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Constructing and Coordinating Representations in Multiple Gesture Spaces

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Gesture space is described as a "shallow disk" (McNeill 1992) or "quarter-sphere" (Sweetser & Sizemore 2006) in front of the speaker's body where communicative hand movements that accompany speech are produced. Goodwin (2007) points out that many gestures are "environmentally coupled," gaining meaning from their relations to objects on and over which they are articulated. In Haviland (2000), the speaker directs his gestures toward virtual objects in a narrated space as well as real objects in the material surround. These and other studies have begun to illuminate the variety of factors that affect where and how gestures are performed.

In the data we're analyzing, the speaker, a lifeguard on a beach in southwestern France, produces gestures in four different spaces as he explains how to determine compass direction from a wristwatch and the sun. The speaker gestures over a diagram he has drawn in the sand; he gestures in relation to the surrounding horizon; he gestures on top of a wristwatch he is wearing; and he gestures briefly in the space in front of his body, the only time he depicts the watch face vertically. These spaces differ in scale as well as location and orientation: one is defined by the inscription in the sand; one by the geographic space inhabited by the interlocutors; one by the face of a mass-produced object; and one (conventionally) by the speaker's body. How are these different movements, spaces, and scales unified?

Our answer comes from the perspective of distributed cognition supported by cognitive linguistic theories of meaning construction. We show how the speaker constructs and coordinates representations in multiple spaces using gestures shaped simultaneously by the structure of the functional system he is describing and by the communicative goal of guiding the listener's conceptualization toward an understanding of that system.

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