

For the theme panel: Grammar and gesture

**Bridging the study of speech, sign, and gesture
with the notion of the scope of relevant behaviors**

Since at least De Saussure (1916), many linguists have accepted the idea of the linguistic sign as linking a signifying “sound image” and a signified concept. This has been developed in cognitive grammar (Langacker 1987; 1991; and elsewhere) as the conventional pairing of phonological form and semantic content, where the former includes “the full phonetic detail of an utterance, as well as ... gestures and body language” and the latter is “the expression’s full contextual understanding” (Langacker 2008: 457–458). Since symbolic status is understood here as a matter of the degree of conventionalization of this link between phonological and semantic poles, cognitive grammar problematizes the notion of what behaviors constitute linguistic expressions. Two approaches to handling this challenge are the idea of a continuum between overlapping language/sign and gesture clouds (Author2 2013) and the notion of the scope of relevant behaviors (SRB) (Author1 2012).

This presentation will outline a theoretical approach that integrates the dynamic nature of the SRB along the continuum between more and less fixed pairings of expressive forms and associated concepts. We thus reformulate the problem into: In what contexts, and when, do behaviors acquire a more conventionalized symbolic function?

The data consist of videorecorded conversations between pairs of acquaintances: ten in American English and ten in American Sign Language, all approximately 20 minutes in length. Sections of the videos involving changes in the SRB underwent frame-by-frame qualitative microanalysis with respect to the SRB of the producer of the communicative behaviors.

We will present initial inventories of (a) contexts in which we find increasing versus decreasing SRBs and (b) the types of symbolization processes associated with these changes in both the spoken and signed languages. Examples include:

- Repetition (new information is repeated, becoming old information) = contraction of SRB. A diffusion of meaning over several articulators contracts and stabilizes, resulting in a more stylized form of a sign, a contextual emblem, or simply the use of the spoken word.
- Elaboration (old information is repeated with new information added) = expansion of SRB. An idea first presented with a conventional linguistic word or sign is reintroduced using multiple articulators and/or more elaborate use of form parameters, correlating with degrammaticalization/delexicalization in the context of signing, modification of the meaning of lexical signs, and elaboration of speech with spontaneous gesture.
- Restarts (new information is reformulated) = expansion followed by contraction of SRB. Repetition of an idea one or more times, resulting in some form of resolution (completion, or abandoning, of expression of the idea).

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One conclusion is that expressive forms of all sizes and levels of schematicity, and meanings of all "sizes" and levels of schematicity, make up these form-meaning pairings, revealing the categories of 'language' and 'gesture' as having a prototype structure. Our approach questions whether the distinction that linguists make between linguistic and paralinguistic units is a valid one for users of language.

The Iconic Dimensions of Viewpoint in the Multimodal Grammar of Antithesis

This paper analyzes the compositional structure of gestures that accompany antithesis, a rhetorical figure wherein contrasting terms are located in adjacent phrases. Each gesture pairs contrasting terms with the left and right poles of a horizontal axis. They differ, however, along several iconic dimensions, including the number of hands, the number of regions activated in front of the speaker, the shape of the hands, and the distance between them. My samples, which consist of political debates and speeches drawn from televised news, exhibit both the planned and unplanned use of different compositional forms to convey different *degrees* of personal alignment with the contrast proposed. This data points to a multimodal grammar of antithesis based on the iconic characterization of viewpoint. While my paper addresses all of the iconic dimensions listed above, I focus here on how the number of hands and the distance between them rhetorically attunes the viewpointed significance of the antithesis being expressed.

The iconicity of antithetical gestures has long been overlooked. Atkinson (1984) and Bull (1986) describe them as *beats* that merely mark the delivery of contrastive terms, and Streeck (2008) describes them as *pragmatic gestures* that merely highlight the speech act in play. Yet Cienki (1998) shows that people gesture upwards when describing good morals and downwards for bad morals in accord with the GOOD IS UP metaphor. Sweetser (2009) discusses how this research alludes to other iconic dimensions with similar functions. Following Sweetser, I argue that the horizontal axis is another iconic dimension that has an antithetical mapping based on the SIMILARITY IS CLOSENESS metaphor (Grady 1997). Williams & Bargh (2008) show that people express more negativity after locating dots at greater distances, and Casasanto (2009) shows that people express more positivity with their dominant hand. My paper integrates these studies into a rhetorical perspective on the general idea, first noted in ASL (Liddell 2003), that spatial loci are used to represent contrastive topics, with the main topic held by the dominant hand and the opposing topic by the other. To do so, it demonstrates that politicians use hand dominance and distance, as well as other parameters, to manipulate the range of affective viewpoints built into the horizontal axis.

Consider the antithesis used in Obama's "A More Perfect Union" speech: "commentators built entire careers unmasking **bogus claims**...while dismissing **legitimate discussion**...as mere **political correctness**" (23:06). In simultaneous delivery, he pairs the contrasting terms, *bogus* and *legitimate*, with his right and left hands. He then returns to his right hand when referring to *political correctness*. By using both hands in their respective spaces, Obama expresses immense difference, while endorsing *legitimate discussion* with his dominant left hand (Parry 2010). He enhances this contrast by pushing *political correctness* further into the right pole, thus increasing its distance from the positive space. Compare this to his earlier antithesis – "problems that are neither **black nor white**" – which is accompanied by a subtle, single-handed gesture toward the right and the left, with its spatial proximity expressing a minimal contrast that he does not support (8:07). McCain, Romney, and Ford use similar compositional forms, with common mappings between distance, handedness, and viewpoint. As such, my analysis provides a compositional, multimodal view of antithesis that establishes a theoretical model for the uncharted exploration of multimodal grammar in the realm of rhetorical figures.

Sources

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A semantic map for cyclic gesture functions in American English: Towards a mapping of conceptual space

In gesture research, families of gestures have been identified and described based upon shared formal and semantic properties (Kendon, 2004; Ladewig, 2011; Muller, 2004). One such family of gestures, the cyclic gesture family, is formally characterized by the production of a circular movement produced as a single continuous and unified gesture. Ladewig (2011) explores the meanings and discourse contexts in which cyclic gestures occur in German, finding that the various functions share core semantic properties across usage events. Ladewig proposes an idealized cognitive model to account for the relationships across cyclic gesture functions and posits possible sources for those meanings, sources grounded in human experience. If cyclic gesture meanings and functions in German are indeed formed through the abstraction of actual experiences pertaining to cyclicity in the physical world, then we should expect to find both diversity and commonalities in the functions that cyclic gesture constructions serve crosslinguistically.

While the cyclic gesture family is formally identifiable and occurs in language use across many different languages, the functions of these gestures have neither been systematically described nor compared crosslinguistically. Linguistic typology provides useful tools for the comparison of constructions expressing the same or similar functions across languages. One such tool is semantic mapping, a method of representing the structured patterns of meanings found within and across languages for a given conceptual domain (Croft, 2001; Haspelmath, 2003). Language-specific semantic maps that examine constructions used for similar functions can be overlaid to show the similarities and differences in how languages structure and express functions from the same conceptual domain (Croft, 2001). In this way, semantic maps reveal both the crosslinguistic diversity and boundaries of diversity within a particular region of conceptual space. These boundaries to diversity represent the universals of human language (Haspelmath, 2003).

In the present study, which is my initial investigation within a larger crosslinguistic study, I analyze the functions of cyclic gesture constructions occurring in a corpus of American English talk show episodes of approximately 35 hours of video recordings. The functions of cyclic gestures are analyzed within the context of the multimodal assemblies in which they occur; that is, I take both the spoken and manual gestural components as holistically contributing to the meaning of a construction. Gesture constructions analyzed as being used for the same functions across speakers in the corpus are taken to be conventionalized constructions. Using the conventional, recurrent functions of cyclic gesture constructions found in the corpus, I create a semantic map that illustrates the structured relationships between the different functions in semantic space. This semantic map for American English is part of a larger body of research that aims to create semantic maps for cyclic gesture functions across a variety of unrelated languages in an attempt to outline and describe the structure of universal conceptual space for the cyclic gesture.

References

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Thinking through gesturing and partial modeling

I explore how gestures are used to enact thought. The simple thesis is that people often *think their ideas through* by modeling them. The model they create is partial and personal - typically unhelpful to others. Sometimes this model is encoded in recognized forms: words, drawings, writing. But often people use their body to create a partial model of the thing they are trying to understand. For instance, when thinking through the structure of a dance movement, dancers will usually 'mark' the movement rather than dance it full out. Marking is a movement reduction system like gesturing. The same applies to practicing musical phrases: musicians will tackle *aspects* of the phrase as a way of exploring it. This external modeling is itself a form of thinking because it is directed, interactive and representational. It should be regarded as important to thought as speaking, writing and drawing – the modalities of expression that are unambiguously expressions and enactments of thought. Such body movement, whether gesture, whole body articulation, sound, or object manipulation has a different expressive power and cost structure than annotation, drawing and speaking.

The idea that we simulate the behavior of things when we are trying to make sense of them is a natural extension of the theory of embodied cognition that states that sensemaking is grounded in sensori-motor understanding. Early discussions focused on sensori-motor understanding achieved by inner simulation. Our account adds outer simulation as a complement to inner simulation.

To defend this idea I present new data and analysis derived from a major ethnographic study of dance making, and from videos of music practicing, music exploration, engineering understanding and architectural planning. A central tenet of this approach is that when people try to understand the structure or function of something that is not transparent to them, they actively probe the structure visually, or manually. Connections come to light by animating the thing, if not literally by manipulation then imaginatively by projection. For example, when people look at an illustration of connected gears they run their eyes over linkages to see how rotating one gear would cause motion in another. (Hegarty). Their eye motion reveals they are not just looking at the gears, they are simulating gear interaction. This addition of motion to what is visually static is a clear case of visual projection. Projection is typical of visually probing many sorts of illustrations [Tversky]. Notably, projection can take place in any modality, sound, movement, and taste, in addition to sight.

The major point developed is that projection can be enhanced by physical interaction. Gesture, marking, and external simulation all facilitate projection. Thus when musicians hum fragments, or beat rhythms while sight-reading, they are supporting auditory projection much the way mental abacus calculators simulate abacus manipulation by gesturing. They create models of activity that support projection and other inner processes central to thought. To a lesser degree moving a hand during speed-reading, done to provide a pacing stimulus for the eyes to lock onto, also scaffolds, and partially models reading. By complementing inner processes gestures and body movements help thought move forward.

References

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