

3rd Conference of the
International Society for Gesture Studies

Panel: Common Ground

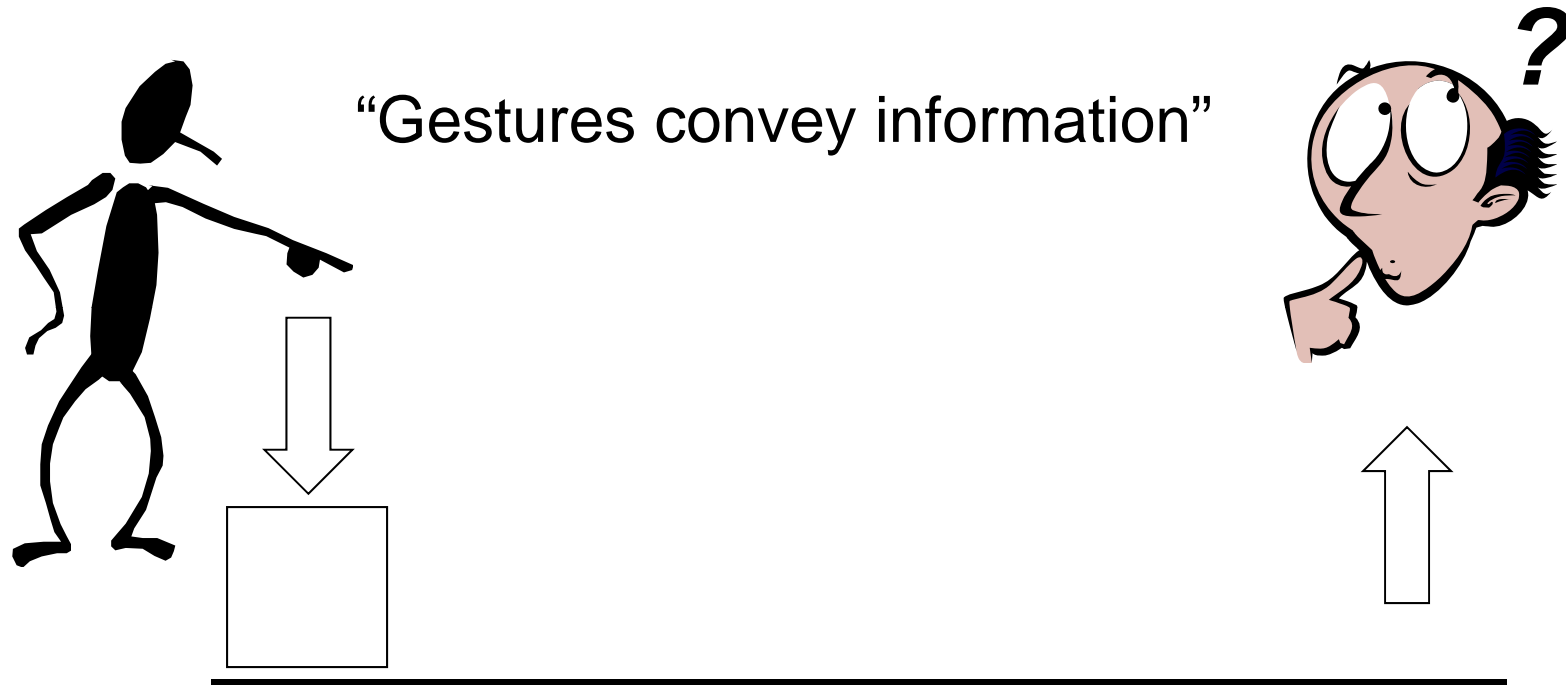
Using Mapping and Anchoring Gestures to Establish Common Ground

Robert F. Williams

Lawrence University
Appleton, Wisconsin

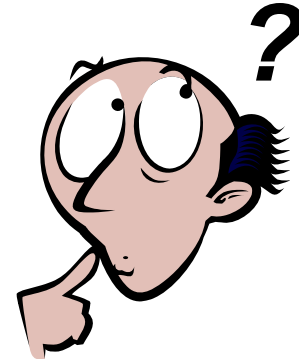
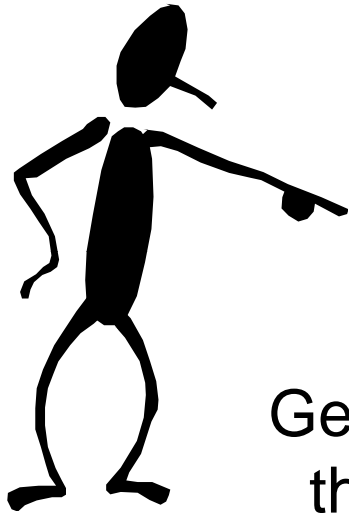
robert.f.williams@lawrence.edu

Do gestures communicate?



The Conduit Metaphor (Reddy, 1979)

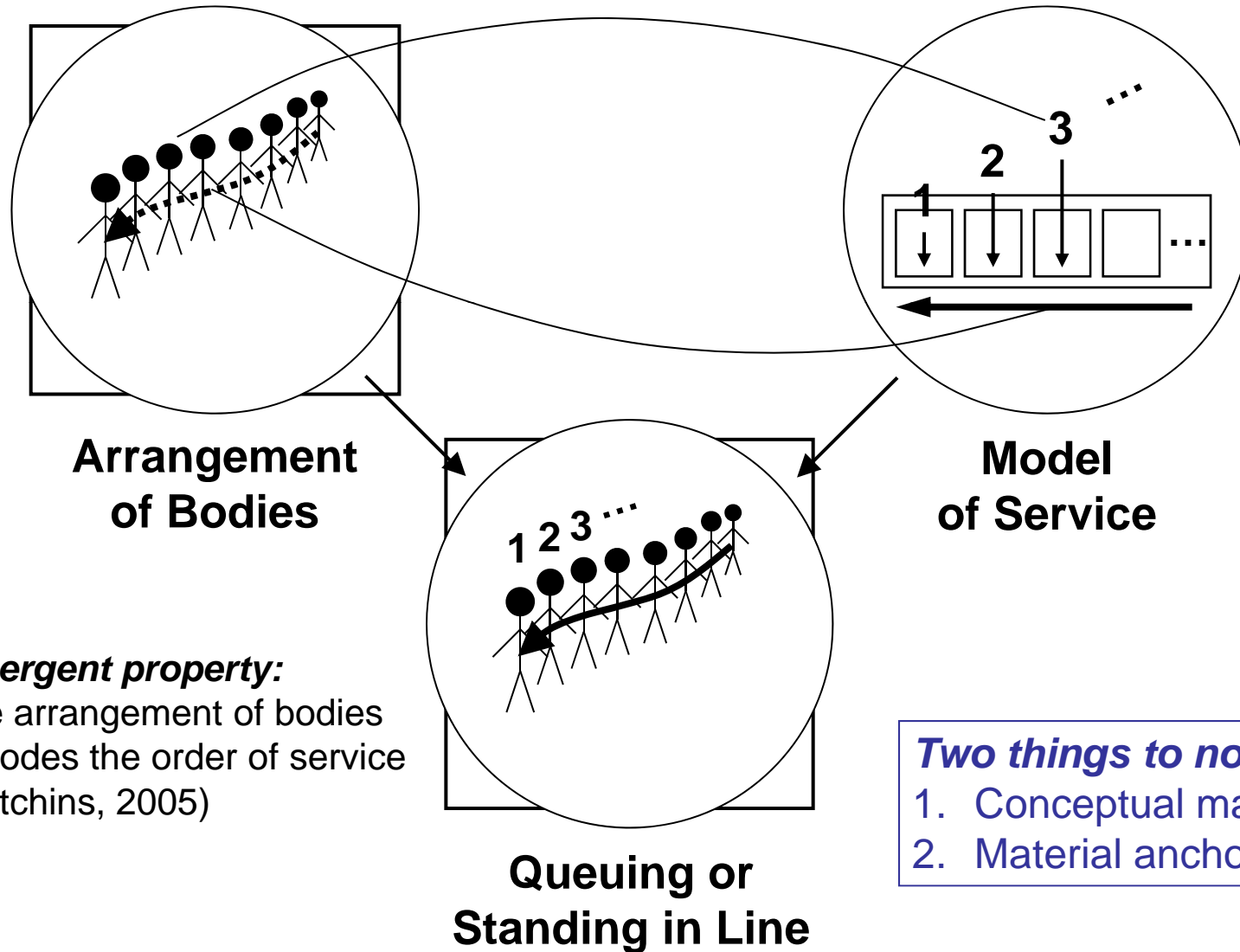
Yes, gestures communicate



Gestures prompt conceptual operations
through which we construct meaning

Conceptual Integration Theory (Fauconnier & Turner, 1998)

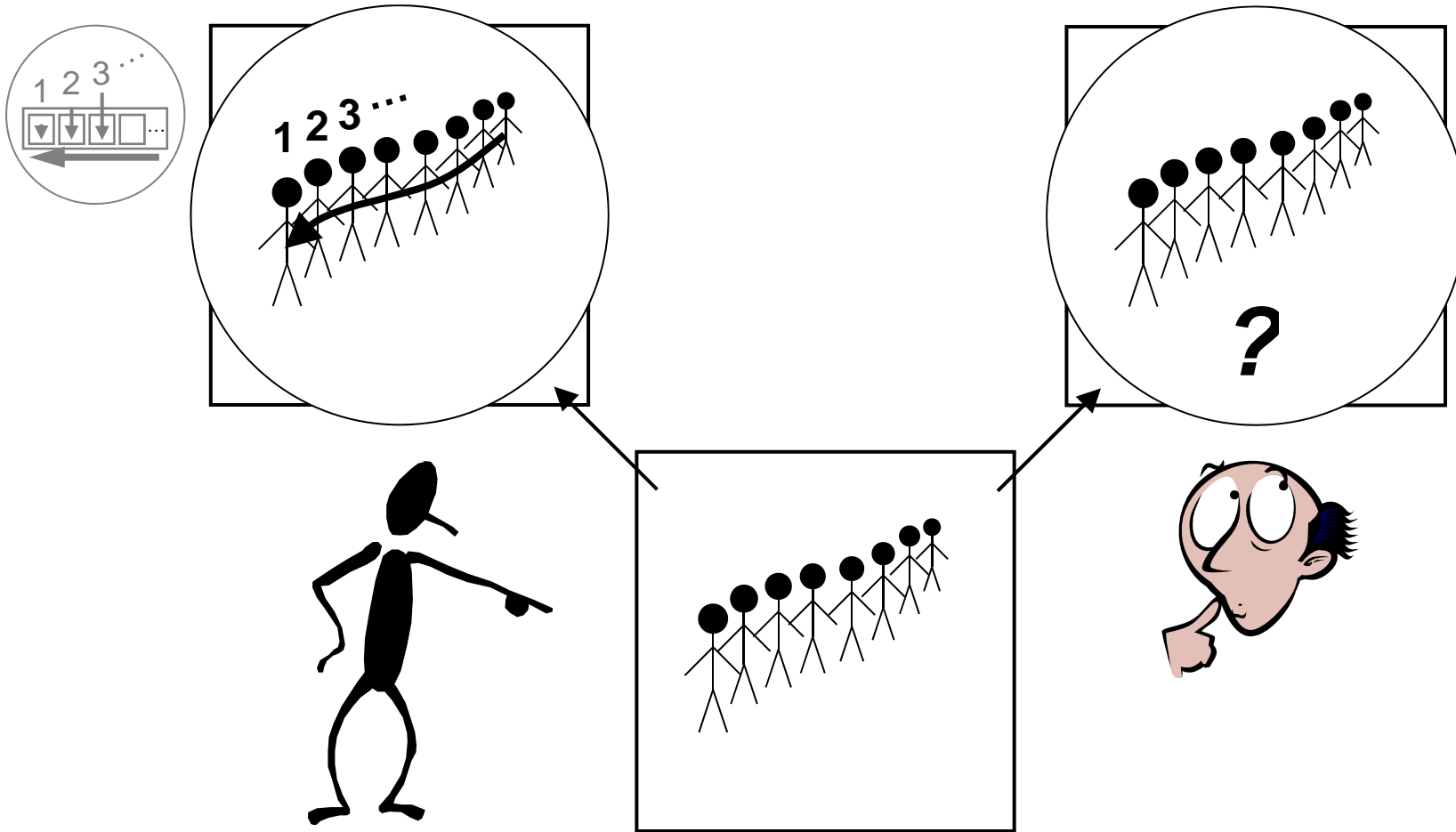
Conceptual Integration



Emergent property:
The arrangement of bodies
encodes the order of service
(Hutchins, 2005)

Two things to notice:
1. Conceptual mapping
2. Material anchors

The Problem of Common Ground



Instruction



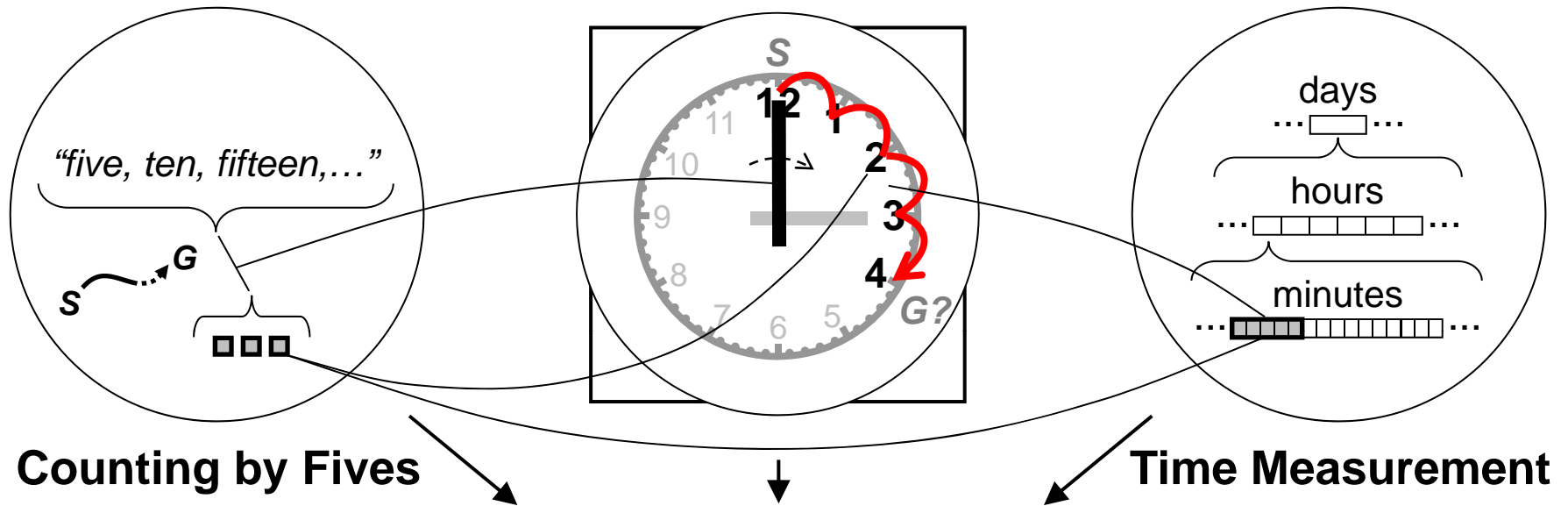
Mapping Gestures

(Williams, in press)

Mapping gestures guide conceptual mapping; i.e., they link conceptual entities with physical structures (or locations) that anchor those entities in the ensuing discourse.

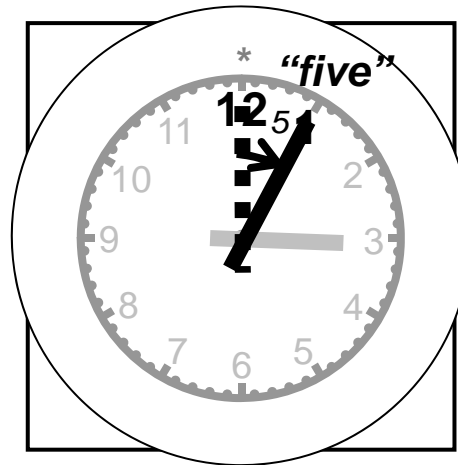
Prototypically, mapping gestures are ‘environmentally coupled gestures’ (Goodwin, 2007) co-timed with speech profiling the entity to be mapped. The mapping gesture brings speech and setting into coordination, establishing a material anchor for a conceptual entity.

Mapping Gestures: Pointing



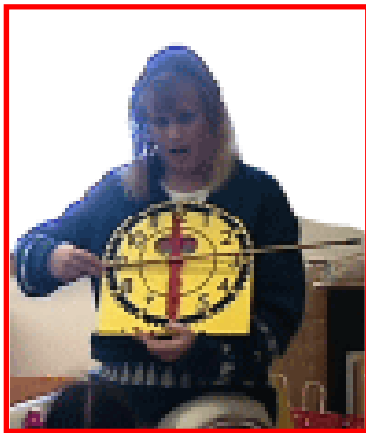
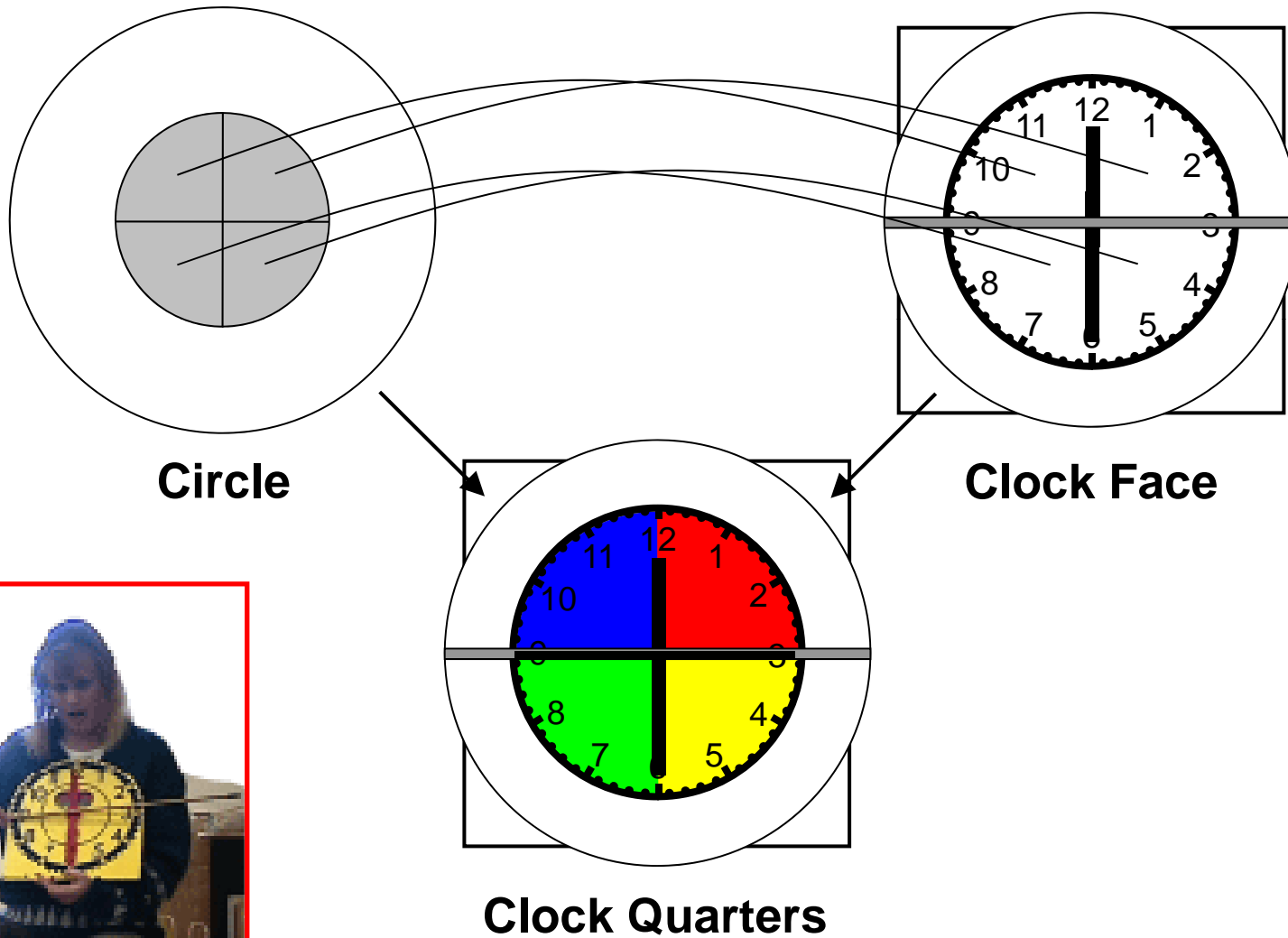
Counting by Fives

Time Measurement

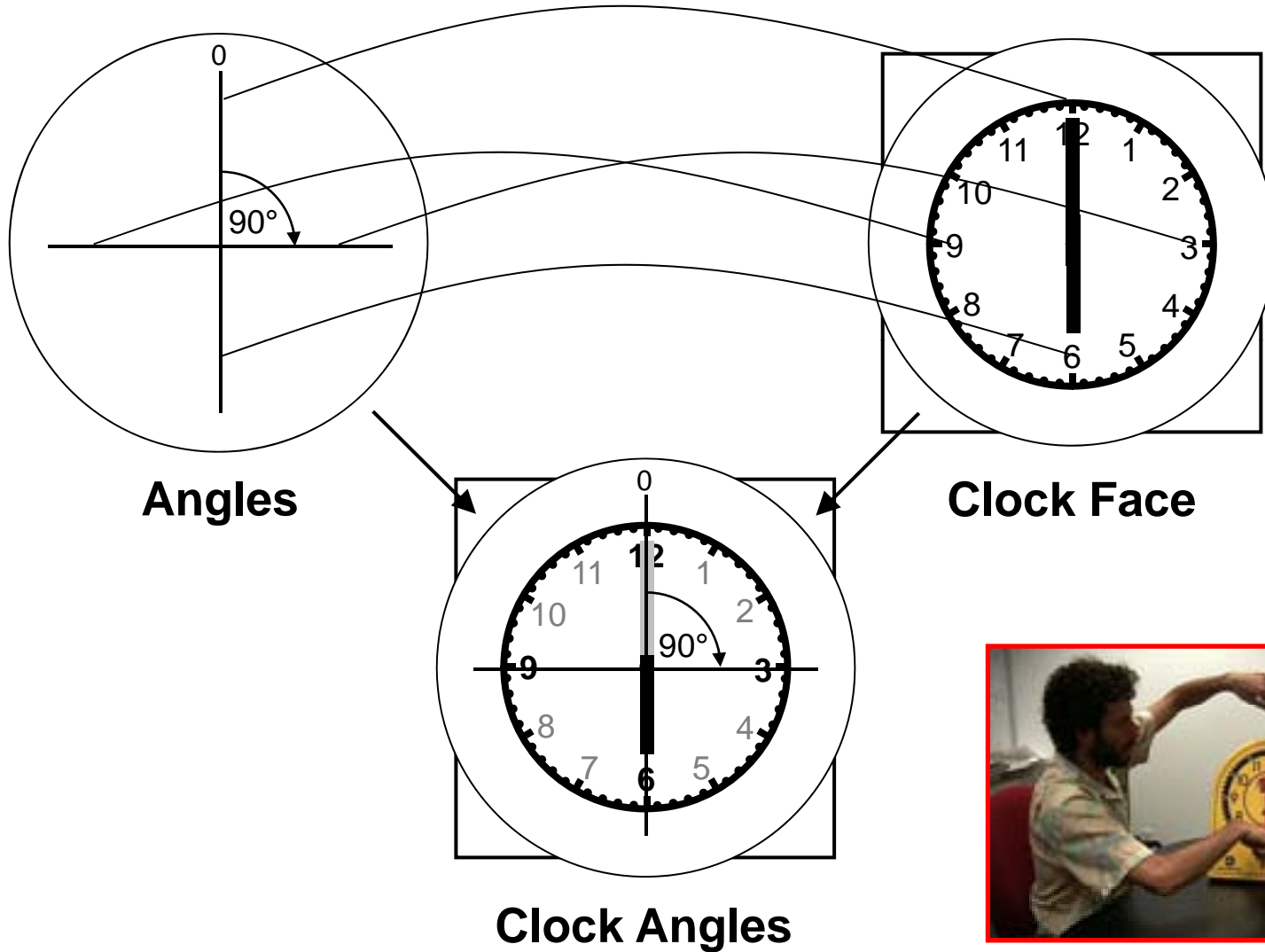


Counting on the Clock

Mapping Gestures: Tracing



Mapping Gestures: Tracing

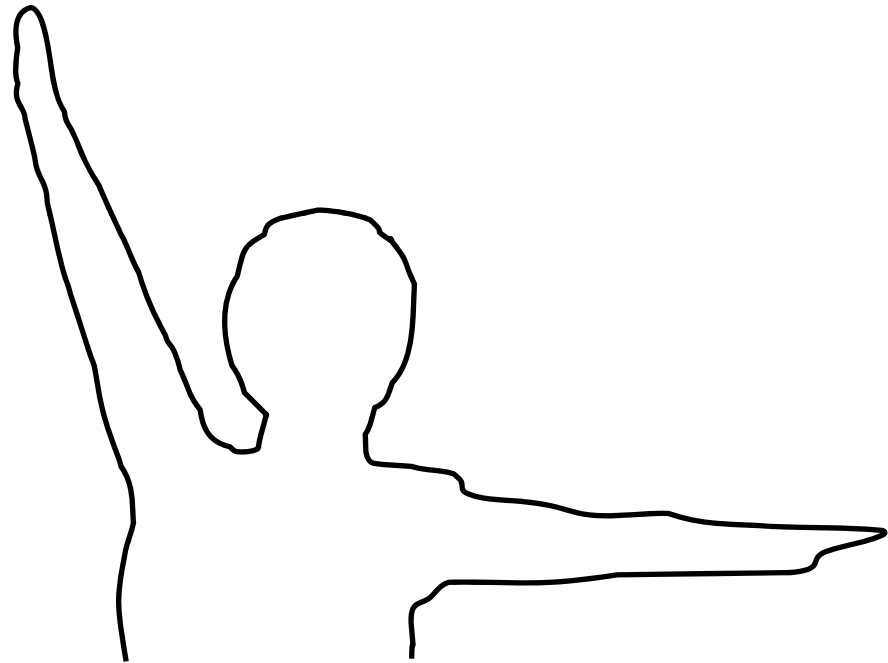
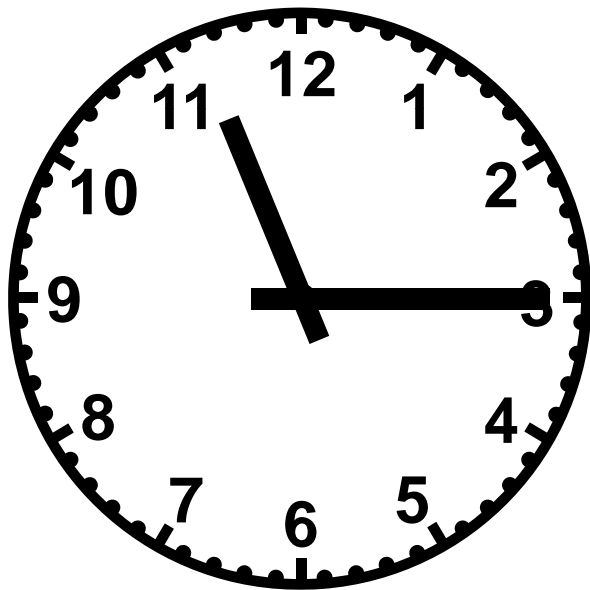


Anchoring Gestures

Anchoring gestures provide physical surrogates or proxies for conceptual entities, anchoring those entities in the ensuing discourse.






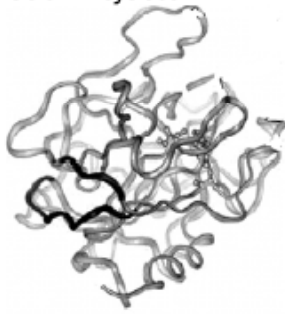
Co-gesture speech prompts a conceptual mapping constrained by context; coupling of the gesture with the environment may provide further constraints on the mapping.

The Body Clock






The Thrombin Hand

(Becvar, Hollan & Hutchins, 2005)

<p>1.1 (37:10;00)</p>  <p>B: ^See how (0.8) you have ^{(0.3)}^ all these little loops^{(0.3)}</p>	<p>1.2 (37:14;10)</p>  <p>^this loop^ ^this loop^ (0.6) ^this loop^ and ^this loop^ (0.8)</p>	<p>1.3 (37:18;20)</p>  <p>{all kin' of: (0.3)}</p>
<p>1.4 (37:20;10)</p>  <p><u>in three-dimensional space they're like this</u></p>	<p>1.5 (37:21;00)</p>  <p>(1.1) an' that's the ^active site (0.3)^}</p>	<p>1.6 <i>Model of Thrombin on Overhead Projector</i></p> 

'Thrombin Hand' as Moving Entity

2.1 (00:37:04;00)	2.2 (00:37:08;00)	2.3 (00:37:11;30)
		
B: {And so (0.3) our new theory is (0.5) that (1.1)}	thrombomodulin does something like this (0.5)	or like} {this (1.5) okay (0.3).}

The Oak Tree

(Wong, in prep)

((E stands on the chair)).

E: So, here I am, a proud oak tree

((E moves right arm in an uncurling motion))

E: and here comes my acorns.

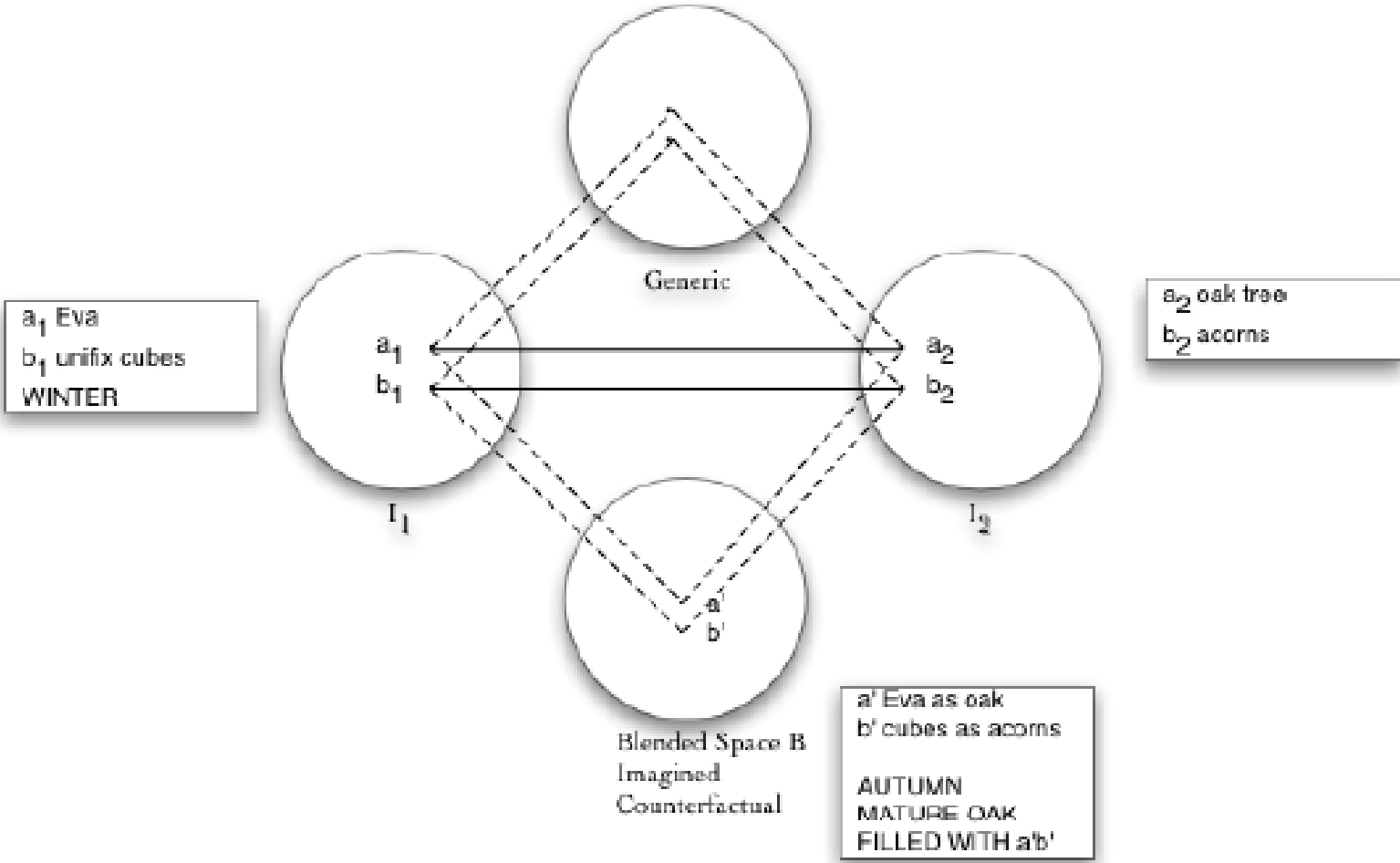
((Drops cube onto floor. E's feet basically face front, right corner of chair))

E: oop.

((continues dropping cubes, one by one))

E: There goes another one. Thank you for not touching 'em.

The Oak Tree Blend



Conclusions

- Mapping and anchoring gestures contribute to common ground by giving conceptual content a physical presence in the discourse.
- Once conceptual entities have been anchored, they can be directly referenced and manipulated to generate inferences.

References

- Fauconnier, G. & Turner, M. 1998. Conceptual integration networks. *Cognitive Science*.
- Goodwin, C. 2007. Environmentally coupled gestures. In S. Duncan, J. Cassell & E. Levy (eds.), *Gesture and the Dynamic Dimension of Language [Gesture Studies 1]*.
- Hutchins, E. 2005. Material anchors for conceptual blends. *Journal of Pragmatics*.
- McNeill, D. 1995. *Hand and Mind: What Gestures Reveal About Thought*.
- Reddy, M. 1979. The conduit metaphor. In A. Ortony (ed.), *Metaphor and Thought*.
- Williams, R. F. In press. Gesture as a conceptual mapping tool. In A. Cienki & C. Müller (eds.), *Metaphor and Gesture [Gesture Studies 3]*, forthcoming from John Benjamins.