Path Schemas in Gesturing for Thinking and Teaching

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SOURCE-PATH-GOAL image schema
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“path schema”
Path Schemas in Gesture

The conceptualization of any process involves motion, whether actual or metaphorical (change from one state to another).

- Path schemas provide important image-schematic structure to thought and communication.

Gestures directly embody motion and are therefore well suited to depicting motion in the speaker’s conceptualization.

- We expect path schemas to motivate gestures and to partially structure their form.
Gestures for thinking serve the speaker; they play a functional role in solving the problem at hand.

The problem may be related to reasoning (computing) or to communicating (word-finding).

*Example that typically involves gesturing for thinking*

What is the 11th letter of the alphabet?
Path Schemas in Gestures for Thinking

Counting Objects

“one” “two” “three”

Already counted

G

To be counted

Video montage of counting gestures
Gesturing for Communicating

Gestures for *communicating* are directed toward others; they play a functional role in shaping the listener’s conceptualization and aligning it with the speaker’s (creating intersubjectivity).

Gestures for *teaching* may be more deliberate and performative (subject to greater awareness and conscious control) than those produced in ordinary conversation.
Path Schemas in Gestures for Teaching

Minute Hand Cycle

Video montage of minute hand cycle gestures (on clock face and in air)
Incidental vs. Essential Path Structure

**Circle**

**Count by Fives**

*Video of tracing circle on clock face*

*Video of counting on clock face*
Incidental vs. Essential Path Structure

Circle

Count by Fives

it’s the same circle shape...

is we count by fives when we move this from number to number—there’s five minutes between each number
Incidental Path Structure

Circle

Minute Hand Cycle

Shape

Movement through one clock hour

it’s the same circle shape...
is we count by fives when we move this from number to number—there’s five minutes between each number
Incidental vs. Essential Path Structure

Circle

Video of tracing circle on clock face

Count by Fives

Video of counting on clock face
All Three in Sequence

Video of three sequential gestures

Circle

Minute Hand Cycle

Count by Ones

Already counted
“To be counted

“one” “two” “three”
Combination

Video of two-gesture combination

Count by Ones

Minute Hand Cycle

“one” “two” “three”

Already counted

To be counted

G?
Conclusions

SOURCE-PATH-GOAL image-schematic structure is evident in gestures that support the speaker’s cognition (gesturing for thinking) and gestures directed at guiding the listener’s conceptualization (gesturing for teaching/communicating).

- This supports the argument that image schemas motivate and partially structure gestures for both cognitive and communicative purposes.

The image-schematic structure evident in the gesture may be incidental (reflective of the speaker’s conceptualization but not critical to communication) or essential to proper understanding. In either case, the gesture makes the image-schematic structure available for the listener’s apprehension.


