

Universal Features of Manual Pointing: Candidates and Concerns

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To locate an item in the world, we typically perform two linked behaviors: we use a spoken language expression—often a spatial deictic term like *here* or *there* that carries limited semantic information—and we use some combination of our hands and head to point to the item in question.¹ These behaviors are linked in that they both *indicate*: that is, both direct the interlocutor's attention to a more or less narrowly circumscribed search space (Clark 1996, discussed in Cooperrider 2015). What's more, these behaviors are linked in production: they occur together more often than alone, a fact often interpreted as evidence of their intrinsic connection (see e.g., Clark 2003; Levinson 2003).

Of the two types of indicating strategies, the spoken variety has received vastly more scholarly attention in linguistics, psychology, and related disciplines. Nevertheless, a sufficient number of studies on gestural spatial referencing have been performed to allow for early arguments for and against possible universals in the behavior of pointing (see, e.g., Kita 2003).

The very act of manual pointing—the behavior of extending an arm and hand to designate an intended referent—has been described as a possible universal of human communication. But while pointing as a broad phenomenon may be universal, it remains to be shown whether any of its forms are universal. Consider the example of pointing handshape: an extended index finger is a form that recurs in many of the world's pointing systems, perhaps because it is the hand configuration motorically simplest for humans to produce (Povinelli & Davis 1994). Index finger extension has been described as the preferred configuration in pointing produced by children (Liszkowski et al 2012). But Wilkins (2003) argued against the notion that the index finger handshape remains privileged in adult pointing behavior cross-culturally. He observed that adult speakers of Arrernte control a variety of pointing handshapes, the use of which encodes information about the pointing referent. While the extended index finger handshape is present in the Arrernte system, it does not have special status within it. In making this observation, Wilkins drew attention to the potential conflict between (motoric or cognitive) motivations shaping pointing and the demands of a semi-arbitrary semantic encoding system.

I am particularly interested in the question of whether some motivations are sufficient to ensure morphological universals in pointing: this is because my own work on pointing investigates one such potentially universal feature of manual pointing. Since 2012 I have worked with speakers of San Juan Quiahije Chatino (Zapotecan, Oto-Mangeuan) in Oaxaca, Mexico. Using the 'local environment interview' method of Kita (2001), I have video recorded over 11 hours of multimodal spatial referencing behavior used to locate landmarks inside the village of San Juan Quiahije and in its environs. Analysis of these videos reveals that Chatino speakers use the height feature of manual pointing gestures to encode information about the distance of the intended referent (Hou & Mesh 2015; Mesh in prep). Referents located inside the community are indicated with a low or unelevated elbow height, while referents outside the community are indicated with an elevated elbow. When pointing accompanies the name of a landmark, this height modulation is perceptible but subtle. When speakers make spatial referencing the focus of their talk (as for example when giving route directions or answering a question about a landmark's location), the height modulation is amplified.

Meaningful modulation of pointing height to convey information about referent distance has been documented for a handful of other pointing systems. Kendon (1988) observed this type of distance-indexing in the pointing of Warlpiri and Warramungu speakers. Wilkins (2003) found evidence for a three-way distinction in Arrernte pointing height that maps to the three-way distance distinction in the spoken Arrernte demonstrative system. de Vos (2014) found that users of the signed

¹ Users of signed languages, of course, locate objects exclusively in the visual-manual modality. Their indicating behavior

language Kata Kolok use height to distinguish distal and proximal referents of pointing signs. And Eco (1976), without connecting his the observation to a specific cultural pointing system, noted that points to distal targets require greater “energy” (p. 119), describing energy in a way that suggests that the term is a proxy for pointing height.

That this phenomenon occurs across manual pointing systems is not coincidental: distant objects appear higher in the visual field (Gibson 1986) and this sensory experience can be reflected in pointing height. Additionally, pointing height mirrors a feature of one human practical action: moving an item to a distant location by manually propelling it. To throw an item in this way necessitates raising the arm, and the increased arm elevation required to launch an item farther can be reflected in pointing gestures that ‘throw’ nothing more than an object-indicating vector.

Could pointing height index referent distance cross-culturally? Phrased differently: is this motivated feature of manual pointing robust enough to persist cross-culturally—even when pointing height is layered with additional meanings?² To address this question, and the many other analogous questions about motivation, arbitrariness, and universals in pointing behavior, requires the collection of substantially more data than we have at present. At this stage have enough data on pointing to generate the relevant questions, but not enough to answer them satisfactorily. The responsive plan of action is clear: a full account of spatial referencing requires a rigorous program of cross-cultural *and* multimodal data collection—a program that the language documentation community has the tools, as well as the incentive, to begin.

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² Enfield et al. (2007) observe that pointing height distinguishes location-focus from other pragmatic features in Lao discourse. They are silent, however, on the question of whether pointing height also encodes referent distance in Lao pointing, and on the potential for interaction between these two semiotic dimensions of pointing.

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Universals & Variation in Spatial Referencing across Cultures & Languages

To *indicate* is to direct the interlocutor's attention to a circumscribed search space.

This is typically accomplished through deictic behaviors:

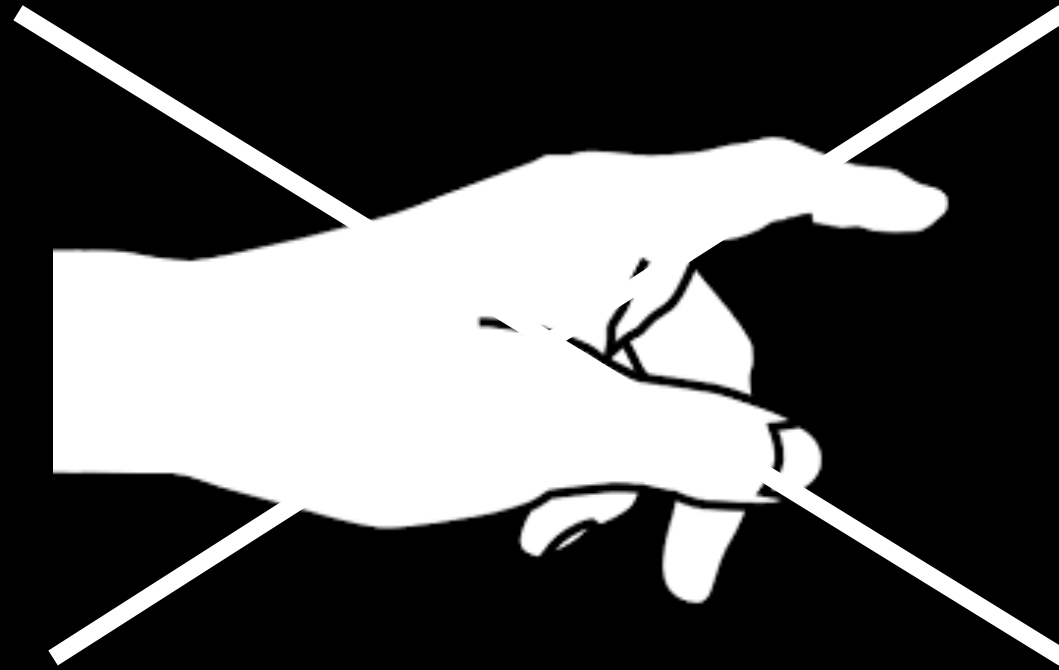
Demonstrative
expressions

Pointing gestures

Universals in Pointing: Handshape?



Universals in Pointing: Handshape?



Wilkins, D. (2003). Why pointing with the index finger is not a universal (in sociocultural and semiotic terms). Kita, S. (Ed.): *Pointing: Where language, culture, and cognition meet*, 171-215.

Universals in Pointing: Elbow Height?



Elbow height distinguishes distal and proximal referents for San Juan Quiahije Chatino speakers

Universals in Pointing: Elbow Height?



Universals in Pointing: Elbow Height?

Arernte

Wilkins (2003)

Warlpiri &
Warramungu

Kendon, A. (1988.) Kendon, A. Sign Languages of Aboriginal Australia: Cultural, Semiotic and Communicative Perspectives. Cambridge: Cambridge University Press.

Kata Kolok

de Vos, C. (2014). The Kata Kolok pointing system: Morphemization and syntactic integration. *Topics in Cognitive Science*, 7(1), 150–168.

...everyone?

Eco, U. (1976). *A Theory of Semiotics* (Vol. 217). Indiana University Press.

What To Do About This If You Are A Linguist:

Collect and analyze video of indicating behaviors with referents at the landscape scale.