When Deictics are not just Deictics: Pointing Gestures and Second Language Learning (Omaggio a Jim Lantolf)

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Abstract

This conceptual paper deals with ways in which gesture or embodied utterances create deictic expressions (i.e., deixis) that are relevant to second language teaching and learning. While many gesture types have been found to be material carriers of meaning (McNeill, 1992; Vygotsky, 1986), deictics have the ability and function to create new beginnings or propositions for learning. We review research concerning gesture, Vygotsky's Sociocultural Theory (SCT), and findings dealing with the function of gesture in second language classrooms. We provide general gesture classifications and definitions and argue that deictics should be understood for their role in creating and unifying time, space, and qualitatively meaningful experiences. We then provide a conceptual understanding for how gesture works within Vygotsky's (1987) genetic method, the term he used in researching higher forms of mental behavior. We focus on Vygotsky's genesis as a space-time act and promote the use of deictics as additional mediation that create genesis junctures that initiate opportune moments for second language (L2) learning between teachers and students. Throughout the paper, we acknowledge Jim Lantolf's work for providing foundational and insightful understandings in viewing L2 learning and teaching through a Vygotskian perspective.

Keywords: *Deictics, Vygotsky, Sociocultural Theory, Gesture, Second Language Learning*

[1]Introduction

This conceptual paper addresses gestures, deictics, and Vygotskian sociocultural theory (SCT) and second language studies (Lantolf & Thorne, 2006; McNeill, 1992; Negueruela & Lantolf, 2008; Vygotsky, 1986). Vygotskian SCT provides the field with important understandings concerning how language and thought (i.e., speaking and thinking) are intersectionally connected in supporting the development of the mind (Vygotsky, 1987, 1997a). This area of research would not have come to fruition without Jim Lantolf's leading hand throughout his career. While it would be a mistake to elevate any one of his studies as more influential than the others, we focus on his contributions concerning Vygotskian theory, second language teaching and learning, with an emphasis towards his work on gesture and deictics.

Vygotsky (1987, 1997a), an early twentieth-century Russian psychologist, introduced a non-traditional and revolutionary psychology emphasizing how humans shape and are shaped by the social-material world around them through the use of mediational tools. Vygotsky proposed the analysis of semiotics as the only adequate method to study consciousness, sense, and meaning-making, which included humans internalizing culturally created signs to bring about behavioral transformations (i.e., development). Additionally, while he addressed language as a meaning-making activity that changes thought, he included that meaning and sense-making are issues of consciousness, and that language-centered mediation was the key to understanding the new ways of *being and changing* (i.e., ontogeny and ontology) in the world.

Gestures are an important area of study in understanding second language learning and teaching (Gullberg, 2010; Gullberg & McCafferty, 2008; Hudson, 2011; Kimura & Kazik, 2017; Lazaraton, 2004; McCafferty & Stam, 2008; Mori, 2004; Mori & Hayashi, 2006; Tellier, 2008a, 2008b). They have been shown to support L2 oral production to increase classroom interactional competence (Graziano & Gullberg, 2013; Kita, 2000). Gestures (e.g., representational or emblematic) have been found to be carriers of content and play a role in enhanced L2 vocabulary learning (García-Gámez et al., 2021; García-Gámez & Macizo, 2019), actional affordances for learning (Di Paolo et al., 2018), and supports L2 grammar learning (Nakatsukasa, 2016), pronunciation (Gluhareva & Prieto, 2017) and listening comprehension (Sueyoshi & Hardison, 2005). Additionally, Morett (2018) suggested that producing gestures supported L2 word learning stronger than just observing gestures.

Specific to SCT studies, gesture has been shown to reveal portions of L2 learners' thinking and understanding (Aguiló Mora & Negueruela-Azarola, 2015; Choi & Lantolf, 2008; McNeill, 1992; Stam, 2008) and has been found to facilitate meaning-making between second language teachers and students (McCafferty, 2002; Rosborough, 2014, 2016; Smotrova & Lantolf, 2013). Additionally, gesture has been viewed as a physical and psychological mediational tool supporting shared understandings, intersubjectivity, self-regulation, and cohesion in first (L1) and second (L2) classrooms (Lantolf & Thorne, 2006; McCafferty, 2008; Negueruela & Lantolf, 2008; Rosborough, 2011; Roth, 2001; Roth & Lawless, 2002).

In consideration of this paper, we consider deictics as being an interesting and necessary gestural type to consider when trying to understand how first and second language learners

make meaning and integrate into new languacultural settings. Kita (2003) points out the importance of deictics (i.e., pointing gestures) and examines them from a variety of multidisciplinary perspectives, defining them as the "foundational building block of human communication" (p. 1). He claims that four important reasons for studying deictics include: they are ubiquitous in everyday use, unique to human use, primordial in ontogeny, and create further types of signs. Complementing Kita's work, we recommend that deictics may be viewed from a Vygotskian (1986, 1987, 1997) sociocultural/cultural-historical theoretical understanding. A Vygotskian definition encompasses a dialogic, dialectic, and inter-active perspective where pointing, whether by the index finger of either hand or by other bodily measures, can create new openings or new beginnings that initiate abstract and higher psychological functions. We term these initiations or new moments, *genesis junctures*, an orienting deictic from which further languaging and mediation may escalate. A Vygotskian-based definition requires moving the analysis of deictics beyond the traditional egocentric positioned notion, where space, time, positionings, and exchanges between people stem from one's cognition in relation to physical senses. Instead, we emphasize deictics' time-space relationship in relation to development, which positions deictics as an important part of socially (i.e., mediationally) based meaning-making activities by humans.

The purpose of this paper is to provide some insights into and reasons for why deictics are relevant to the study of second language learning and development. First, we present a brief review of gesture and categorizations in relation to general communication. This includes research addressing the benefits of gesture in supporting second language (L2) learning. Next, deictics and deixis are addressed for their role in creating orientation and grounding of meaning. We include a section concerning cross-linguistic challenges and agreements in understanding deictics in second language settings. Finally, we present our interpretation of deictic functions from a Vygotskian sociocultural theoretical (SCT) perspective in more detail. Here we include Lantolf's work concerning the intertwinement of Vygotskian theory, second language and gestures, with an emphasis on deictics.

Gesture Classification and Role

Gesture, particularly those of the hand, has been defined in multiple ways but is generally acknowledged as a part of nonverbal communication, embodied modality, and utterance for providing some type of meaningful message (Kendon, 2004; Stam & McCafferty, 2008; Zlatev, 2007). As such, gesture should be viewed as a full part of language and concrete material reality that contains both some type of form and substance of expression and content (McNeill, 1992; Volosinov, 1973). McNeill (1992, 2005) uses a gesture classification spectrum he terms "Kendon's Continuum" (see also Kendon, 1988, 2004). In this classification, gestures are listed from left to right as being spontaneous, fluid, and analogue-based (i.e., *gesticulations*), which often, but not always, demonstrating speech-like coordination (co-speech gesture). The middle categories include pantomimes using segmented story building, and emblems that are culturally defined and standardized. This leads to the final category, formal Sign Language as furthest to the right on the continuum. To explain, spontaneous gestures are not emblems in a culture and can be language-like in that they may function similar to words. Kendon points out that gesticulations do not have [speech]linguistic morphological properties, are not syntactically conventionalized, and carry a more global, analogous, and

holistic meaning. Gesticulations portray action and imagery as part of conversation and meaning making and are a full part of both first and second language learning (Goldin-Meadow, 2003; McCafferty & Stam, 2008).

Many researchers provide other classifications, schemes, and typologies for defining and categorizing gesture, and while terms may differ, most typologies include categories or characteristics that address the ways gesture can be representational of a topic (e.g., iconics or metaphorics), provide deixis orientation (e.g., deictics or indexicals), create some type of rhythmic motion (e.g., beats or batons) (Ekman & Friesen, 1969; Kendon, 2004; Krauss, et al., 2000), and contain emblems that may demonstrate a particular or standardized meaning to a culture. Additionally, emblems do not have morphological relationship to what is being represented and can be pictorial or non-pictorial. Goldin-Meadow (2004), Gullberg (2006), and McNeill (2012) offer further comparisons and details about gesture continuums, typologies and spectrums, all sharing that gesture is often accompanied by speech (i.e., co-speech gesture), can stand alone as individual gestures without speech, or can comprise of multiple consecutive gestures depicting a message (i.e., pantomimics).

Deixis, Deictics, Ground, and Ostension

Deixis and deictics are often viewed interchangeably as both have strong relational meaning "to show" or "point out" (Stapleton, 2017). Concerning deixis, Fillmore (1966, p. 220) defined it as an aspect of language that provides information concerning the occasion of the utterance, time of utterance, before and after the time of the utterance, the location of the speaker, and as displaying the identity and relational issues between the speaker and the intended audience. Other linguistic and gestural definitions position deictics in a similar way, as providing referential information through pointing out something specific in relation to time, place, person, or action in a particular context (Fillmore, 1977; Lyons, 1977; Yule, 1996). Levinson (1983) views deixis as an important area of study in pragmatics and semantic linguistics. He defined deixis as providing the meaning to certain words and phrases through the contextual information having to do with *personal*, *spatial*, and *temporal* deixis and similar to Fillmore (1977) and Lyons (1977), added *social* and *discourse* deixis types.

Deictics, when viewed as one-dimensional pointing, can provide differentiation that distinguishes among positional pairings such as HERE and THERE, THIS and THAT, THESE and THOSE (Kita, 2003). While definitely providing referential and differential functions, many deictic definitions rely heavily on a dualistic perspective where movement and time may be simplistically referencing one origination point from another, or one moment in time from another (Stefanini et al., 2009). Moving beyond this dualistic and segmented perspective, deictics have been found to assist in general conversational communication and are one gesture type of many that can help lighten the cognitive load on working memory throughout the activity (Goldin-Meadow et al., 2001). Additional pedagogical-based research demonstrates deictics as playing an important role for grounding and orienting conversational relations and learning for both L2 adult (Kita, 2003; Lantolf, Poehner, & Swain, 2018; McCafferty & Stam, 2008), as well as K-12 classrooms (Matsumoto & Dobs, 2017; McCafferty & Rosborough, 2023).

Goodwin (2003) addressed elements of "grounding" in language as a space where relational understanding can be shared. He described deictics as having many referential-

focused elements, and as being used as a simple technique for referencing something positionally to avoid the complexities of formulating a lengthy semiotic [verbal] language exchange. Hanks (2009) addressed deictics through traditional terms such as "indexicals" or "indexical expressions," and added that they have more dynamic complexities towards grounding information rather than simplistic referential markings. In a similar way, studies from linguistic anthropology such as Enfield (2003), Goodwin (2000), and Haviland (2000, 2016) have extended deictic definitions to include how they function in expanding contexts, discourses, and other gestures. Similarly, Clark (1996), labeled deixis displays as "shifters" being viewed more for their consistent alterations and changes in creating and developing grounding in dialogue.

Also offering a broader pragmatic perspective, deictic research has moved beyond the traditional demonstrative terms (e.g., this, that, these, those, there) context and indexicality definition, viewing deictics as having *ostension* characteristics, a concept having to do with manifestations, showings, and joint-presence (Engelland, 2014; Wittgenstein, 2005). In this definition of deictics, ostension and indexical grounding is dialogic and multimodal as it both helps shape the interactive conversation and is itself shaped during the interaction. Accordingly, interpersonal acts of pointing do not just create three coplanar reference points (i.e., producer, receiver, and referent) during conversation, but through ostension, provide contextualization for meaning, fully playing the role of having multiple potentials and possibilities rather than just simplistic referential signification (Wittgenstein, 1953). In relation, these possibilities invite and require inter-recursive assumptions which then in turn creates common ground between participants (Enfield, 2003). Deictics then can be viewed as a key feature of language concerned with joint-presence, shared interaction, extended content knowledge, and grounded orientation in communication (Barsalou, 2008; Gibson, 1979; Goodwin, 2007).

Deictic Challenges and Possibilities

When reviewing the body of L2 research concerning deictic gestures, a focus on pointing as associated with the understanding of the differentiation of space or tense-time is given primacy, and the third dimension of trajectory is often mentioned, but rarely given value in the coding system (Anderson & Keenan, 1985). Similar to the aforementioned issues of deictic definitions relying on referents or indices in a two-point relationship (e.g., here-there), not all languages work with the same tense-time and embodiment relational positionings. For example, Boroditsky (2011), found that English and Mandarin speakers think of time differently, demonstrating contrasting orientations and conceptual metaphors concerning vertical-axis placement of time events. Using another example, Mudra gestures can be understood as being beyond the typical categories of emblems, iconics, or symbols, as they demonstrate sacred rituals that create religious/spiritual growth in the actional creation of them (Katsman, 2008). Also, Wilson et. al., (2014) studied gestures, including deictics, in multi-discipline subjects in a middle-school setting. One of the many findings included the differences in pointing and gesturing in relation to math, sciences, and language arts. In language arts, gesturing and pointing in relation to words, onomatopoeia, and other figures of speech were not of the same sort or parallel in comparison to pointing at numbers during math time, although the form

looked the same. In essence, diverse multilingual environments instantiate spatial relations (e.g., deictics) differently.

Deictics then may be viewed as referents or indices which can be plotted on a two or three-point coplanar relationships (e.g., here-there + me-you + trajectory), which includes tense-time positionings (i.e., past, present, future). However, deictics are not all of one type or kind, especially in relation to diverse languages, settings, and topics, yet they are often categorized in one catchall coding category. As is often found in quantitative gesture studies (Kartalkanat, H. & Göksun, T. 2020) summations of how many occurrences of each gesture type (e.g., emblems, iconics, metaphorics, deictics) in relation to the L2 teaching/learning contexts have provided a variety of interpretations and explanations for the benefit of gesture in second language use. However, such a body of research also puts us in a mindset or pattern that deictics serve mainly to differentiate through their demonstrative function. This mindset may limit our understanding of deictics as the fabric for subjectivity or gravitational relationship among the participants, the reference points, and content/context.

From a second language pedagogical perspective, we support that deictics may be defined more in line as creating a fabric of space-time, borrowing the term from Einstein's (1913) general relativity work. Here, deictics play a unifying and joint-presence role analogous to space-time fabric in relation to revolutions and motions by heavenly bodies. It is this relational positioning and attention to a new orientation that can bring us to a *quality* time-space relational act, where deictics can be viewed for their function in supporting deeper engagement (e.g., ontological-chronotopes) with content.

Of concern to second language teaching settings, deictics will function differently according to the type of instructional conversation in which they are used (Mehan, 1979; Rosborough, 2016; van Lier, 2004). If the instructional conversation is simply an initiate-respond-evaluate/feedback (IRF or IRE) [2] exchange and follows a simplistic pattern of response, then we will see deictic space-time activity on a one or two-dimensional plane, with a simple point-to-point coplanar orientation. McNeill (2005) often defines deictics as having the function and dimension to locate something in space and this includes abstract pointing to such things as theories or concepts. In this case, the limited definition of deictics as only cues or signifiers, limits the full relational and dimensional fabric value that deictics can potentially produce in the L2 teaching-learning experience. Again, to be clear, we do not argue or promote that deictics carry the full meaning of content, but we posit that they may be viewed for their function in establishing and maintaining important relational positionings beyond the three positional – 1. Personal (I, we, you), 2. Spatial (this-that; here-there), and 3. Time-tense (today/yesterday; before/after) found in many deictic definitions.

Particular to second language learning, challenges may not only derive from dissimilar linguistic systems (Varonis & Gass, 1985) between participants but also from a lack of common ground and background (Agar, 1994; Efron, 1972; McCafferty, 2004). Gesture, including deictics, has been found to be a full part of contextual configurations, common ground, and shared communication in second language classrooms (Church, Aymon-Nolley & Mahootian, 2004; McCafferty & Rosborough, 2014; Rosborough, 2011). Also, deictics have

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[2] Both Mehan and van Lier refer to linear conversations between teachers and students as initiate-respond-evaluate (IRE) or initiate-respond-feedback (IRF). This is a step-like exchange pattern where teachers initiate a question, students give a simple answer, and then the teacher responds whether it is correct or not.

been found in many L2 narratives, conversations, and classroom content as abstract place holders or markers, demonstrating where something occurs or where an abstract idea can originate, be held, or developed (Sweller et al., 2020). Additionally, in Wang, Gao, and Cui (2023) overt gesture instruction given to learners resulted in higher scores in academic presentation tasks as compared to students who did not receive gesture instruction. However, concerning deictics, no significant difference was found between the groups. The researchers believed both groups had higher experience using deictics and so specific deictic instruction training showed insignificant results.

In Rosborough (2011), deictic gestures played the primary guiding role in initiating questions and prompting L2 elementary students towards answers. Results from a random sample scene indicated that deictics, as referential signs, worked interpersonally to communicate shared understandings by the participants. The study as a whole substantiated the important role deictics played in shared L2 social interaction supplementing and similar to previous study results using differing contexts (Hewes, 1973; Call & Tomasello, 2007; Tomasello, 2010). Also, we note the work of Gullberg (2003), McCafferty (2004), and McCafferty and Rosborough (2023) as additional research speaking to the important role gestures, and particularly deictics, play in creating common ground and inter-cultural linguistic support for L2 learning.

Vygotskian Sociocultural Theory and Deictics

The paper up to this point has provided an overview of traditional definitions, expansions, and challenges concerning deictics in relation to first and second language studies. We now turn our focus to Vygotskian theory to establish how deictics may be viewed in more expansive ways. Vygotsky viewed history, materialization, and meaning-making in a combined definitional way, where change and struggle (via Marx, 1996) are viewed through a revolutionary mental lens. Similar to Marx, Vygotsky's view of history moved away from a traditional past-present-future orientation towards a more "living, sensuous, continuous, indivisible totality of human existence" (Newman & Holzman, 1993, p. 13). In this perspective, Vygotsky positioned materialization (i.e., physically-tangible, sensuous-based) and thinking (i.e., abstract/psychological) as a non-dualistic scientific method for understanding and shaping human life. In short, Vygotsky proposed that the historically established perspective of opposites (e.g., Descartes' body and mind), as found in traditional psychology, was inadequate. Instead, in addressing this crisis in psychology, he proposed a dialectical perspective where the unity of opposites was at the root of Vygotsky's novel and non-traditional psychology to understand development. Vygotsky was committed to developing a new Marxist psychology to understand how consciousness develops through human activity (i.e., meaning-making), with language playing the primary and mediational modality of study.

Vygotsky viewed gesture as a full part of language, and deictics as an essential gesture type that plays an important and leading role in orienting people with concerns to space, time, and contextualization of content or topics and in understanding the higher psychological system of consciousness (van der Veer & Valsiner, 1991). Additionally, Vygotsky viewed deictics as playing a leading role and the genesis point of development from birth. The genesis concept was the preferred methodology Vygotsky used for studying human development through

psychological tools (Lantolf & Thorne, 2006). Summarily, this is known as the *genetic method*, a way to study the mind's responses during the process of change (i.e., internalization and self-regulation), an enterprise that focuses on the quality of mediation during the journey of developmental.

Vygotsky (1978) considered deictics as an important gateway towards self-regulation and consciousness and considered an infant's first gesture as physically referential and concrete in style. He described that children's deictics (pointing finger) arise from their innate ability (and inability) to grasp and reach. He postulated that the child's unsuccessful attempts were adhered to by caretakers and through this social interaction, the child changes from trying to reach, to the social act of pointing towards their desired object. In later childhood, children begin to demonstrate the use of deictics in incrementally more abstract ways, parallel to adult usage. He describes such developmental change as *gesture-in-itself*, then *gesture-for-others*, and finally as *gesture-for oneself* (1978, 1986). Butterworth (2003) follows Vygotsky's placement of the importance of link between gesture and speech and the development of deixis, explaining these roots start before one year of age in humans. He concluded the pointing materialization (i.e., deictics) in relation to auditory qualities is the "royal road" to language (p. 29).

Vygotsky relied on a cultural-historical-time framework demonstrating how multiple acts in relation to time (ontogenesis) was needful for development, considering such acts as genetic revolutionary motions and not as a linear timeline structure. Viewing time differently than as associated with classificatory assigned moments (i.e., time as related to mechanization of labour), Vygotsky positioned time through ontological terms, viewing the concept of activity and development in the school environment as needing to be understood through cycles, metamorphoses, disproportions, changing centers, and as a journey of discovery (Vygotsky, 1998, p. 14). For Vygotsky, pedagogical activities focused on time-space relationships for understanding the concept of development, included sense-making *smysl,* shared-meaning *znachenie*, and development-making *obuchenie*. In obuchenie, the focus is not so much on the definition or question of "what has been learned" in relation to a finalized answer, but more on "teacher student instructional and learning *interaction*" or basically instruction that leads to development (Wertsch, 1995, pp. 332-333).

Vygotsky, Lantolf, and Second Language Learning

While Wertsch (1985) categorizes Vygotsky's genetic method as focusing on the domains of group and individual development, social psychological activity, and semiotic mediation to understand the human mind, Jim Lantolf addresses Vygotsky's work as directly relevant to second language (L2) learning, instruction, and development (Lantolf, 2000; Lantolf & Appel, 1994; Lantolf & Poehner, 2008, 2014; Lantolf and Thorne, 2006;). In relation to time and second language in the field of education, Lantolf focuses more on *ontogenesis*, how individuals develop during their lifespan, and on *microgenesis*, having to do with development of mental functions over short periods of time, such as formally bounded (e.g., assignments, curriculums, semesters) L2 academic tasks.

We consider Jim Lantolf's work to be central to the Vygotskian "sociocultural theory and second language learning project" (Lantolf & Thorne, 2006, p.18) and wish to complement his labor with an eye towards embodied deixis and its function as a dialectic (i.e., unity of opposites). With concern to Vygotskian theory, deictics can be viewed for their ability to

support smysl and obuchenie during second language instruction and development. Using this perspective, deictic gestures may be viewed as an important part of Vygotsky's genesis method and as playing an important role in the dialectical cultural-historical mediational space where language and cognition combine (McNeill, 1992, 2012; Vygotsky, 1987, 1997a).

We propose that for L2 teaching and learning, newly created and initiatory space-time moments be termed *Genesis Junctures*, where deictics signal opportune moments that invite teachers and students to interact in qualitatively deeper ontological-languaging (Swain, 2006) acts during instructional conversations (see also Rosborough, 2016). While deictics, in association with genesis junctures, are not necessarily the carriers of subject-content curriculum, they may be viewed as the discourse markers or pointing acts that carry *propositional implicatures* that [potentially] activate intersubjectivity between participants and expand dialogic conversations in new and dynamic ways.

We argue that deictics, when situationally positioned as genesis junctures, can be viewed as a gateway unit of analysis for the unification of time, space, and qualitative and meaningful experience. Somewhat parallel to Bakhtin's (1981) chronotope, genesis junctures are concerned with how and where new physical and psychological actions occur in relation to semiotic affordances. Space (i.e., activity) is unfolded in time-scale events and is always interdependent (Lemke, 2000, 2005) and deictics in such a space create notions of time and orientation towards potential development. The pointing act brings together new meanings of time, space, and orientation, with the potential to demonstrate how past events (narratives) come together with present communicative actions in a complex interrelationship between participants. Similar to the young child learning to point, deictic acts can be viewed through Vygotsky's law of development, where the external material manifestation of pointing commences the saliency of the materialized mediational tool to be used towards the developmental journey. These gesture junctures correspond well to Vygotsky's (1986, 1987, 1997a, 1997b) dialectical historical materialism in that they can establish the foundation, space, and relational positions to L2 content and joint-presence between teachers and students. The awareness and identity of such gesture junctures may be viewed as multimodal acts, initiating meaning between participants, and as supporting the additional needs of L2 speakers (McCafferty & Rosborough, 2023; Negueruela & Lantolf, 2008; Rosborough & Wimmer, 2024).

Of particular note to understanding deictics, Vygotskian theory, and second language learning, in *Dialectics of Gesture in the Construction of Meaning*, Negueruela and Lantolf, (2008) focus on meaning-making in a second language as manifested through gesture-speech synchronicity during narrative sharing. They specifically concentrated on deictic and iconic gestures explaining how L1 gesture-speech co-expressivity generally adhered to manifesting additional meaning, coordinated to provide additional information not specifically given through the linguistic-verbal channel. However, they explain that L2 speakers mainly used these gestures not for expressive functions but for self-regulation. As Vygotsky explained with children, and applicable to adults, gestures are multifunctional and have both self- and other-directed functions. Following a Vygotskian sociocultural concept, deictics may be positioned as spontaneous or common movements that provide immediate information for contextualization purposes as well as having an initiatory and psychological mediating role that supports the building of abstract and conceptual thinking. We agree with Negueruela and

Lantolf's study and promote that deictics viewed through Vygotsky's dialectical methodology can provide a qualitatively rich understanding for understanding how to better support L2 learning and teaching.

Conclusion

We have argued that deictics embedded in instructional conversation and other related utterances must be evaluated for their grounding abilities and in relation to the new [potential]pedagogical development they create. Some studies have positioned deictics from a simplistic position, such as when studied during sequential-based conversations (Mehan, 1979; van Lier, 2004). This limits the larger functional roles for deictics that can lead us towards deeper L2 development. In linear instructional conversational discourse, even when coupled with multimodalities, the teaching, function, and quality of deictics can be reduced to one coplanar level, often leaving us with what Vygotsky has termed, "empty verbalism" in the L2 exchange. However, if deictics are used as gateways and gesture junctures towards more mediation, then we should see instructional conversations that lead towards microgenesis and future ontological development.

As previously stated, we view deictics as a beginning and maintaining process for humans to create joint-presence and intersubjectivity. Depending on the type of classroom discourse pattern, deictics, as gesture junctures, can move the participants beyond just referencing an object, space orientation, or abstract idea. In instructional conversations of depth, gesture junctures may act as new orienting openings in the lesson, having a definition that focuses on moments that are quality-filled and meaningful to the participants. In these moments, teachers and students can create new contexts and engage in new situations in ways the further languaging and further mediation in the learning task. Such languaging extensions can provide new spaces where participants can position themselves and the content in novel ways. In this way, gesture juncture moments are authentic and create opportune spaces for students to show their abilities. Such moments can empower them to make new choices, new explanations, and to develop with the L2 learning task rather than using (and viewing) deictics as simply a way to orient towards one correct answer. While we have referenced some studies viewing the benefits of deictics, we encourage future gesture studies to take on deictics as gesture junctures that further L2 languaging.

Especially for teachers, conscious awareness of deictics can help them better support students by inviting them to enter into opportune spaces leading towards transformative, revolutionary (meaning-making), and essential human development. In other words, when teachers gain heightened conscious awareness of deictics, they can use these gesture junctures to move them towards more "teachable moments." When further languaging occurs, with regards to attending to gesture junctures, the process of learning becomes primary, and the correct answer becomes the byproduct. As a reminder, it is not the actual sign as carrier of knowledge (i.e., the correct answer) that is predominantly important, but the creation of [deictic] signs and acts towards change and developmental growth that are of most importance in the education of children learning a second language.

Given this paper's focus on deictics, we conclude by returning to the Negueruela and Lantolf (2008) study. We agree with them that Vygotsky's dialectical methodology addresses deictics as having dual-directionality functions. They address this dual-directionality citing

McNeill (2005, p. 53) stating "every gesture is simultaneously 'for the speaker' and 'for the listener.'" They go on to explain that one function of a gesture can became more dominant than the other, with L2 speakers using deictics as a regulatory function (McCafferty, 2004), having redundancy with speech, and not providing additional information as compared to L1 use. We extrapolate from their study that the [deictic] sign for self-regulation is not only externalized concretely and tangibly but also internalized as a psychological mediational tool which influences and supports higher psychological functions such as abstract thinking, reflection, and refraction.

Negueruela and Lantolf (2008), in their conclusions, also point us towards some very interesting ideas that we have tried to reinforce in this paper. Gesture, including deictics, mark semantic features not easily expressed through the linguistic-verbal channel. A deictic viewed as self-regulatory or as simply adding additional referential information, demonstrates only a small portion of this gesture's function when compared to its larger capacity as a fabric of connectivity between participants. While Negueruela and Lantolf's study was performed to better understand the processes of L2 development, they leave us with the reminder that overall, communication and language is a social activity. We add our voice to theirs that deictics, as gesture junctures, play an indispensable and critical role in Vygotsky's genesis methodology and in supporting second language development. Jim has pointed the way.

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