**Gesture**

For the purposes of this manual, a gesture will be defined as “a meaningful/intentional use of space” and/or “an effortful movement of hand(s), palm(s) and/or finger(s)”. A gesture can be made with just one hand or with two hands working together or in conjunction.

**Boundaries of a Gesture**

Some gestures start from a resting position, have a stroke (the meaningful nucleus of the gesture), and then return to rest. These are easy to pick out as isolated gestures.

Other times there will be a series of gestures without a return to rest separating them. In such cases, the series can be divided up into different gestures by finding the different strokes (the most meaningful part of the gesture) and making an annotation for each one.

A gesture stroke will involve a change of hand shape, motion pattern, or position (and sometimes changes in more than one of these features all at once). Usually, a stroke will involve a relatively quick, simple movement; but in other cases, a gesture can convey a more complex idea.

For example, a participant may spend some time gesturing to the left and then some time gesturing to the right, seeming like two separate gestures when in fact it could be one complex left-and-right (or even up-and-down or in-and-out!) gesture. At other times, a participant may move their arms to their right in preparation for a left gesture. Thus, it is important to distinguish the intentionality of these gestures.

It can sometimes be difficult to distinguish a preparatory movement from a stroke, particularly without accompanying speech. Often, these can be distinguished based on the apparent effort involved, with the stroke involving a clear acceleration. However, in the case of ambiguity, conservatively assume the movement is merely a preparation.

**Beat Gestures**

Beats (Let’s use McNeil’s (1992) definition for this) are small, low-energy, bi-phasic finger or hand movements - that is, they are made of two-movement components. When Ps generate beats, they will probably not move their hands in gesture space just to make that beat - they will just generate beats wherever their hands are at the moment. Note that beats can be horizontal / vertical / sagittal / other directions.

**Beat Filter**

If you are entirely uncertain and want to be completely sure, you can use what McNeil (1992) referred to as the Beat Filter. Start with a score of 0 for the gesture and then ask the following:

1. Does the gesture have other than 2 movement phases (1 or 3 or more?)? If so, add 1 to the score.
2. How many times does wrist or finger movement or tensed stasis appear in any movement phase not ending in a rest position? Add this number to the score.
3. If the first movement is in a non-center part of space, is any other movement performed in center space? If so, add 1 to the score.
4. If there are exactly two movement phases, is the space of the first phase different from the space of the second? If so, add 1 to the score.
5. A low score probably means that the gesture is a beat and a high score probably means that the gesture is representational.
6. Ask yourself how confident you feel about your decision on a scale of 1 to 5. Then make your decision.

**PUG Gestures**

PUGS are palm-up gestures. See Figure 2 in Cooperrider, Abner & Goldin-Meadow (2018) for an idea of what these gestures may look like but to put it simply, if the palms are facing up – for example, the way they do when we say “how would I know” (laying flat in the horizontal direction, with fingertips oriented to the sides like so: ¯\\_(ツ)\_/¯ ) or “as you know” (with fingertips facing forward towards the other person instead of to the sides), it is probably a palm-up gesture.

**Self-Adaptor Gestures**

Self-adaptor gestures are gestures that include fidgeting, fiddling with items or accessories (such as a pen held in the hand or a watch on the arm or their sleeves or shoes etc…these are also called object adaptors) or engaging in some form of self-touch (fixing one’s own hair, touching one’s own face or ears, scratching a body part, rubbing one arm with the other etc…)

**Representational / illustrative gestures**

These gestures on the other hand will seem to be gestures the participant is using to represent / depict something in gesture space – they can be concrete (like saying “I saw some really good tomatoes in the supermarket” while making a tomato-like circle with the palm) but can instead be very abstract (like saying “tomatoes, tomátoes” with a hand moving left and right as though it doesn’t matter what pronunciation of the word “tomatoes” is used). In short, the participant seems to be conveying meaning with that gesture, it is probably a representational gesture. Note however that participants can blend a beat or PUG with a representational gesture in the same hand movement!

**Some categories of gestures of interest to this study:**

* **Placement:** The gesture positions / places / arranges one or more things in gesture space (look for a well-formed palm shape in such cases)
* **Movement:** The gesture moves along gesture space (look for deliberation and energy expended to distinguish random movement from representative movement)
* **Pointing:** The gesture points in a particular direction in an active manner (that is, the hand moves a bit in the direction pointed by the finger)
* **Highlighting:** The gesture highlights the space held between the hands or palms (or even fingers) but along a particular axis. It could also indicate some form of contrast (e.g: one palm facing up and the other down, or the palm facing inward but the hand moving outwards)
* **Complex:** The gesture seems to convey complex meaning (these usually look like two separate gestures but are really one long / complex gesture conveying a meaning in what only appears to be multiple strokes).

**Gesture Axes**

In this study, 3 spatial axes matter:

* **Vertical (Up/Down):** Gestures that seem to deliberately move / place / point to / otherwise emphasize something upward or downward wrt the participant’s status quo/resting position of the hands and palms.
* **Horizontal (Left/Right):** Gestures that seem to deliberately move / place / point to / otherwise emphasize something leftward (the participant’s left!) or rightward ward wrt the participant’s status quo/resting position of the hands and palms.
* **Sagittal (In/Out):** Gestures that seem to deliberately move / place / point to / otherwise emphasize something inward (towards the participant) or outward (away from them) wrt the participant’s status quo/resting position of the hands and palms.