by speakers of two or more languages.

Emotion

As per claims from Leys (2017), Thrift (2008), Shouse, (2005), and Massumi (1987), one begins to understand that emotion and affect are related, but separate concepts, and that the expression of emotion is multidimensional. It is an embodied and personal feeling, created through experiences and affect embodied within the individual, and expressed outwardly, whether through intentional or unintentional means. Prior research has found that emotions are typically triggered by events and self-analyses of those events (Averill, 1982; Kockelman 2010; Oatley, Keltner, & Jenkins, 2006). The event that triggered the emotion and the self-analysis of it can both play a part in the outward socially orchestrated manifestation of verbal and nonverbal expressions. The current event and the reaction to it must be taken into account, but further, an investigation as to why the reaction occurred based on past experiences may be beneficial. Languages, through their multifunctional affective ties, can play a part at every stage of this communication. In other words, people most often tend to exhibit and construe affect through simultaneous verbal and nonverbal arrangements that hint at affect rather than clearly defining it (Besnier, 1990; Ochs & Schieffelin, 1989).

Thrift (2008) posited that life is thought of in a rich moral array of emotions, and that such emotions can cause individuals to sense things that they are not always able to define. Most often, studies will focus on the ways in which people talk about emotions instead of how they are expressed. Katz (1999) expressed that a distinctive quality of emotions is that, even though they often arise during the act of speaking, emotions themselves are not talk. Additionally, they aren't

actually an expression in their individual essence, but an expression of something else that verbal communication cannot reach.

Thrift (2008) suggested that emotions are not something that people simply have, they are something done in communication. These emotions can be brought out through languages as embodied experiences of the past, enabling people to “do” emotion based on what that past has instilled in them. Through these experiences, situations of learning and conditioning, the body is prepared to react to the world and individual social settings. It was proposed that such a perspective on emotion allows us to “understand emotions as a kind of corporeal thinking” (Thrift, 2008, p. 67). As Katz (1999) so wonderfully painted the idea, “through our emotion, we reach back sensually to grasp the tacit, embodied foundation of ourselves” (p. 7).

If emotion is looked at as a thing of doing, rather than a reaction or something individuals have, than emotion in its expression of self is, as Thrift discussed, something that people can put forth before thinking about what was even done. Due to its unexpected nature, and the commonality of affect associated to any given language one speaks, it’s all taken for granted as an unconscious act or “normal” unless curiosity is piqued, and pondering occurs. There is a thing of wonderment here, just outside of our conscious grasp; not just that shaping of who we are, but also how we have become. This is an understanding that has the potential to become consciously tangible. Yet the ability to do that, to make that happen, is complex as it involves so many factors that are second nature and unconsciously done by human beings in daily actions.

Thrift offered that showing the complexity of emotion can be done through mimesis, the imitation of human behavior in art, which then ties into findings from the artistic media methods used to study intent. Thrift suggested that such an investigation of the “doing” of emotion would best help one understand how affect is generated. He expressed a need to slow down and see how

the body, and particularly the face, plays a role in revealing emotion that is tied to its own cultural history, which I take to mean the body's personal or internal culture as affected by its historical affect. "The face becomes a map of affective historical geography," revealing what has been experienced through social interaction and experiences "and producing a release of meanings from the past that reach us as cultural signifiers" (Thrift, 2008, p. 74). Again, the culture referenced could entail one's culture in the sense of nationality or place of origin, or it could be their own individual culture, formulated over time by their own individual experiences through life. Regardless, it becomes clear that the face plays an integral role in discovering who the "actor," as Goffman would describe him, is in a given communicative interaction.

Research Questions

The purpose of this paper is to investigate self-presentation in communication through the measurement of the emotional effects of experiential affect on bilingual speaker's nonverbal communication. Given this direction for exploration, and contributing to the literature above, the following research questions will direct this study:

RQ1: Is a bilingual person's intended meaning during communication affected by nonverbal expressions of emotion linked to prior experiences in their respective languages?

RQ2: Which detectable emotions appear as bilingual speakers share personal narratives in different languages?

RQ2A: How does facial recognition software offer additional insight into affect and self-analysis findings?

RQ3: Is the individual aware of variations in nonverbal behavior and communication style?

RQ4: What, if any, emotional reactions do people display when observing their recollections of an event in different languages?

RQ4A: If there are emotional reactions to the content, what explanations do people provide as the cause?

RQ4B: To what extent do those emotional displays differ based on whether or not it was the language of occurrence that was observed?

Methodology

This investigation utilized a combination of qualitative and quantitative research methods. Quantitative methodology assisted in the gathering of numerical data which provided a foundation for a new experimental technique to be applied to communications in various professional outlets. The methods for this research include emotion tracking, through facial recognition software, and an integration of new methodology created by the researcher in order to help participants identify changes in behavior or identity cross-linguistically. While the methods are quantitative in nature, the data gathered may be analyzed both qualitatively and quantitatively: quantitative to record the frequency of emotions that come about through the study and how they appear both cross linguistically and through self-analyses; and qualitative to provide a possible rationale behind their occurrences and through the expression of feelings by the participants.

While quantitative data and analysis offer vital data, qualitative analysis is the primary focus for this study as it explores the richness and depth of human interaction and how linguistic identity and emotion can affect communications. Brennen (2012) declared that “the goal of qualitative analysis is to contribute to a process of understanding” (p. 14). Further, sound qualitative research is needed in order to gain a breadth of insight and offer a level of both dependability and transferability (Lincoln & Guba, 1985). This research endeavors to draw new connections between experience and emotion, and the importance of understanding the self for increased control over communicative ability. It acts as a hybrid, contributing to gaps in current research based on a foundation of theory, proposes new theory and methodology, and posits how various communication outlets may be affected and potentially improved through the utilization of the data and techniques.

Participants

IRB approval was received for the use of “human subjects” in this study (see appendix item C). Participants were bilingual speakers, gathered on a volunteer basis, consisting of both males and females ranging in age from 21 to 30 years old. Most were known associates of the researcher, with some individuals gathered through snowball sampling. An announcement regarding the study was made to the known associates regarding the basic goal of the study, and contact information was left for any to reach out should they desire to participate or know of anyone else who would.

Sixteen participants were gathered to participate in live analysis facial recognition and emotion tracking, with four viable recordings of participants in a prior study used for post-analysis. The four recordings from the past study were included to confirm past foundational findings through the use of iMotions, which findings would be stronger than a researcher’s personal opinion. Literature states that studies in the social sciences with 10–30 as a sample size offer practical advantages (Isaac & Michael, 1995), “including simplicity, easy calculation, and the ability to test hypotheses, yet overlook weak treatment effects” (Johanson & Brooks, 2010, p. 395). More recent literature recommends a minimum of 30 participants from the population of interest for a representative sample size in a study with a purpose of preliminary survey or investigation development (Johanson & Brooks, 2010). As this study utilized each participant twice in the study (each language being counted as a case), 32 live cases were reviewed, with an additional 32 analyses. Additionally, prior recordings of four participants from a pre-study (which also received IRB approval) were used in post-analysis to raise the validity of prior study findings and increase evidentiary support. These recordings offer eight cases, two languages per participant, and an additional eight analyses. This totals 40 cases and 40 self-analyses.

This sample size provided more than enough data for saturation, “criterion for judging when to stop sampling different groups” that are important to a study (Glaser, 2017, p. 61). Stories told by participants were coded as being negative or positive. To reach saturation, enough data from participants needed to be gathered to show instances of negative and positive emotions, expressed while sharing a story in two languages, that could be compared to both the type of story and the self-analyses of the participants. The use of the constant comparative method (CCM) was also used to analyze the data and ensure that saturation was met across categories of story emotion, emotion in the language of occurrence or alternate language, and the emotion of analyses. Boeije (2002) explained that CCM provides a way to systematize the analysis process in order to create analyses that are more traceable and verifiable. This is done by comparing all data involved in the study and ensuring that it correlates with the aim of the study and the research questions being asked.

Materials

iMotions software was implemented in several ways for this study. The technology allows for deeper investigation into the emotional reactions of people through automatic facial expression analysis. This method is non-intrusive and helps avoid biases caused in participants by intrusion and by the researcher inferring what a facial expression might mean. The software utilizes an Affectiva engine, called AFFDEX, which recognizes the face and uses a powerful algorithm offering metrics in nuanced facial expressions. These metrics offer a more wholistic investigation by providing valence, facial landmarks, emotion channels, emotional engagement, head orientation, and more. Seven basic emotions (joy, anger, surprise, fear, contempt, sadness, and disgust) are automatically detected and 15 facial expressions are identifiable.

Both live- and post-analyses are made possible through this system. Live-analysis records an individual in real time, noting all facial channels and emotions, and exports raw data to any statistical program so that it may be analyzed further. Post-analysis is similar in its capabilities; however, the data is gathered from previously recorded material.

Recordings of participants in a prior study by the researcher (Webb, 2015) were used to conduct post analyses to confirm or refute past inferred data from the prior study. New methods created by the researcher in the prior related study were also implemented as they play a part in the unique use of the iMotions software.

Procedures

Prior research conducted by the investigator suggested that people were not aware of the identities they expressed in each of their respective languages, that their identity seemed to vary depending on the language being spoken (Webb, 2015). Due to these factors, new methods of analysis were developed by the researcher to enable speakers to gain an outside perspective of their self-presentation. In these methods, participants were filmed sharing the story of an event in the language it occurred in and an alternate language. Later, they were provided an opportunity to review the films and analyze themselves and their nonverbal behaviors. Findings showed that analyzing the recordings in a different language than that of the film permitted distance and increased self-awareness. In order to add evidence to support or refute the claim that a speaker can gain awareness of changes in nonverbal behavior across languages, participants reviewed the recordings made of them while telling a personal story. They were asked to analyze the recording and express their thoughts, prompted only to say whatever came to their mind. As they watched, they were recorded again with their face being analyzed by the iMotions software. This technique ties in suggestions from Koven (2007) and Thrift (2008) and offered data to support or

challenge the notion that how one states they feel and how one actually reacts are the same, as well as whether or not the face is really the key to this data.

To set a foundation for this type of research and the new structure for using facial recognition software, and to maintain the producer perspective and see what the individual could notice and point out on their own, participants were not given a strict prompt to encourage responses. This coincides with grounded theory methodology (Glaser & Strauss, 1967). In grounded theory, researchers may carry over any theories that arose in past research if relevant to the current research. However, the primary goal is to generate theory from data gathered through social research (Glaser, 1978). Glaser and Strauss (1967), the creators of the method, asserted that the work of a researcher is interpreted and that that interpretations must include the voices of the individuals being studied. They believed that, rather than a researcher interpreting what an individual says or giving voice to them through prompts, an individual should be able to voice their own thoughts and perspectives unprompted. Falling in line with this perspective, when asked to analyze their recordings, participants in this study were only prompted with examples that “comments could be about the story told and how you told it, behavior or things you’re doing, what you notice about yourself, really anything that comes to mind.” This provided an opportunity for the voice of the participant to be heard while studying what they were able to observe regarding their nonverbal behavior without assistance or cues from the researcher that could bias the results.

Live-analysis method. Appointments were scheduled with participants on an individual basis to come into the eye tracking lab at Brigham Young University. When a participant first came to the lab, they were asked to sign a consent form to participate in the study, as well as a form consenting to the use of the research material to be studied for research purposes, such as

the writing of scholastic papers. Participants could choose how the materials generated from their involvement could be used (see appendix item B). Before signing the consent form, participants were told of the procedures they would be involved in should they wish to proceed with participation in the study. After signing the consent forms, participants were asked if they wanted to enter a drawing for one of two \$25 VISA gift cards. A random drawing was conducted at the end of the study to determine two recipients and all personal information was shredded after contacting the winners.

To generate the experiments and gather data needed for this study, participants were asked to sit in front of a computer screen in the eye tracking lab and share an experience they'd had. This was done in two languages, with at least one-week in-between tellings to prevent retelling the story from the memory of the time before. Some participants told the story in the language it had happened in first, while others did not. It was important to include this variation in data gathering to ensure that any possible changes were due to the language and not just a factor of telling the story again. A small camera attached to the computer recorded their faces, and the data was transferred to the researcher's computer in another area of the room, out of the participant's view. An image of what the camera captured appeared in the lower left corner of the researcher's screen with a box around the participant's face that turned green if the person was situated correctly (face forward) and the system could read their face, or red if they were not (their face was not adequately facing the camera, they were turned too far to a side, they were covering their face, and so forth). Participants had been advised not to cover their faces, look away from the camera, or move their bodies too far in one direction or another. The hope was not to disrupt the flow of storytelling once the participant began; however, if hindrances to data collection occurred for more than 10 seconds, the participant was asked to correct what was

causing the issue. As determined by iMotions, data is only viable for research purposes if 80% or more of emotion recognition data was captured during story telling. The software reports this to the researcher at the end of filming by providing the percent of viable data over the image of the individual and outlining the image of the participant in green if viable (80% or better) or red if not (< 80%). When participants completed telling their story, their participation for the day was completed. Return appointments were scheduled to run the procedure again at a later time in an alternate language.

The participants returned to the lab the following week to tell the same story in an alternate language. It is important to note that one of the languages used was the language the event told occurred in. This is different than an individual's native language. For example, if a native English speaker has an experience while using an alternate language they know with other individuals, such as Spanish, the language of occurrence would be Spanish. This is the language that was being used when the event being shared actually happened. The language of occurrence could have been in English or any other language. One of the languages used was English for each participant. Participants told the story according to the manner in which it naturally came to mind in that language and not based off of how they remembered telling it in the other language. This is important as the study focuses on changes that occur during discourse across languages.

On the return day, participants were also asked to watch the recordings from the two days and perform self-analyses on what they saw. In order to not lead the responses from participants, they were only directed to give their analysis through free flow of thought. They were to express whatever came to mind as they watched the recordings. If asked for further directions, they were told to talk about what they noticed about themselves, the story they told, or anything that stood out or came to mind as they viewed the recording.

These films from the two days were brought up on the computer, one after the other, as a stimulus for the participants. The participant's emotions were tracked again as they watched and provided feedback. While the initial data, gathered from the first two days, shows what emotions are being expressed, and if there is any variation, the final two recordings and self-analyses show whether or not the individual can see the same things the software picked up to determine whether or not individuals are able to comprehend variations in their nonverbal behavior. Analysis of this final recording also offered data on the participant's reaction to the recordings, such as being surprised by the behavior or if it seems normal to them. This will help address the question of intent and whether or not the individual's behavior comes across as they intended. Further, as previously stated, it is important to understand how the individual explains their feelings in both sets of data, the story tellings and the analyses. At the conclusion of the self-analyses, the participants were thanked for their participation and any questions regarding the study were answered.

Post-analysis method. For post-analysis, video recordings of past participants in a prior study (Webb, 2015) were uploaded to iMotions. As participants in the prior study had been asked to complete many more varied tasks, the films were edited down to only include scenes of participants completing the task of telling a personal story in each of their languages. These edited films were uploaded into iMotions in order to test for viability and conduct post-analyses. Films from all 10 participants in the prior study were initially uploaded to the system. Films could only be used if the participants were in an appropriate position for the software to pick up and maintain visual contact with their face and capture facial expressions. As the use of facial recognition software was not a part of the prior study, and recordings had primarily been gathered for the intention of data verification, position of participants during filming had not

been a concern. This was the main factor that decreased the usability of most recordings from the prior study. Additionally, individuals tend to move around as they communicate, as was the case in the prior recordings as there had been no need to advise about movements. As some participants had turned their heads away from the camera or covered their faces as they thought or expressed certain emotions, such as embarrassment or confusion, the software could not detect their faces enough to obtain a high enough percentage for viability. This meant that they could not be included in the new study.

As in the live-analysis method, viability was determined by iMotions. Data was only deemed viable for research purposes if 80% or more of emotion recognition data was captured during story telling. Again, this time after scanning the uploaded recordings, the software reported whether or not the recording provided a viable percent of data by outlining the image of the participant in green if viable (80% or better) or red if not (< 80%). Prior research had been conducted on multilinguals, also with a recording done in each language, so if recordings for at least two of the languages was viable, and one was in English, the recordings were used. Since these were past recordings for a study that had different criterion, nothing could be done at this time to correct for issues. The above outlined criteria resulted in the recordings of only 4 out of 10 participants from the prior study being used for the post-analysis method of this new study. Those recordings included eight interactions and five languages. After being uploaded into the system and verified for viability, iMotions could track the emotions expressed by the individuals by coding them and providing data in the same manner as a live-analysis. This meant that data gathered through the live-analysis and post-analysis methods could be equally compared at this point.

Coding and Data Analysis

Coding procedures. Initial coding for the types of emotions expressed by participants during story tellings and analyses, including frequency and intensity, was conducted by iMotions for both live-analysis and post-analysis data. The software coded for joy, anger, surprise, fear, contempt, sadness, and disgust, through automatic detection of 15 identifiable facial expressions. The coding readout designated joy as a positive emotion, and all other emotions as negative. A numeric level of intensity for each emotion was designated for every second of recorded data. Lack of an emotion was shown with a negative number, while the presence of it showed a positive number, the greater the number meaning a more intense expression of the emotion. One additional step was then conducted by the researcher to prepare the data for analysis. A query was run in Excel to have the system highlight all numerical data reading as a 3 or greater since, often, numbers fell in the negative range or as a 1 or 2. This provided data for which particular emotions would need to be compared as it helped ensure that the emotions being evaluated were those of the greatest intensity.

The researcher and two independent coders, volunteers who are associates of the researcher, coded for the types of stories participants told in order for comparative analyses with iMotions data to be conducted. Coders received approximately 1 hour of training prior to conducting coding for the study. Training consisted of listening to 4 made up stories of varied tones, discussing the types of emotions expressed and overall tone, and then deciding if the tone was negative or positive, as related to the types of emotions iMotions codes for. As iMotions coded for only one positive emotion and multiple negative emotions, stories were initially coded as having a tone that was either negative or positive. Stories that would denote joy, the term designated by iMotions, were those that expressed joy, happiness, humor, or amusement.

Negative stories were those that followed the designated emotions from iMotions: sadness, anger, fear, surprise, contempt, and disgust. If a story was designated as negative, the type of negative emotion was then broken down to later analyze if it matched emotions picked up by iMotions that were expressed by the participant during story tellings and analyses.

Inter-coder reliability was established through the use of Cohen's (1960) Kappa. Ten percent of the total number of stories shared by participants were separately evaluated by the coders and the researcher and discussed afterward. A reliability of 100% was achieved. All remaining stories were analyzed by the researcher only.

Analyses. Data was analyzed by the researcher using the constant comparison method (Boeije, 2002), which involved the comparison of all data components involved in the study to one another and verifying if they correlated with the aim of the study and the research questions being asked. Data components being analyzed included the emotional tone of stories being shared, the emotion expressed during story telling in both the language of occurrence and an alternated language, and the emotions expressed as participants conducted self-analyses while viewing the stories told in the language of occurrence and an alternate language. An Excel spreadsheet was prepared with the following 10 categories for comparative analyses: (a) a number designated to each participant; (b) the type or tone of story; (c) the language the story occurred in (LO); (d) the most intense emotion iMotions detected for the LO; (e) the alternate language (AL); (f) the most intense emotion iMotions detected for AL; (g) the strongest emotion picked up by iMotions during the analysis of the LO story; (h) comments from the participant during the 1st analysis regarding emotion; (i) the strongest emotion picked up by iMotions during the analysis of the AL story; and (j) comments from the participant during the 2nd analysis regarding emotion. The analyses for each data component was conducted as follows.

Analysis of story telling emotions. Coded readouts were generated from the iMotions software to determine what emotions were expressed while participants shared the same story in both the language of occurrence (LO) and an alternate language (AL). As emotions expressed with an intensity greater than 3 had been highlighted, emotional categories in the spreadsheet that had been highlighted were reviewed for frequency. The emotion that maintained the greatest amount of highlighting was selected as the primary emotion expressed while telling the story. This was done for each language, for every participant, with both live-analysis and post-analysis data. The primary emotion was then placed into the excel document in its appropriate category for each participant. The language being used for the story was also placed under its appropriate category as being the LO or AL.

With the primary emotions for the LO and AL recorded side by side, the primary emotions expressed were compared and color coded for any variations in emotional expression. For this study, matching emotions were highlighted in orange, while differing emotions were highlighted in blue. This data was also used to compare against emotions expressed during the participants' self-analyses of the same recordings, and also the type of story told.

Analysis of self-analysis emotions. The final recordings of the study, where the participant conducted self-analyses, were also analyzed for a primary emotion by observing the frequency of the highlighted intensity markers. As with the story telling emotions, the primary emotions for analyses were placed into the Excel document under their appropriate categories, whether they were in relation to the telling in the LO or the AL, and notes from the participant's analysis related to personal observations of emotions expressed, emotions they were presently feeling, reactions to nonverbal behaviors, and even explanations for why they shared the story or may have had certain reactions were included where designated.

Further, any data regarding the frequent or intense expression of surprise or confusion by participants during analyses, even if not the primary emotion, was noted as a marker for seeing nonverbal behavior or emotions they may not have intended to communicate and may or may not have verbally communicated. The idea was that the presence of surprise or confusion, particularly when not an expected emotion to be expressed in the type of story shared, signified the appearance of something unintentionally or unconsciously shared or done. This became clearer when compared to what individuals said as they analyzed themselves. Comments from the individuals questioning their movements, facial expressions, and emotions were compared with iMotions data of surprise or confusion.

Additionally, after placing the primary emotions coded by iMotions for the self- analyses into the Excel document, they were compared with their respective stories, such as the analysis of the LO with the story in the LO. These, too, were color coded for a match or variation through this comparison. In this study, a match for this second set was color coded purple in the analysis section if it matched its story telling emotion, and yellow if it did not. This meant that emotions under the story telling categories remained orange and blue, and the emotions in the self-analysis categories were yellow and purple. This provided an ease for visual cross comparisons. These categories were then cross compared with the type or tone of the story shared.

Analysis of emotional tone of stories. Finally, the type of story shared by the individual, as determined through the coding of the researcher and two individual coders, was entered into its respective category in the Excel document for each participant. These were listed as positive or negative as designated by the type of emotions iMotions could analyze and for ease of overall analyses. Each category in the Excel document was then compared against the type of story to determine any variation. For those that matched, text was made green, while text was made red

for those that didn't. This allowed for an additional comparison, without interfering with the color coding of prior data comparisons, so that all comparisons of data could be visualized at the same time in one document.

Special interest was first given to the type of emotions expressed when told in the LO and the AL in relation to the type of story to see how they compared. Data for the primary emotion expressed when telling the story in the LO and the type of story shared were calculated to determine the percentage of matches. Data from the AL was then calculated against the type of story, with the resulting percentage being compared against the LO percentage. The differences provided data for whether or not emotional expression changed if an individual shared a story in the language an event took place in or not, and if emotional expressions would more closely match the type of story shared if done in the language it occurred in.

Comparison for the emotions expressed during analyses and their respective story tellings were then calculated for additional percentages of variation. This was to check for additional changes in emotion when conducting self-analyses. Further, it provided data for whether or not analysis of a story being told in the LO made a difference in how the individual felt about it. This data became particularly useful in the qualitative analysis of what participants verbally expressed seeing and feeling during their analyses, as emotions picked up on by iMotions and verbally expressed by participants during this process did not always match. This provided data revealing that the emotions individuals outwardly expressed were not always the ones they internally felt or meant to share and signaled a difference in affective emotion from past events and current emotional perspectives.

Findings

This investigation explored the self-presentation of bilingual speakers in communication and the emotional effects of experiential affect on their nonverbal communication. This was done using facial recognition software and is the first study of its kind to do so. This method provided a way for bilingual individuals to recognize how they present themselves during discourse, how they are seen by others, and enabled them to identify who they have become due to social norms and experiential affect. The complex study was structured and conducted with the concepts of emotional communicative intentionality, identity creation, self-perception, affect, and emotion in mind. Several insights emerged which confirmed hypotheses formulated by the researcher. The following is an explanation of the quantitative results found through coding and analysis, the qualitative findings discovered in the exploration of the research questions, and contributions to the field.

Quantitative Results

iMotions data revealed that individuals expressed emotions matching the type of story told when done so in the LO (language of occurrence) 95% of the time, or in 19 out of 20 cases (see table 1 below). It also showed that the individual expressed opposite emotions from the type of story when not told in the LO 75% of the time, or with 15 out of 20 participants (see table 1). For those individuals who were recorded as feeling the same emotion between story tellings, 4 out of the 5 felt joy for both, with the fifth feeling negative emotions for both. What is thought-provoking here is that, even though the same emotions were expressed, the emotions were still shared with a greater intensity and frequency in the language the story happened in than in the alternate language.

During self-analyses, an additional change in emotion was seen only 40% of the time when analyzing the LO, and 45% of the time when analyzing the alternate language. The same types of emotions were maintained by 60% of participants when analyzing their stories as when they told them in the LO, and only 55% of the time when in the alternate language. All analyses were conducted in English. So in total, out of 40 cases, 23, or 57.5%, underwent an additional change in emotion. Of the self-analyses, 70% revealed joy from the participant (see table 2 below). This is curious as past research on people has suggested discomfort from individuals from even hearing a recording of their own voice (McLuhan, 2003). Yet, the self-analyses themselves draw particular attention as participants often reported feelings that contradicted what iMotions found. This doesn't necessarily mean that iMotions was wrong but confirms the idea that we are not always communicating what we feel or intend to others through our nonverbal behavior.

The following tables outline the data from the story tellings (table 1) and self-analyses (table 2) in greater detail, providing the languages of occurrence (LO) and the alternate languages (AL), as well as their attributing emotions. Names of participants with anecdotes mentioned in the paper have been changed for the sake of anonymity.

A. Story TellingTable 1. *Emotional Results of Story Telling in Two Languages*

Participant	Analysis Type	Emotion of Story	LO	LO Emotion	AL	AL Emotion
1	Active	Negative	English	Negative	Spanish	Joy
2 (James)	Active	Positive	Portuguese	Joy	English	Negative
3 (Angie)	Active	Positive	German	Joy	English	Joy (less)
4 (Liz)	Active	Negative	English	Joy	German	Negative
5	Active	Positive	Cantonese	Joy	English	Negative
6 (Dan)	Active	Positive	Danish	Joy	English	Joy (less)
7	Active	Negative	Ilanggo	Negative	English	Joy
8 (Sarina)	Active	Negative	Mandarin	Negative	English	Joy
9	Active	Positive	English	Joy	Korean	Negative
10 (Adam)	Active	Positive	Spanish	Joy	English	Negative
11 (Brooke)	Active	Positive	English	Negative	Mandarin	Negative (less)
12 (Maya)	Active	Negative	Cantonese	Negative	English	Joy
13	Active	Positive	Spanish	Joy	English	Negative
14 (Joanna)	Active	Negative	English	Negative	Norwegian	Joy
15	Active	Positive	Filipino	Joy	English	Joy (less)
16	Active	Negative	Russian	Negative	English	Neutral
17 (Alexander)	Post	Negative	Hungarian	Negative	English	Joy
18 (David)	Post	Positive	English	Joy	Mandarin	Neutral
19 (Jocelyn)	Post	Positive	English	Joy	Spanish	Joy (less)
20 (Steven)	Post	Negative	Spanish	Negative	English	Joy
				95% Match	75% Change	

Note: LO = Language of Occurrence, AL= Alternate Language

B. Self-AnalysesTable 2. *Emotional Results of Analyses in Two Languages*

Participant	Analysis Type	Emotion of Story	LO Discourse Emotion	LO Analysis Emotion	AL Discourse Emotion	AL Analysis Emotion
1	Active	Negative	Negative	Joy	Joy	Joy
2 (James)	Active	Positive	Joy	Negative	Negative	Joy
3 (Angie)	Active	Positive	Joy	Negative	Joy (less)	Joy
4 (Liz)	Active	Negative	Negative	Joy	Joy	Joy
5	Active	Positive	Joy	Joy	Negative	Joy
6 (Dan)	Active	Positive	Joy	Joy	Joy (less)	Joy
7	Active	Negative	Negative	Joy	Joy	Joy
8 (Sarina)	Active	Negative	Negative	Negative	Joy	Joy
9	Active	Positive	Joy	Joy	Negative	Negative
10 (Adam)	Active	Positive	Joy	Joy	Negative	Negative
11 (Brooke)	Active	Positive	Negative	Negative	Negative (less)	Joy
12 (Maya)	Active	Negative	Negative	Joy	Joy	Joy
13	Active	Positive	Joy	Joy	Negative	Joy
14 (Joanna)	Active	Negative	Negative	Joy	Joy	Negative
15	Active	Positive	Joy	Joy	Joy (less)	Joy
16	Active	Negative	Negative	Negative	Neutral	Negative
17 (Alexander)	Post	Negative	Negative	Negative	Joy	Joy
18 (David)	Post	Positive	Joy	Joy	Neutral	Negative
19 (Jocelyn)	Post	Positive	Joy	Joy	Joy (less)	Negative
20 (Steven)	Post	Negative	Negative	Joy	Joy	Negative
					40% Change (8)	45% Change (9)

Note: LO = Language of Occurrence, AL= Alternate Language

Qualitative Results

RQ1: Is a bilingual person's intended meaning during communication affected by nonverbal expressions of emotion linked to prior experiences in their respective languages?

An individual's nonverbal behavior changes between the use of languages, without the speaker realizing. The fact that these changes in nonverbal behaviors occur while sharing the same story in a different language would suggest that they are unintentional for two reasons: (a) they do not always match the story being told, and (b) the participants verbally expressed surprise and confusion over various nonverbal behaviors when conducting analyses, emotions that were picked up by iMotions. While not always the most prominent emotion expressed, every participant was found to express surprise, confusion, and/or frustration from behavior they had not expected to see or emotions they had not intended to express. This would confirm theories regarding unconscious action, suggested by Thrift (2008) with his introduction of studies by Wundt and Libet on the movement of the body before cognitive realization.

This also seems to support McCrone's claim (1999) that the idea of instantaneous consciousness during an experience is an illusion. These unconscious actions need to be reviewed so that they may be associated with a cause. Emotions expressed during the telling of stories also helps in this exploration of a root cause. The emotions expressed when participants told the stories they had chosen to share varied depending on the language it was told in. The emotions matched the type of story being told when the discourse was given in the language the experience had occurred in. This would suggest a correlation to the experience and memories, linked to the language, that draw out the emotions when being told. This confirms the idea proposed by Levinas (1979) that a person's intentions may stem from forgotten experiences. As Katz (1999) claimed, emotions allow us to reach back in time to find the foundation of ourselves.

As most individual's emotions matched the tone of the story being told, when told in the language it happened in, emotion would seem to hold a link to past experiences and the effects they had on the individual in becoming who they are in that given language.

RQ2: Which detectable emotions appear as bilingual speakers share personal narratives in different languages?

Emotions detected during this particular study through iMotions software included joy, sadness, fear, frustration, confusion, surprise, contempt, anger, and disgust. The majority of the detectable emotions are negative as iMotions, at this time, is not able to break "joy" down into further categories. While these are the emotions that can be picked up, and were captured by the system, it is important to investigate how they came across when using languages because that points to emotional intentionality and identity. When sharing personal stories in the languages they occurred in, participants almost always portrayed emotions that reflected the type of story told, such as positive emotions like joy for happy or funny stories, and negative emotions for sad or difficult stories. Yet, when the same story was told in an alternate language the emotions portrayed were almost the exact opposite, meaning "joy" was expressed through difficult stories, and negative emotions were portrayed during happy stories. While raising additional questions, this finding offers data in response to the questions of other researchers (DeWaele, 2010; Koven, 2007; Pavlenko, 2006) regarding claims from participants in their studies that they feel like a different person when using a different language. If drastically different emotions can be expressed when telling the same story, simply by changing the language used, it comes as no surprise that individuals would feel like a different person. The issue then falls to raising awareness of the specific differences and finding potential causation which, as Buber (1958)

alluded to, the participant may be the only one who is able to provide that information from their history of past experiences.

RQ2A: How does facial recognition software offer additional insight into affect and self-analysis findings?

The ability to track emotions was extremely helpful in better understanding what was occurring emotionally for participants as they shared a personal story. It also provided solid evidence for the changes in emotion that occur when sharing the same story in different languages and helped to reveal the reactions individuals had during analysis that suggested any variation from intent. I believe it helped to open a number of pathways for further research due to the implications of the findings. For example, theories of face and facework could be more deeply researched through the use of facial recognition software. Cupach and Metts (1994) suggested that people exhibit face unconsciously while communicating. With the help of the facial recognition software, that theory can be confirmed. I come to this conclusion as the readouts from the software showed some level of surprise or confusion from every participant in this study, a marker used for unintentional or unexpected personal behavior or action. While participants expressed surprise or confusion over their nonverbal behaviors, the software allowed for solid, unbiased data to confirm such reactions. The software not only confirmed that certain behaviors were unintentional, but also revealed the unintentional expression of emotion, exhibited by the detachment of story tone and emotion when told in the language other than that of its occurrence. Being able to compare the facial recognition readouts with the type of story shared and what the individuals expressed brought light to the ability to separate one's self from a situation in a different language, possibly enabling the individual to approach a situation

differently or find resolution to an emotional problem because it can be viewed in a unique way. Additionally, Imahori and Cupach (2005) expressed that the self reveals itself only through interaction with an “other.”

However, this study and the use of facial recognition technology would show that that is not accurate. Participants were speaking to a blank screen, and yet iMotions still picked up variations in emotion and behavior when the stories were told in different languages. This points to the idea that an individual’s identity may be impacted by others, affecting who they are even in each of their individual languages due to the experiences with those others, but that the behavior is not expressly brought out by the other. Rather, it would seem that the learned expectations of society for an individual’s behavior, as referenced in Bourdieu’s (1991) theory of habitus, is maintained in an individual’s behavior even when no one is around to witness it. Further, Imahori and Cupach (2005) stated that one’s capacity to communicate and manage self-image involves competence. While I agree with this idea, this study found that speakers are not generally aware of their self-portrayal and would require competence of such actions. iMotions provided a way to gain solid evidence as to how individuals portrayed themselves in each of their languages and created an opportunity for them to gain that needed competency. Ultimately, the use of facial recognition technology in this type of study helped to reveal the individual realities of participants as they communicate in different languages. It provided a means to a stimulus for and recording of individual’s inner realities without the presence of an Other.

RQ3: Is the individual aware of variations in nonverbal behavior and communication style?

Individuals in this study were not initially aware of variations in their nonverbal behavior across languages. As mentioned above, participants would go as far as to yell at the recording of themselves when witnessing that they were making odd faces, tapping their fingers, bouncing, or emphasizing words with hand motions. Some participants were even confused to see emotions cross their face that were contrary to what they had remembered feeling, such as Sarina, the individual who shared a sad story but smiled and laughed as she shared the experience. This again confirms the claim by McCrone (1999) that immediate awareness during an experience does not exist, and supports the findings of my prior research (Webb, 2015) that suggested that participants were not aware of behavioral changes across languages. So while not initially aware, participants quickly became aware when viewing the recordings of themselves.

This coincides with McLuhan's (1968) example of a fish in water, that an individual is not aware of their surroundings, the daily happenings that are familiar to them, until something changes and, as Carey (1999) expressed, the common things in life become odd again in some way. While not inherently aware of their behavior, because it is natural to them and wouldn't consciously warrant investigation, being asked to conduct self-analyses and having the opportunity to watch films of themselves created something novel. As Collins (2014) expressed, the participants were able to gain new understanding when provided an alternate perspective of the situation. When put in an environment where their only task was to take note of how they communicate through prior recordings, participants could take stock of what they were doing and provide rationale for the behavior. Collins (2014) also claimed that such an opportunity to ponder over past situations would act as a key to unlocking the mystery of why we do what we do. This was also found to be accurate through this study when participants analyzed themselves.

RQ4: What, if any, emotional reactions do people display when observing their recollections of an event in different languages?

Participants primarily expressed joy, according to iMotions, when observing their recounting of a personal event during self-analyses. This was followed by confusion, surprise, and frustration. For a number of participants, hearing their story told from their own perspective offered a deeper feeling and connections that iMotions couldn't detect. Again, this doesn't mean the software is inaccurate, but may suggest a different type of feeling. As research mentioned in the literature suggests, the new idea of emotion being something we do, not just something we feel or express, this type of feeling, emotion, or sentiment, is something akin to affect, but seems to be more cognoscente in nature.

Perhaps it is the link between mind and heart that lends an explanation to affect. For example, while Angie shared a funny story about a family member, facial recognition still picked up undertones of sadness. For all intents and purposes, an individual listening to the story would expect the speaker to be happy; however, she wasn't. This was due to an association that the individual made from the story that went beyond the experience shared. She missed the individual the story was about, her father who she hadn't seen in a long time, and the funny story was a reminder of times spent together, something she doesn't have now and longs for. This example is reminiscent of Katz's (1999) belief that emotions aren't really an expression of an individual essence, but rather of something else that verbal communication cannot reach. This is an inner formation of thought and emotion that is not intended for the listener when expressing the happy story, and yet it still comes through. So while the receivers of discourse might hear something in what is communicated (a funny story or laughter), see something else (a smile), and

even sense something beyond their comprehension because they aren't be able to maintain focus on it (sadness), the full picture is not portrayed because that's only one part of communication.

On the other side of that discourse is an individual who is doing more than sharing an experience, he or she is feeling it and everything else the discourse carries with it. That experience, the memory, goes beyond the discourse shared and becomes a vessel to something very personal to the individual, another set of feelings only they can explain. This provides evidence to Strhan's (2012) claim that receivers of a discourse can look and see an effect of something that is occurring, but the root cause, the personal history of the individual that created what now exists, remains unknown. The producer holds that knowledge, and it's something they feel again when watching their own telling of a story.

Even beyond the ability to self-analyze and add context or a back story to a behavior or emotion, participants expressed further emotion that surpassed a reaction to what they watched that bordered on something new. While participants expressed amusement, and joy was picked up by iMotions 70% of the time during analyses, two additional factors became apparent. If the story told was one that contained aspects that were ongoing in the individual's life, hearing themselves tell the story in the language it happened in intensified the feelings and, participants expressed, helped them to think about the situation more clearly in an emotional sense. However, participants still admitted to being less emotional in the language the event was not occurring in and claimed that they were able to share just the facts, without emotion clouding judgment. This combination helped them realize how they felt and why, but also let them analytically think about the facts. Yet, if the story was one that was fully completed and in the past, participants seemed to express opposite emotions that provided something like catharsis. As expressed in the results above, Liz was able to find joy with the memories of good experiences she had had with

her pet, that were recalled even during the sad story of that pet's death. Further, completed stories of a happy nature were even funnier in the language they occurred in, as evidenced in James and Dan's stories.

RQ4A: If there are emotional reactions to the content, what explanations do people provide as the cause?

As participants rewatched their stories and analyzed them, a number of reactions occurred. Some were surprised, confused, and even concerned by nonverbal behaviors seen that they had not realized they had done and had not meant to. However, for emotional expressions, participants often seemed fascinated and would attribute appearances of specific emotions to past events or current sentiments for ongoing events. When it came to emotion, affect became a major piece to the puzzle as there seemed to be much more occurring than the act of telling a story in present time.

For one participant, a 30-year-old male whom I'll call Adam*, iMotions found that he was more joyful when telling his story in Spanish, the language it had occurred in, and that he had negative emotions when telling the same story in English. The story had been sentimental, while some events were sad, the overarching message was happy. Upon analyzing the two films of his story telling, Adam expressed that he didn't feel he had a lot of emotion when telling the story in Spanish, that it came across as a routine. However, in English, he shared the following thoughts, "It's funny, I think I've told this story more in English than I have in Spanish, but I never realized how much more I feel it in English. Maybe that's why I share it more." In regard to watching the story in English, he expressed, "It's weird, I don't want to talk over myself in English. I want to listen. I like the story." Even though Adam was listening to his own

experience, the story and what it made him feel as he was listening to it captivated his attention. This, too, suggests a detachment from the self and an ability to see events as an outsider.

Another example comes from a 27-year-old female, whom I'll call Sarina, who shared a sad story. iMotions found that when she told the story in Mandarin, the language the event took place in, she expressed negative emotions, primarily sadness, fear, and contempt. Yet in English, the language it did not occur in, she primarily expressed joy, according to the software. Again, this alludes to the idea that individuals can gain distance from a situation and think of it differently when discussing it or pondering it in another language. Sarina's comments during the English analysis point to this distance and separation of emotion as well. She stated

I'm pretty calm when I discuss hard things in English. . . . I don't describe my feelings as deeply. I feel like when I describe things in Mandarin it's in such a way that people who understand Mandarin can feel the same way as what I share.

Then, when watching the story in Mandarin, the language it occurred in, the feelings returned. She expressed

I know I'm talking to a screen, but I feel I put my emotions into this. Yeah, I really put my emotions with this. So when I tell the story, I feel like I'm also showing my emotions about the story.

In regard to how she felt watching the film in Mandarin, she admitted, "Even though it's been some time [since the event occurred], I think when I listen to what I said in Mandarin, I feel the same way again. That's still what I think about the story." This conclusion made by Sarina upon analysis matched with iMotions. However, one variation consisted of Sarina smiling and laughing as she told the story in Mandarin. She became frustrated with herself upon seeing this and expressed, "I feel I'm weird. Even though I'm telling a hard story, I'm smiling. Something's

wrong with me! . . . I can talk about bad things while smiling and laughing. Laughing at myself . . . It's really hard, why do I smile?!" This reveals that the participant was not aware of the fact that she had been smiling, and the fact that she is disturbed by it further solidifies the point that it had not been intentional or welcome behavior as she communicated her story.

Almost every participant expressed confusion for behaviors or nonverbal communicative actions they hadn't realized they were doing. This includes remarks of being much more shy, insecure, or confident when communicating in a language than the individual had expected to see. As far as nonverbals, participants noted that they would emphasize things with their hands in one language but not the other, or that they were expressive in body in one language but in face with the other, and many commented on making "weird faces" or doing things with their eyebrows they hadn't realized. Other body movements such as tapping fingers, swaying their heads, or bouncing also occurred. Some participants were so surprised, and even flustered, when they realized that they did these things that they would either ask me why they do it, would question themselves about why they had done that, or would even yell at themselves on the screen to stop the unintended action. Participants never had the same nonverbal behaviors in both languages.

Additional points of interest brought up by participants during analysis included an increased ability to remember specific details in the language the story happened in. Participants noticed that they were able to tell the full story in both languages, but specific details, like the names of locations, were left out in the alternate language. Many participants also expressed that, while they felt they shared all of the same details, even in the same order and in the same phrasing, it took them longer to recall the details in the alternate language. Of the 20 participants, 70% commented on this fact, with 50% of those expressing further detail as to how the memories

were different. Three participants, those whose stories occurred in languages other than English, but whose native languages were English, claimed that speaking the language reminded them of the individual(s) who taught them the language, even going as far as to see their mannerisms, their facial expressions, within their own facial expressions.

Beyond what the participants felt or expressed about their stories and how they communicated them during analyses, was the additional sentiment of what they felt that the stories made them experience upon hearing them instead of telling them. Comments included the following: “I feel like the story is funnier in Danish. Like me hearing it in Danish brings a big smile to my face,” (Dan, regarding a funny story that occurred in Danish), “I feel happier listening to the story in English. Like I remember spending time with [my pet] and what a good pet she was,” (Liz, in reaction to a sad story about a pet’s passing that occurred in English), or “I remember the event, it was pretty funny [laughs]. That poor guy, it was not a good day for him,” (James, in response to the Portuguese version of a story that occurred in Portuguese), and finally “I’m good at expressing my feelings and thoughts in Mandarin. It’s so hard to feel it again, but to hear it helps me understand and ponder things in the right way,” (Sarina after her sad story that occurred in Mandarin).

These are a few examples among many. The findings suggest that hearing these stories told from their own perspectives offered the participants increased joy from happy stories, and something resembling catharsis from stories that had been more sad or negative in nature. Curiously, this catharsis only seemed to occur when the experience had been one of the past, that was concluded. In contrast, when participants shared stories that were sad or difficult and ongoing, hearing the stories reintroduced sadness or frustration that was detectable by iMotions. Still, individuals who fell under this category claimed the ability to better process the situations,

which could potentially decrease the timeline for finding personal resolution. iMotions also picked up sadness during the analysis of a happy story, to which a comment by the participant offers explanation. A native of a different country, Angie, had shared a funny story about her family and became sad upon hearing it and seeing her own joy because “I haven’t seen them in a while. It feels like forever since I’ve spoken that language. It’s home. I miss it, I miss them.”

This seems to suggest something even deeper than the act of communication passing through dialogue, a greater and lasting bond that occurs between individuals that may be the most vital and most ignored or overlooked aspect within communicating. It is something that surpasses time and distance, something we try to bridge or replicate through social media (Peters, 2012). If people are not communicating to build bonds and better understand others, if they don’t really understand themselves, what is humankind doing? These findings offer additional outlets to investigate. Yet, maybe these aren’t pathways the world is ready to explore yet. Either they are overpowered and missed due to other avenues that seem more foreign and exciting (Peters, 2012) or perhaps there is a concern to wandering down the path in fear of what may come of it. After all, self-discovery and building bonds with others are very personal subject matters.

An additional finding had to do with comfort. A number of participants expressed a hesitancy to say what they thought for fear of being judged, a spiral of silence (Noelle-Neumann, 1974) even when they were only sharing the details of a past event without any type of incriminating details. Participants stated things like, “I felt like I could say whatever I wanted in this language because I knew no one knew what I was saying” (Joanna) or “I wasn’t so awkward in this language, I wasn’t embarrassed. No one knew my words. This was better” (Maya). Such findings would suggest that people are so afraid of the judgements of others that they fear truly expressing themselves. This same fear could potentially impact exploration for self-discovery.

In the example from Angie, she explained that she hadn't spoken her native language in a while and that it had been a long time since she had seen her family. She missed them. So while she had felt joy sharing the happy story about her father, she felt sadness and longing when hearing herself talk about him, sharing good memories. For those who had shared sad stories, they often felt joy upon hearing them again, but this was also because they were able to separate themselves from the event and remember the good things, like Liz losing her beloved pet but remembering all of the good times with that cherished family member.

As previously mentioned, this ability to rewatch stories from their own perspective offered participants something similar to catharsis. This follows Thrift's (2008) assumption that creating an archeology of an individual's past through a history of affect could be therapeutic and potentially redemptive. Many expressed that these feelings, which arise and come through in discourse, have to do with the history behind the story, not just what is shared. This supports another suggestion by Thrift (2008) that people "do" emotion based on what the past has instilled in them, as the individual was conditioned, and their body prepared, to act in response to what they learned through past interactions and experiences. This could very well be why the emotions that sneak out, on display for others, don't actually match what people intentionally shared. As Collins (2014) so aptly claimed "incidents shape their incumbents, however momentary they may be; encounters make their encountees" (p. 5). Without fail, participants struggled with the rationale behind nonverbal behavior, but emotions were always explained with further details or emphasis of their stories or an explanation of what they are still going through in the case of ongoing events.

RQ4B: To what extent do those emotional displays differ based on whether or not it was the language of occurrence that was observed?

Whether or not the story was told in the language of occurrence had a major impact on the emotional displays of the participants. These results support those within past research (Koven 2007; Marian & Neisser 2000; Schrauf & Rubin 2000), which suggest that individuals may have a stronger affective intensity or emotional link to an event when it is told in the same language as the event happened in. While my past research (Webb, 2015) had suggested that this might be the case, it was astounding to see these results, especially with iMotions as supporting evidence.

As stated in the quantitative results section above, in 95% of the cases, the emotion expressed by the participant matched the type of story told (i.e. joy for a funny story) when told in the language the experience had happened in. The only case where this did not happen was related to something deeper, not directly associated with the story, but cognitively and emotionally linked by the individual to people in the story and current feelings. In 75% of cases, when the story was not told in the language of occurrence, participants primarily expressed an opposite emotion. These results support my earlier argument that the experiences which have occurred in a given language shape the mentality, the reality of the individual, and how they express themselves due to language affect. Such findings suggest that communicating an experience in an alternate language than the one it occurred in could unintentionally cause the speaker to portray emotions and behaviors they hadn't intended.

However, knowing that this happens could benefit the speaker because it also suggests a distance from the experience when spoken or thought of in a different language. This could offer the individual an opportunity to find resolution to emotionally difficult decisions or the ability to

work through situations from a different view point. In the remaining 25% of cases where participants expressed the same emotion in the alternate language as the language of occurrence, reports from iMotions revealed that the emotion was expressed stronger in the language of occurrence than in the alternate language. These findings fall in line with Pavlenko's (2011) notion that additional languages learned by an individual add to what is already in existence, providing a restructuring of self. This is possible through the introduction of a new "culture" in that language, developed through the interactions the individual has in that language, which runs parallel to Croucher and Kramer's (2016) theory about culture fusion and how the addition of languages affects an individual's presentation of their self to others.

Contributions

The above findings lead to the following contributions to the field:

Emotional effects. This study found that emotions match the type of story told in the language of occurrence 95% of the time. The one instance that accounts for the remaining 5% involved a woman whom I'll call Brooke. She shared a sweet and happy story about a bonding experience with her dad that had occurred a few years back. While the story denoted a positive message, and was expressed by Brooke as a treasured memory, iMotions tracked her facial expressions as being sad and confused. It wasn't until her analysis session that she revealed why it was such a treasured memory, and also why it brought her so much sadness. According to Brooke, her relationship with her father did not continue so positively as time went on. She expressed that she still loves her dad and hopes for things to change, but that things didn't turn out how she had thought they would, especially after the experience she had shared, a prior attempt to fix things, had led her to believe.

This could be compared to a similar circumstance, the happy story told by Angie that brought her sadness upon analyzing the story in the language it had occurred in. For Angie, the sadness didn't come until analysis, but for Brooke, it was present from the first time she told the story. This may be due to the details of the stories, their participation in the actual events of those stories, and the current circumstances and affects associated with the loved ones being spoken about. While both women spoke about their fathers, their participation in the stories shared were different. Angie told a story that her father had shared with her about a shenanigan he pulled in grade school. She was not personally involved in the events of the story and found humor in the funny story as she initially shared it. However, when analyzing the story as it was told in the language of occurrence, she expressed that she missed her dad because she lives in a different country than her family and had not seen him in a long time. Reviewing a story he had shared with her when they were together caused the sadness that iMotions picked up on during that analysis. For Brooke, she was very much a part of the story she had told. The memory and affect of that time when things seemed promising for a better future relationship with her dad, and the current knowledge that such a result did not occur, caused negative emotions to surface right from the first telling. While she verbally expressed what a good situation it had been, iMotions recorded the confusion and frustration she felt from what really became.

This difference between the two cases suggests that personal involvement and the affect associated with past circumstances play a large part in how an individual both shares a story and responds to an analysis of it, and further shows that our emotions can be expressed unconsciously, providing a different message than what is said. This is in accord with Katz's (1999) claim that emotions aren't an expression of an individual essence, but something else that

verbal communication cannot reach. There is an inner formation of thought and emotion that is not intended for the listener and is communicated anyway.

In contrast, it was found that when stories of an event were shared in a language that it did not occur in, opposite emotions from the type of story being told were expressed 75% of the time. The cause for this lower rate is currently unknown and would benefit from further research in the future. However, the fact that emotions did not match the type of story told 75% of the time when shared in a different language than its occurrence would suggest the potential for distance from the experience and altered feeling or opinion of the material. This indicates that an individual who knows more than one language may be able to come to different conclusions about a situation if pondered over in an alternate language.

Whether or not the event an individual spoke about was complete or concluded played a part in their reaction to self-analyses. Ongoing stories could be looked at analytically when told in the language it did not occur in because it provided emotional distance from the situation or experience. This is because emotions are more greatly linked to the language in which an event occurred in. Completed stories, on the other hand seemed to provide something like catharsis for participants when analyzing the version of the story told in the language of occurrence. Liz's story, for example became an opportunity to remember happy times with a pet she had lost. While the story was sad, she was able to better remember the good times she had shared with the beloved animal. This melds with Thrift's (2008) claim that creating an archeology of an individual's past through a history of affect could be therapeutic and potentially redemptive.

Additionally, happy stories that were shared, completed or not, seemed to provide even more joy to the participant during analysis. A story that had originally been funny became hilarious when the version it occurred in was analyzed. Regardless of whether or not the event

shared was ongoing, hearing their stories in their own words created a visualization in their minds that enabled participants to recall the events clearly, which then allowed for better coping ability or resolution planning.

The need for an “other.” Past researchers have expressed that the self reveals itself only through interaction with an “other” (Buber, 1958; Imahori & Cupach, 2005; Levinas, 1979; Mead, 1934). This idea relies on additional individuals, members of one’s society, and does not expressly take into account who the individual is before the interaction. While the interaction may be a key in providing an outlet for the identity, it was already in existence before the interaction, formulated by the history of experiences that individual has had, and present through affect. The idea posed by the past researchers also suggests that one’s personality does not exist or cannot be revealed without other people around to interact and communicate with. Findings through facial recognition technology in this study suggest that such claims are not accurate. While participating in this study, individuals spoke to a blank computer screen, and iMotions still picked up variations in emotion and behavior when stories were told in different languages. While one’s identity in a given language may be impacted by society through interactions and experiences in a respective language, that behavior or identity is not expressly brought out by other people. This posits that the learned expectations of society for an individual’s behavior is maintained in the person’s behavior even when no one is around to witness it, which falls in line with aspects of Bourdieu’s (1991) theory of habitus. This also coincides with Collins’ (2014) claim that even brief incidents and encounters shape an individual.

The value of face. The fact that an individual’s identity, shaped by society, is present even when other people are not around may lead to the value of face and preserving how one is seen by the rest of the world. This inadvertent behavior caused confusion, surprise, and

frustration among participants that was picked up by the facial recognition software. While surprise and confusion during self-analysis suggests that participants were not viewing communicative behavior that they had expected or intended, frustration may link to theories on face and the need to maintain it among others in society (Goffman, 1967; Ting-Toomey, 1998). Cupach and Metts (1994) explained that the image of one's self projected by an individual in a given interaction is called face. When individuals interact with one another, they wordlessly present their identities through the encounter, seeking validation for the self that is presented. More simply put, individuals share the identity of who they want to be and who they want others to accept in social setting. "In social scientific terms, face refers to socially situated identities people claim or attribute to others" (Cupach & Metts, 1994, p. 3). As McNeill (1998) stated, "the living face is the most important and mysterious surface we deal with" (p. 4). While this research shows that the face can very well be a window into the identity of an individual as they communicate in a given language, the fact that humankind works to create and maintain face in society may contribute to the unease of participants when seeing unexpected behavior or expressions such as bouncing or making "weird faces." These are things people could be judged for and lose face over as they are expressions that not only affect how they are seen in the moment, but also what type of notion the individuals they interact with take away about them and who they are. Therefore, in order to determine how to interact and present face to others, an understanding of how one presents their self and a recognition of self-face in each of their languages must be achieved.

However, it seems that people fear sharing the truth with others at the risk of being judged, which falls back to the notion of spiral of silence (Noelle-Neumann, 1974). This concept is so ingrained that people avoid facing truths for themselves because of what they might mean

in society if shared. This would explain the unease of participants in this study upon viewing unexpected behavior or expressions that would elicit unwanted reactions from peers. Such findings and theoretical links would respectively confirm and tie in with Imahori and Cupach's theory (2005) that there are risks in changing one's self-image because it may cause altered expectations for future social interaction and the ways in which individuals may feel about themselves. However, these personality traits, expressions of nonverbal communication are leaking out anyway, without the producer's intention. Individuals seem to hide their true selves, even from themselves, due to the fear that changes in identity may prompt judgement from society if there is any deviation from social norms. This is a disservice people do to themselves, although perhaps just as unconsciously as their varying portrayals of behavior. Just as the fear of being judged may be ingrained from social norms, perhaps so is the fear of self-discovery. Yet, if the personality is going to come through anyway, it is better to acknowledge it and gain an understanding of it so that a semblance of control over it may be gained. It would seem that our communicative interactions are restrained by social norms.

Room for new theory. Imahori and Cupach's (2005) Identity Management Theory (IMT) states that one's capacity to communicate and manage self-image involves competence. This suggestion by the theorists brings out a vital oversight: They assume that competence for one's self image is already in existence. However, this research found that speakers are not generally aware of their self-portrayal and require an opportunity to gain competence for their actions. iMotions provided an avenue to gain solid evidence as to how individuals portrayed themselves during discourse and created an opportunity for individuals to gain the competency needed for IMT to be more beneficial. For such reasons, new theory related to identity discovery or awareness may be applicable.

I propose a possible adjusted theory that I plan to present in future research, namely the idea of Identity Competence Theory (ICT), in order to continue this line of research and add to the shortcomings of Imahori and Cupach's Identity Management Theory. As this study revealed, there is still much to learn in regard to identity and communication, and while IMT provides a strong foreground to manage identities, it is important that an individual first be conscious of the existence of their identities and how they appear before they progress to management. Something unknown cannot be managed. This area of study, I believe, is still in its youth and will provide vast pathways to study and room for new theories.

Conclusion and Future Research

Overall, the findings of this study suggest that bilingual speakers are not aware of their nonverbal communicative behaviors, but that they can gain an awareness of them. While Levinas (1979) suggested that unconscious action may stem from forgotten experiences, it would seem that remembered experiences may also lead to the same end in the expression of emotion. While intending to share a particular story with associated emotions, memories from the past can promote feelings in the present that are related to current circumstances rather than the old ones. This causes the producer to unintentionally portray alternate emotions that seem unrelated to the story that is intentionally being shared. So while an individual may intend to speak or act in a particular manner while communicating, that intention can be altered by an unknown pull of the person's personal history, presenting a self even the speaker isn't expressly aware of.

In coming to understand the formation of self or the self-perspective participants had, it was important to focus on the producer perspective in this study, as they are the individual creating the initial verbal and nonverbal behaviors. The aim was to see what type of behavior would be produced in an environment where individuals communicated without the interaction of an Other for a stimulus to produce self. The research found that even without social interactive cues, without speaking to another individual and only conversing with a blank screen, individuals still altered the manner in which they spoke to fit the social norms that would be expected in circumstances or settings where they would use each of their respective languages. Such behavior is done naturally and unconsciously, derived from their experiences and a sort of muscle memory reaction for the brain to communicate in a designated way.

This pull from personal past experiences was so strong that individuals claimed they could see the faces of those who had taught them the language, or with whom they would often

communicate with, upon their own faces or in their mannerisms as they spoke. Past interactions were ingrained so deeply in their self-portrayals, having become a part of who they are, that during analyses they would express opinions such as “I feel like I’m speaking to someone who speaks that language as I’m speaking,” or “I sound super American as I tell the story in English!” or “I know I’m talking to a screen, but I’m saying it in a way I would if I was actually speaking to someone in that country.” The influence of others as we learn may be too linked to self-making to be able to separate where the formation of self from personal or societal means begin and end as Sapir (1934) proposed to investigate. Again, the act of communication creates links far greater than mere words and the act of transmitting information or learning. This suggests that Mead’s (1934) explanation from long ago, that the formation of self may be formed by interactions with others and learned from the expected norms in any given society, may be entirely accurate.

This change in behavior is automatic with the change of language to reflect the experiences and expected norms associated with the history the individual has had in that language. It is unconscious and natural, another lap swum in the fishbowl of life without ever realizing what we have done. As Bakhtin (1981) and Goffman (1981) posited, discourse conducted by bilinguals may unconsciously be formulated through a structure of complex affects. The results of this research would suggest that this belief is accurate.

Yet, as Buber (1958) expressed, within experiences, there are inner and outer experiences. So while the situation, the story told, doesn’t change with the language it is told in, its meaning for the individual does. The experience holds a secret beyond how it is conveyed, something personal to the producer that may not ever be revealed to a receiver. This was evident in the change in emotions expressed across languages, and again when they were being analyzed,

the stories held personal meaning before they were shared, emotions were expressed as they were shared, and something greater and perhaps unexplainable was felt by the participants as they viewed their own storytelling. As Buber (1958) claimed, that experience is in the individual and the world should have no part in it. Only the producer can say for sure what it is, and why it is there, but only if they know it is there.

Collins' (2014) suggestion that being enabled to see the "common realities of everyday life" (p. 5) by reversing perspectives, claiming that disciplining one's self to think through the sociology of past situations would act as a key to unlocking the mystery of why people do what they do is accurate, according to my findings. In being able to reverse perspectives and see what a receiver would in the process of communication, the orator can think through their past and present experiences and circumstances to determine why they have done something or said something in a particular way and with the expression of certain emotions. In being permitted to see what an outsider would as they communicate, a producer of dialect can discover what is common to them as something new. This enables an opportunity for what Carey (2009) suggested a need for, making the mundane strange again, something of interest to capture the attention. This then creates the ability to ponder over it, see what it is, explain it, and be able to better control it in future discourse. As Carey (2009) claimed, and as McLuhan (1968) expressed through his fish in water analogy, finding ways to raise awareness of one's surroundings, the very things that are taken for granted because they seem common and therefore avoid our attention, is a key element in self-discovery and breaking out of the accepted norms of society. This may help in better determining who an individual is without the Other.

Such possibilities could also provide a way to further explore affect and put words to feelings or sentiments that are currently unexplainable. This is important, as affect may also

factor into the feelings one may develop or express, whether consciously or unconsciously. As the research findings revealed, while a bilingual speaker may intend to portray his or her self in a particular way, the affect created through their personal history in the language being used may result in the revelation of a very different self than intended. This also enables the individual to really analyze the situation and determine how they feel about it emotionally, and further, what they think of the circumstance and what they feel about it in a more cognitive or analytical way.

It would seem that affective awareness and its ability to shape self-identity in a more personalized mapping of the past holds the key to many beneficial traits for the individuals who are willing to discover them (Katz, 1999; Thrift, 2008). The experiences which have occurred in a given language shape mentality and how individuals express themselves. It is something that has become a part of them and is called forth unconsciously with the change of a language. As different experiences occurred in alternate languages used by the individual, the reality called forth in each language is reflectively different. Without realizing it, the speaker becomes someone new in the sense of emotions shared and experiences that mean more. While able to share stories of experience in any language, the memories and emotions will be stronger in the language of occurrences. As affect helps us feel something different with each language, we become different through the expression of those feelings, even if unconsciously done.

Future Research

This research opens the doorway for further exploratory studies involving facial recognition software to detect emotions, self-studies and the formation of self, and further, the receiver end of communicating with bilingual individuals. While this study provides a clearer understanding of how bilingual speakers communicate, revealing that unintended emotions and nonverbal communication can occur in discourse, there is still a need to investigate how this

affects the receiver end of communication with bilingual speakers and how others react to them in various professional settings. This could hold large implications in the field of communications and business, and any outlet where one would need to communicate between languages.

Additionally, the findings generated by this study, particularly those related to connection and experience through affective history in the language of occurrence, and detachment in an alternate language and catharsis-like opportunities during self-analyses could be beneficial in the fields of psychology and in therapy. Since the emotions individuals expressed matched the type of personal experience being shared when told in the language of occurrence, patients undergoing therapy may benefit from receiving council in the language that any particular trauma occurred in, or what I would refer to as the trauma language. This is due to the fact that emotional recall will be more prevalent and can be better managed, enabling the individual increased opportunities for resolution.

Due to the findings of this research, further study in its application to international business would be advised. If an individual unintentionally changes so drastically through nonverbal and emotional presentation by using a different language, expatriates a business may send overseas with certain expectations based on the language the employee has worked in may be surprised that the individual is very different in their interactions overseas in another language. Further investigation as to what happens during real life application, such as in the workplace or in therapeutic clinical studies, could be benefited by future study. The findings of this study also hold implications for education. Because an individual's past experiences, interactions, and emotional and affective ties in a language contribute to identity and self-expression, it may be possible that an individual could be conditioned while learning a language

to behave or communicate a certain way. This could be done by manipulating their interactions and experiences to shape the type of individual that would perform as desired. This could be useful to a variety of platforms, such as business and even the military. As changes in the self were discovered with the change of the language, a similar study could also be conducted with a focus on neurological function to further the investigation of what is happening in the process of a bilingual communicating.

I offer that, just as a society changes over time and adjusts to new technology and surroundings, human beings also change with the acquisition of new languages and continue to change over time with their respective experiences in them. Just as studies are conducted to explore changes in a society and why they occur, further studies are needed in regard to the self, to raise awareness and become more familiar with humankind and communicative behavior. As societies continue to change and grow over time, and communication throughout the world continues to expand, it is important to return to the roots of humankind and understand not just who people are and how they interact and communicate with others, but why.

Limitations

Potential limitations associated with this study could include inaccuracies with the iMotions software, especially with its ability to only read a limited number of specific emotions and facial markers at this time. Emotions expressed by participants during any given interaction could have been related to fatigue or the mood the participant was in that day and the events that had been experienced before coming to the lab. Some concern could also be expressed for whether or not participants felt able to share their full stories, enabling natural emotion to come across in their dialogue. Fear picked up by iMotions could also have been attributed to some discomfort or nervousness in participating in a research study. Participants were not given a strict prompt to encourage responses as the intent was to set a foundation in this type of research, and the new structure for using facial recognition software, to see what the individual could notice and point out on their own. While examples were given that “comments could be about the story told and how you told it, behavior or things you’re doing, what you notice about yourself, really anything that comes to mind,” the prompt could have been too broad to elicit deeper responses regarding nonverbal behaviors. The desire to allow the study to be personal to the participant and see what they could notice about themselves without prodding could have stunted richer findings. More prodding into both what participants saw and their explanations for noted nonverbal behavior could be beneficial in future research. As this study was conducted in a structured lab setting, further research is needed to see if such findings apply to real world circumstances.

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Appendices

A. Consent Form

Consent to be a Research Subject

Introduction

This research study is being conducted by Sarah Webb, under the mentorship of Scott Church, Ph.D, at Brigham Young University to determine how bilingualism may affect the delivery of discourse in communications. You were invited to participate because you are a bilingual speaker interested in the study.

Procedures

If you agree to participate in this research study, the following will occur:

- You will come to room 234 in the Brimhall building on 2 separate occasions that are convenient for you and taken to the eye tracking lab down the hall.
- 1st visit- you will be asked to sit in front of a computer and be recorded telling a personal story of your choice in one of your languages. This should take roughly 10 minutes.
- 2nd visit- you will be asked to sit in front of the computer and be filmed telling the same story in your other language.
- You will then be asked to watch the two recordings of yourself and analyze your thoughts on them. Are you seeing what you expected to? This may take up to 30 minutes.
- Total time commitment will be about 1 hour.

* Stories will be told in English and one additional language. Please do not share stories that disclose confidential or potentially damaging information about yourself or another individual. Should you accidentally disclose such information during your participation, you may request to have the video recording deleted and to redo the recording with a new or revised story.

Risks/Discomforts

Risks involved with this study are minimal. The only projected discomforts may come from the oddity of being filmed or seeing yourself on camera. Should discomfort persist, please contact the BYU counseling center for help at (801) 422- 3035.

Benefits

There will be no direct benefits to you. It is hoped, however, that through your participation researchers may learn about the effects of bilingualism on discourse and how that knowledge may be applied to communications fields.

Confidentiality

Research data will be kept in a secure location, on a password protected computer, that only the researcher can access.

Compensation

You will be entered into a random drawing to receive a \$25 VISA gift card.

Participation

Participation in this research study is voluntary. You have the right to withdraw at any time or refuse to participate entirely without jeopardy to your class status, grade, or standing with the university.

Questions about the Research

If you have questions regarding this study, you may contact Sarah Webb at Sare.b.Webb@gmail.com for further information.

Questions about Your Rights as Research Participants

If you have questions regarding your rights as a research participant contact IRB Administrator at (801) 422-1461; A-285 ASB, Brigham Young University, Provo, UT 84602; irb@byu.edu.

Statement of Consent

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Name (Printed): _____ Signature: _____ Date: _____



B. Video/Audio Release

Video/Audio Recording Release Form

As part of this project, I will be making video/audio recordings of you during your participation in the research. This recording will be used with facial recognition software to analyze expressions as you speak. Please indicate what uses of these recordings you are willing to permit, by initialing next to the uses you agree to and signing at the end. This choice is completely up to you. I will only use the recordings in the ways that you agree to. In any use of the recordings, you will not be identified by name.

- Recordings can be studied by the research team for transcription and for use in the research project.
- Recorded material can be used for writing literature for scientific publications.
- Recorded material can be discussed at scientific conferences or meetings.

I have read the above descriptions and give my express written consent for the use of the video/audio recordings as indicated by my initials above.

Name (Printed): _____ Signature _____ Date: _____



C. IRB Approval

INSTITUTIONAL REVIEW BOARD
FOR HUMAN SUBJECTS



MEMORANDUM

To: Sarah Webb
Department: COMM
College: FA&C
From: Sandee Aina, MPA, IRB Administrator
Bob Ridge, PhD, IRB Chair
Date: September 20, 2017
IRB#: X17368
Title: *Fish out of Water: Measuring Intent and the Emotional Effects of Life Experience on Bilinguals' Non-Verbal Communication*

Brigham Young University's IRB has approved the research study referenced in the subject heading as expedited.

The approval period is from September 20, 2017 to September 19, 2018. Please reference your assigned IRB identification number in any correspondence with the IRB.

Continued approval is conditional upon your compliance with the following requirements:

1. A copy of the informed consent statement is attached. No other consent statement should be used. Each research subjects must be provided with a copy or a way to access the consent statement.
2. Any modifications to the approved protocol must be submitted, reviewed, and approved by the IRB before modifications are incorporated in the study.
3. All recruiting tools must be submitted and approved by the IRB prior to use.
4. In addition, serious adverse events must be reported to the IRB immediately, with a written report by the PI within 24 hours of the PI's becoming aware of the event. Serious adverse events are (1) death of a research participant; or (2) serious injury to a research participant.
5. All other non-serious unanticipated problems should be reported to the IRB within 2 weeks of the first awareness of the problem by the PI. Prompt reporting is important, as unanticipated problems often require some modification of study procedures, protocols, and/or informed consent processes. Such modifications require the reviewed and approval of the IRB.
6. A few months before the expiration date, you will receive a continuing review form. There will be two reminders. Please complete the form in a timely manner to ensure that there is no lapse in the study approval.

Sandee M.P. Aina, MPA
Institutional Review Board for Human Subjects, Administrator
Office of Research & Creative Activities
Brigham Young University
A-285 ASB Campus Drive
Provo, UT 84602
Ph: 801-422-1461 | <http://orca.byu.edu/irb/>