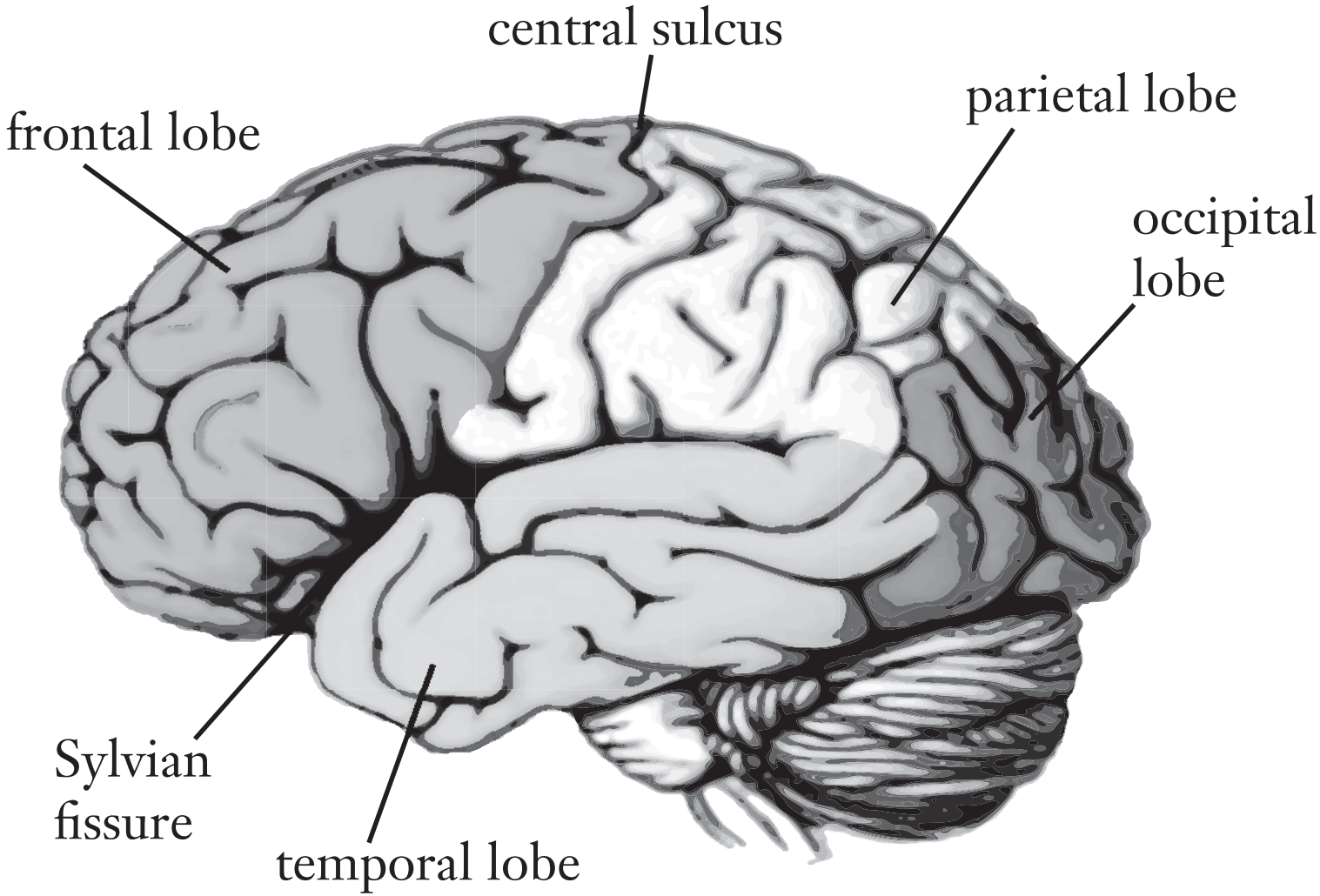
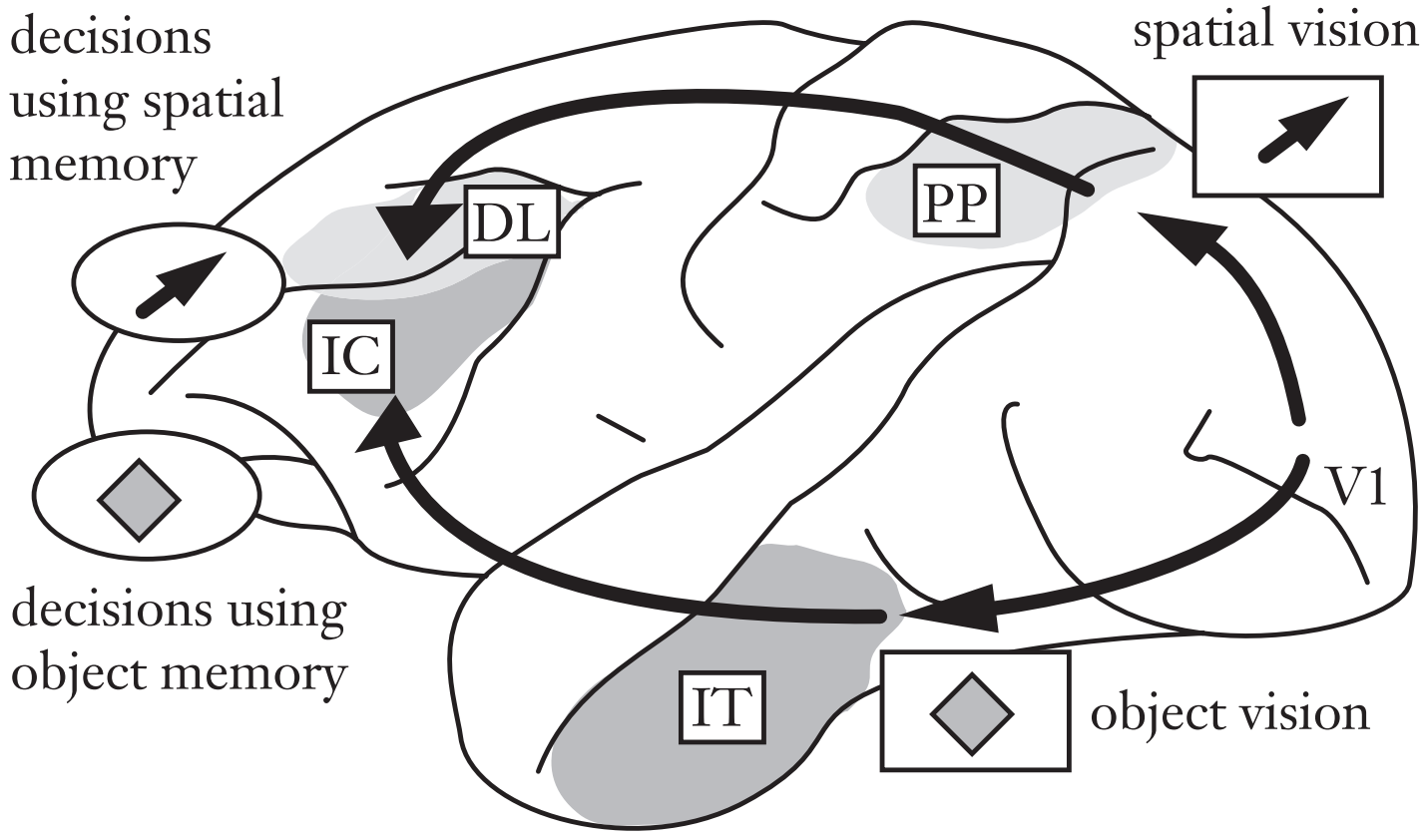


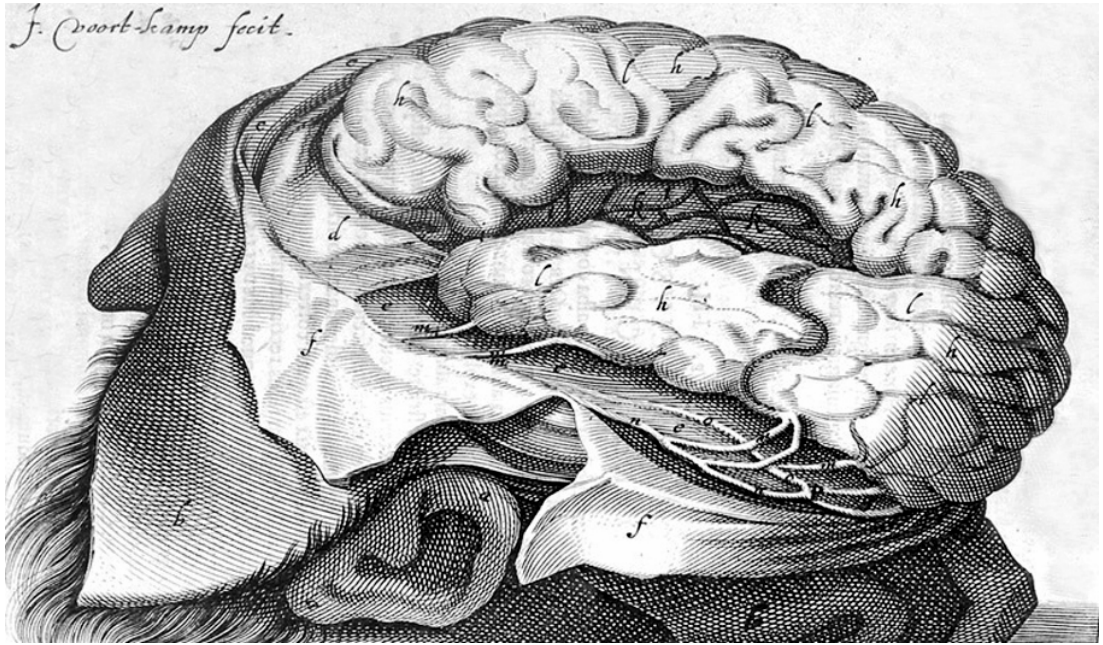
The lobes of the brain. Note that the crease along the top of the temporal lobe is the Sylvian fissure, which divides most of the bottom brain from the top brain.



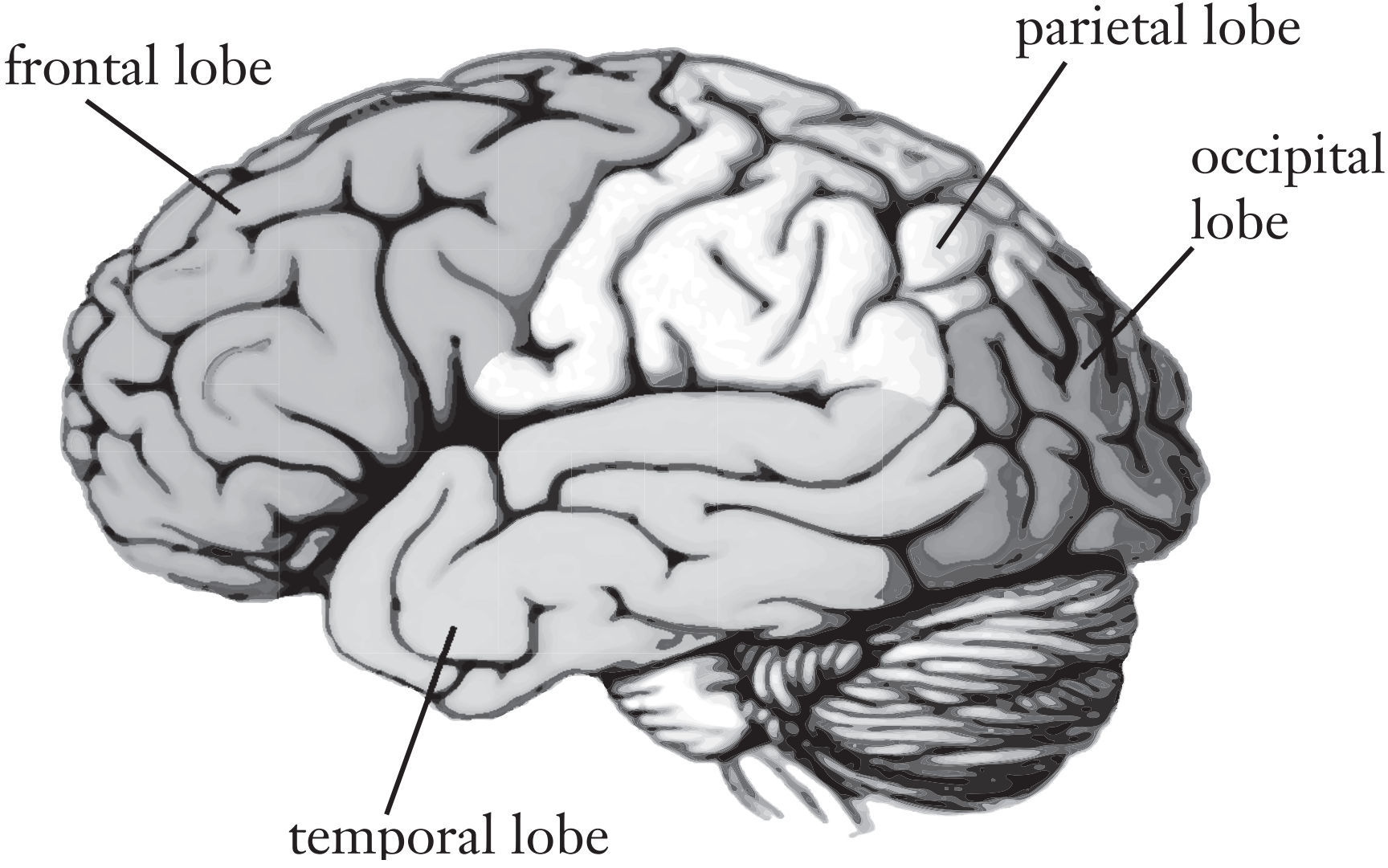
The first area to receive input from the eyes is V1 (the V for visual and the 1 to signify first). Massive neural pathways lead down to the temporal lobe (IT indicates inferior—meaning lower—temporal) and up to the parietal lobe (PP indicates posterior—rear—parietal). Both pathways continue into the frontal lobe, to the dorsolateral (upper side, DL in the diagram) and bottom parts (IC indicates inferior—lower—convexity). These pathways play a role in vision, in holding information briefly in mind to make decisions, and in other functions.[2]

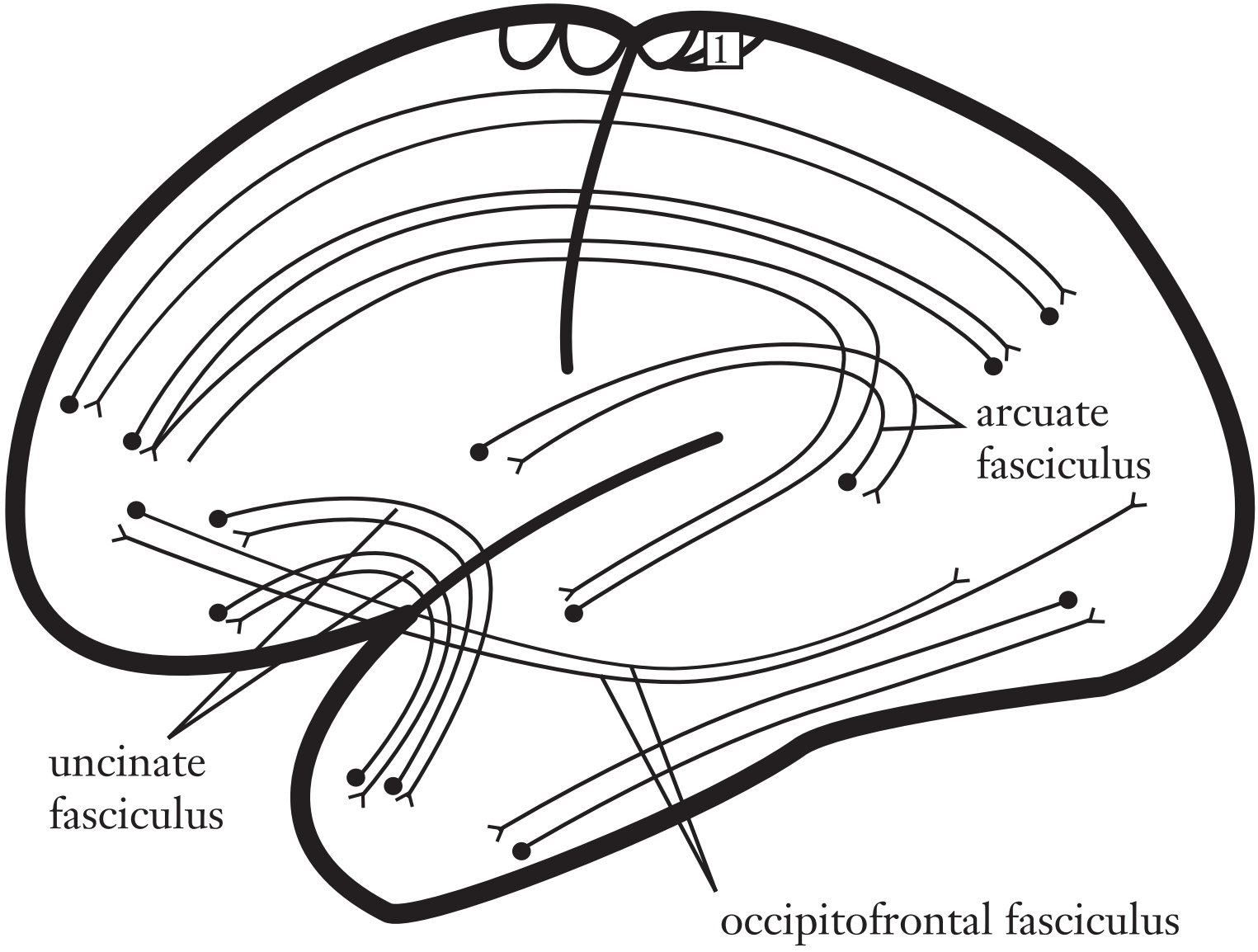
	Highly Utilized Top	**Minimally Utilized Top**
Highly Utilized Bottom	Mover Mode	Perceiver Mode
Minimally Utilized Bottom	Stimulator Mode	Adaptor Mode

The nineteenth-century "science" of phrenology held that cognitive functions are localized in specific areas of the brain. A professional examination of a person's skull could supposedly reveal the strengths or weaknesses of each.

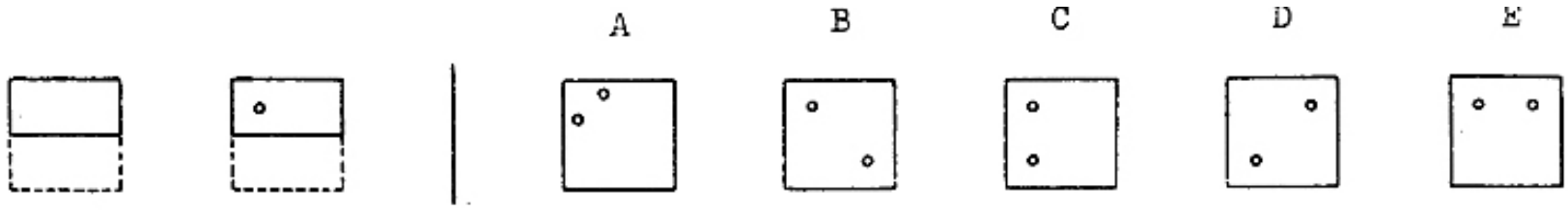


The seventeenth-century Dutch scientist Franciscus Sylvius is credited with first identifying the divide between the top and bottom parts of the brain that now bears his name. Its significance went unrecognized for centuries. *J. Voort Kamp in* Institutiones Anatomicae, *by Caspar Bartholin.*

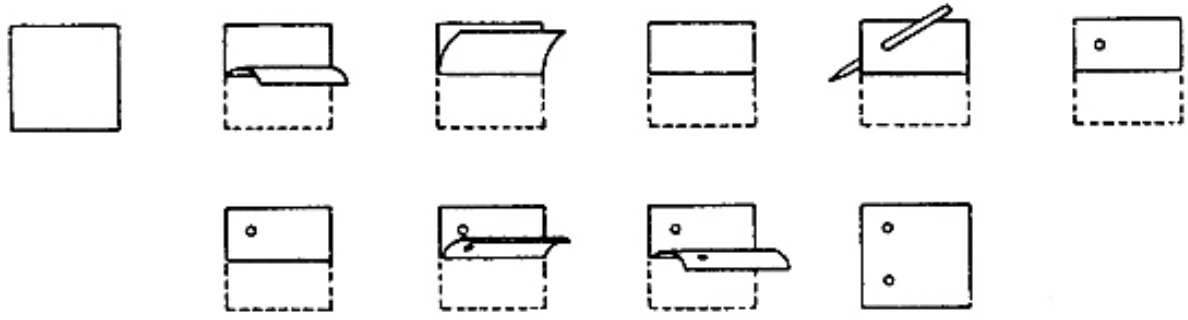

frontal lobe
parietal lobe
occipital lobe
temporal lobe



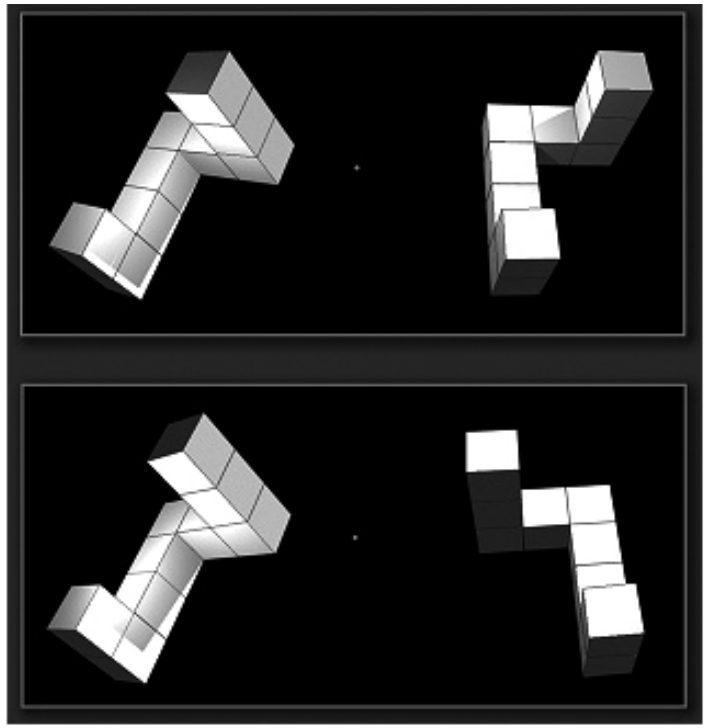
The major long-range connections (fasciculi) in the brain. Note that these connections define which parts of the frontal lobe are in the top-brain system and which parts are in the bottom-brain system.



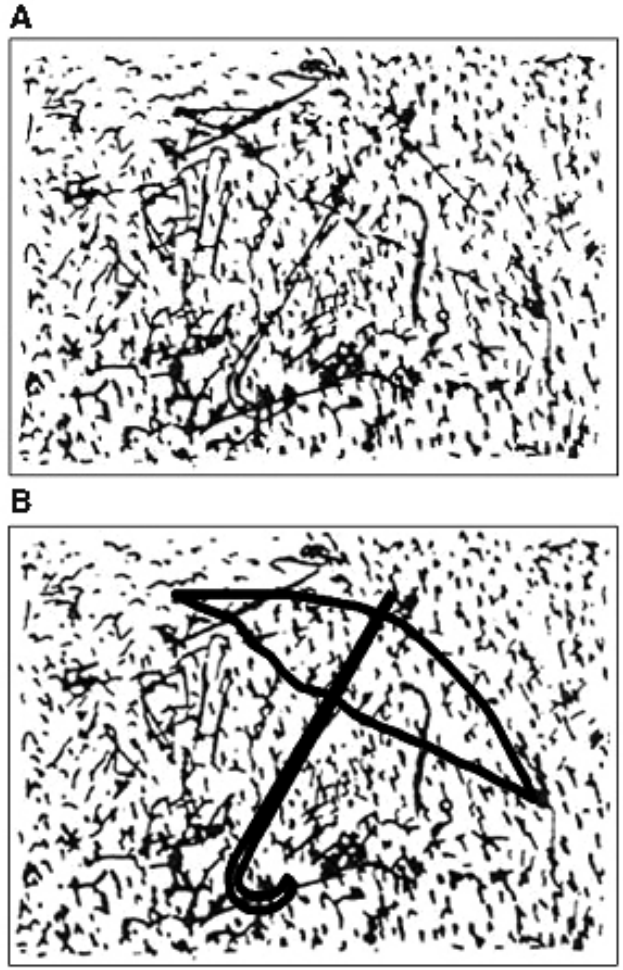
The correct answer to the sample problem above is C and so it should have been marked with an X. The figures below show how the paper was folded and why C is the correct answer.



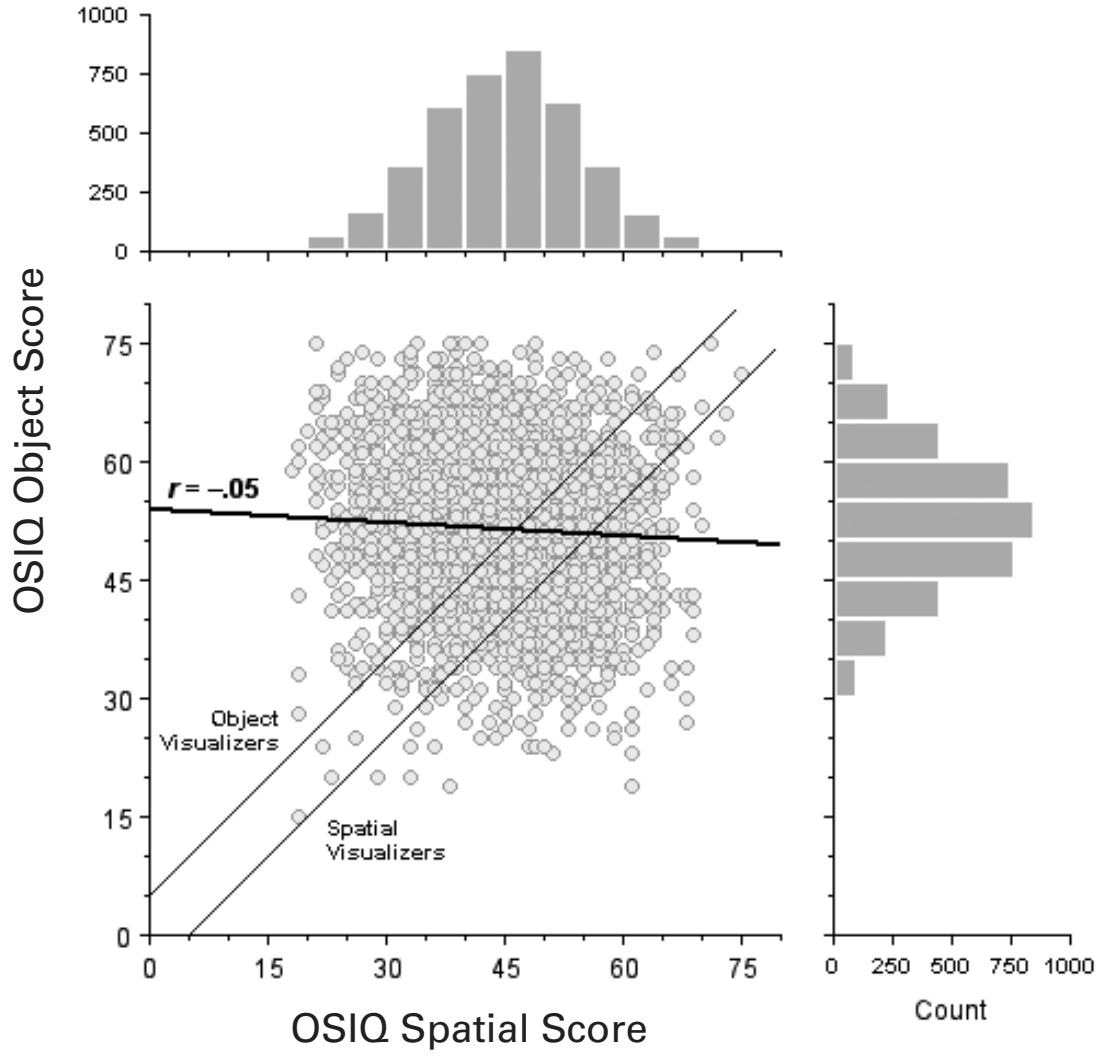
An example of an item in the Paper Folding Test, with an explanation of the correct answer. Top row: In this test a person is shown a sheet of paper that is folded in a particular way, and then a hole is punched through the folded sheets (on the left). The participant is asked to select which of the unfolded alternatives (showing where the holes occurred, on the right) is correct. Bottom: A visual explanation of why C is the correct answer. *With kind permission from Springer Science+Business Media:* Memory & Cognition, *"Spatial Versus Object Visualizers: A New Characterization of Visual Cognitive Style," Vol. 33, issue 4, January 1, 2005, Maria Kozhevnikov.*



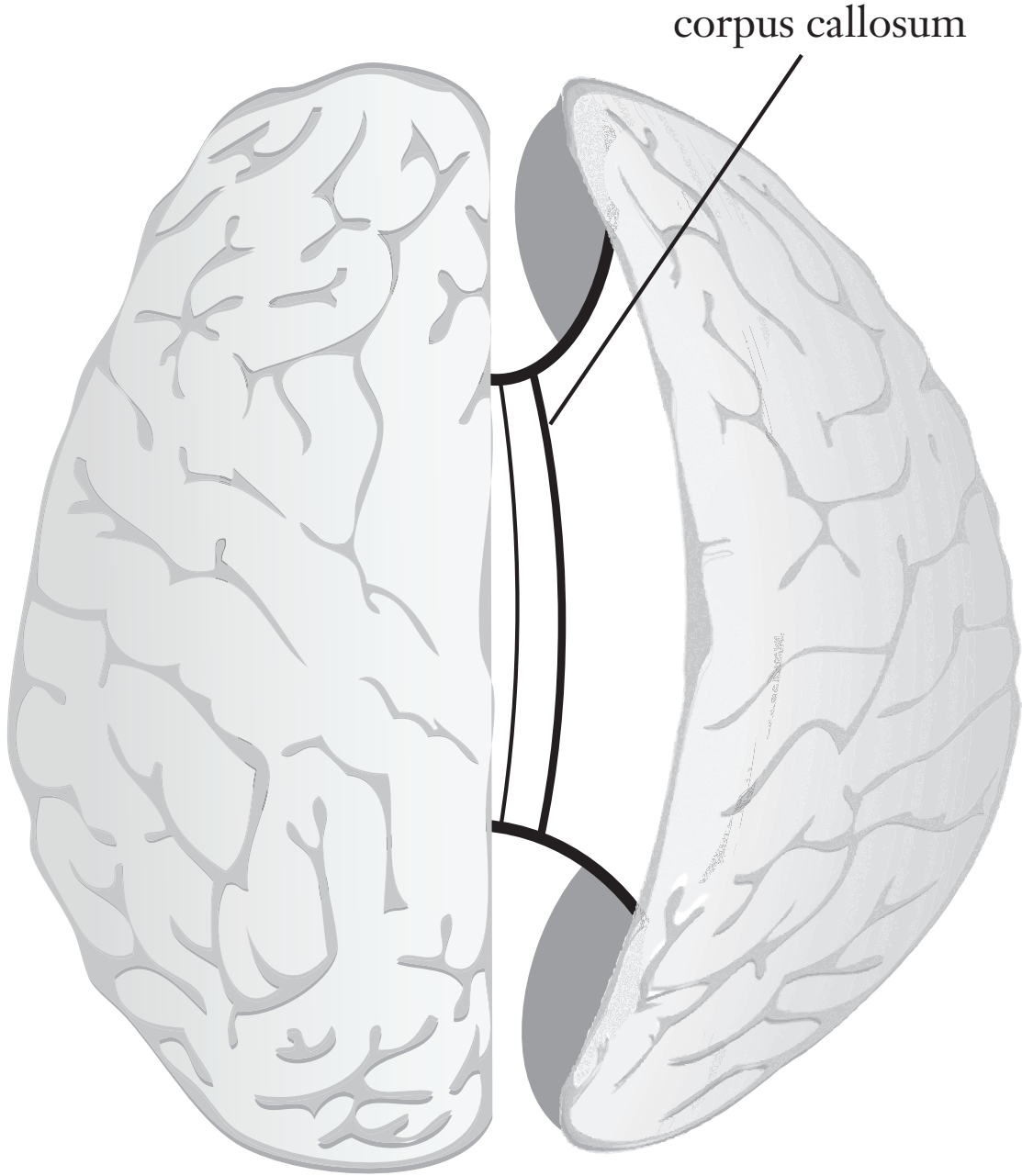
An example of a stimulus used in the mental rotation task. Participants were asked to mentally rotate one of the objects in each pair so that it lines up with the other, and then to compare the two objects to decide whether their shapes are identical or whether one is a mirror image of the other. *With kind permission from Springer Science+Business Media:* Psychonomic Bulletin & Review, *"Training Generalized Spatial Skills," Vol. 15, no. 4, January 1, 2008, Rebecca Wright.*



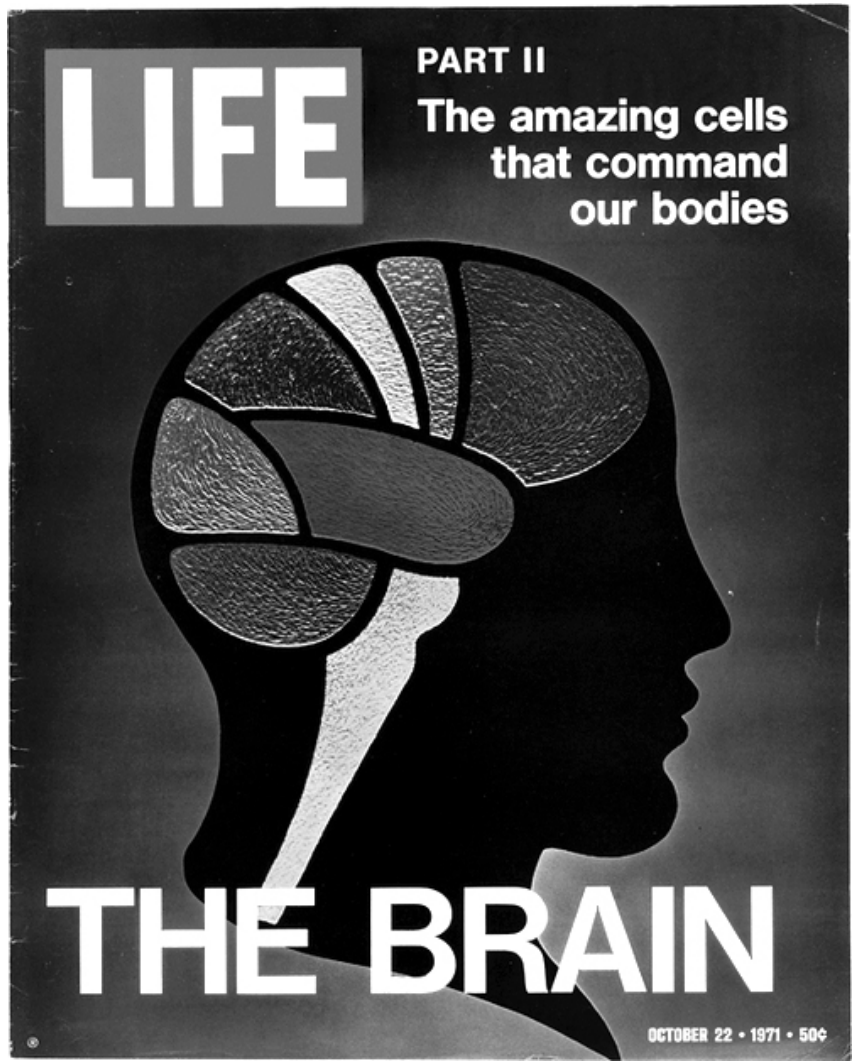
Top: An example of a stimulus used in the degraded pictures task. The participants are asked to name the object, in spite of the interference from the random line fragments placed over the drawing of it. Bottom: The outline of the embedded drawing (shown here to illustrate it; participants never saw this drawing during the test). *With kind permission from Springer Science+Business Media:* Memory & Cognition, "*Spatial Versus Object Visualizers: A New Characterization of Visual Cognitive Style*," *Vol. 33, issue 4, January 1, 2005, Maria Kozhevnikov.*



The relationship between scores on the Object Imagery versus the Spatial Imagery scales of the Object and Spatial Imagery Questionnaire (OSIQ). Each dot represents the scores on the two scales from a single person; the bar graphs illustrate how scores on the scales were distributed. Object visualizers had higher scores on the object scale than the spatial scale, and vice versa for spatial visualizers. The horizontal line shows how scores on the two scales were generally related. *With kind permission from Christopher F. Chabris.*



A view of a brain, seen from the top with a cutaway view that exposes the corpus callosum. The corpus callosum is the largest connection between the two cerebral hemispheres (left/right halves of the brain).



Life magazine's five-part series on the brain in the autumn of 1971 helped build public interest in neuroscience.

LEFT-BRAIN FUNCTIONS

Analytic thought

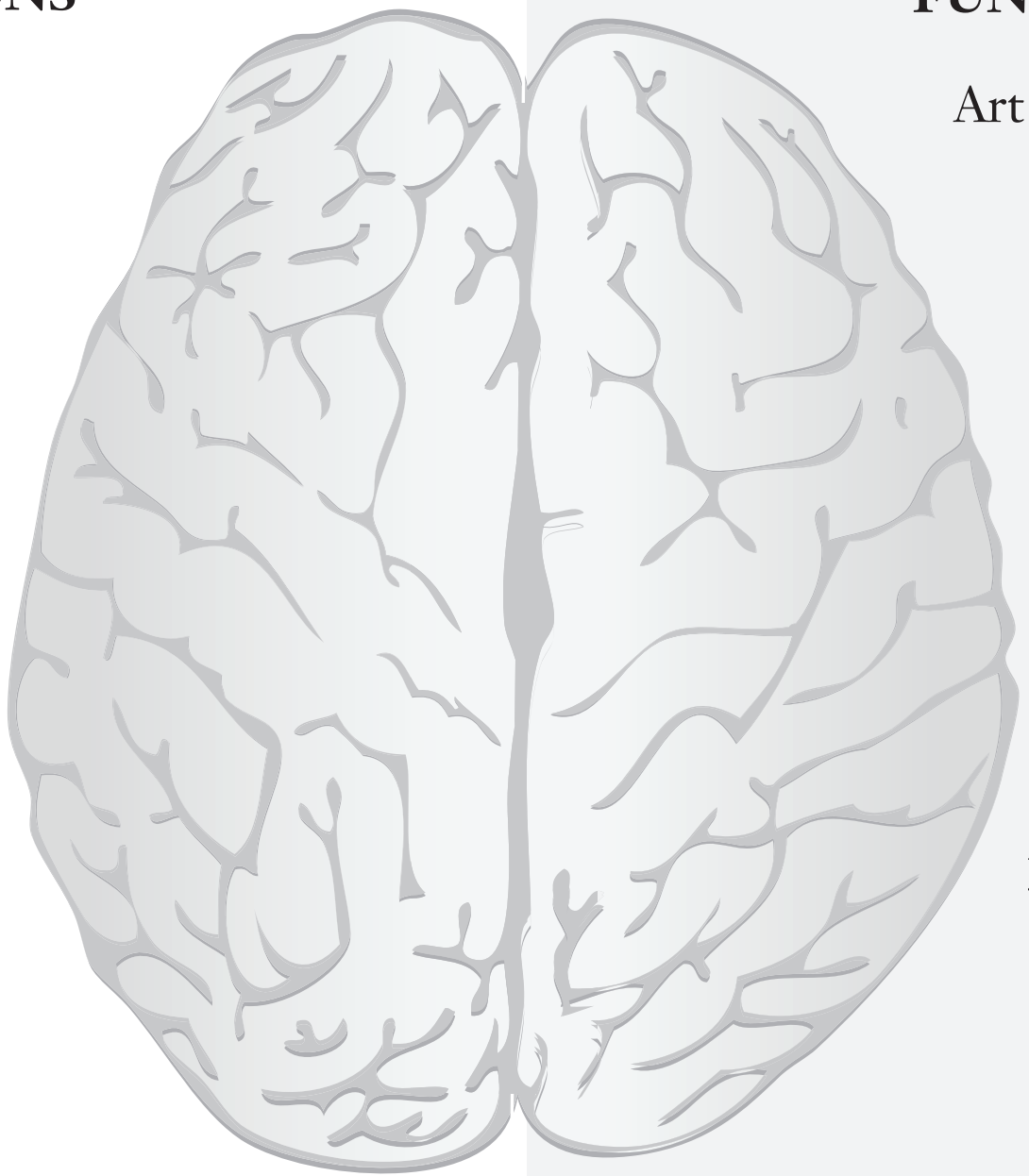
Logic

Reasoning

Science and math

Reading and writing

Number skills



RIGHT-BRAIN FUNCTIONS

Art awareness

Creativity

Intuition

Insight

Holistic thought

Music awareness

3-D forms

The major purported functions of the left brain versus the right brain, according to popular lore.

	Highly Utilized Top	**Minimally Utilized Top**
Highly Utilized Bottom	Mover Mode	Perceiver Mode
Minimally Utilized Bottom	Stimulator Mode	Adaptor Mode

TOP-BRAIN PROCESSING	
Over 47	Very strong tendency to use top-brain processing
37–47	Tendency to use top-brain processing
27–37	Tendency not to use top-brain processing
Under 27	Very strong tendency not to use top-brain processing

BOTTOM-BRAIN PROCESSING	
Over 43	Very strong tendency to use bottom-brain processing
33–43	Tendency to use bottom-brain processing
23–33	Tendency not to use bottom-brain processing
Under 23	Very strong tendency not to use bottom-brain processing

TOP-BRAIN/BOTTOM-BRAIN CLASSIFICATION	TYPICAL MODE
Very Strong Tendency Top/ Very Strong Tendency Bottom	Consistently Mover Mode
Tendency Top/Tendency Bottom	Mover Mode, but particularly context-dependent
Very Strong Tendency Top/ Tendency Bottom	Mover Mode, but sometimes Stimulator Mode
Tendency Top/ Very Strong Tendency Bottom	Mover Mode, but sometimes Perceiver Mode
Very Strong Tendency Not Top/ Very Strong Tendency Bottom	Consistently Perceiver Mode
Tendency Not Top/Tendency Bottom	Perceiver Mode, but particularly context-dependent
Tendency Not Top/ Very Strong Tendency Bottom	Perceiver Mode, but sometimes Mover Mode
Very Strong Tendency Not Top/ Tendency Bottom	Perceiver Mode, but sometimes Adaptor Mode
Very Strong Tendency Top/ Very Strong Tendency Not Bottom	Consistently Stimulator Mode
Tendency Top/Tendency Not Bottom	Stimulator Mode, but particularly context-dependent
Very Strong Tendency Top/ Tendency Not Bottom	Stimulator Mode, but sometimes Mover Mode
Tendency Top/ Very Strong Tendency Not Bottom	Stimulator Mode, but sometimes Adaptor Mode
Very Strong Tendency Not Top/ Very Strong Tendency Not Bottom	Consistently Adaptor Mode
Tendency Not Top/ Tendency Not Bottom	Adaptor Mode, but particularly context-dependent
Very Strong Tendency Not Top/ Tendency Not Bottom	Adaptor Mode, but sometimes Perceiver Mode
Tendency Not Top/ Very Strong Tendency Not Bottom	Adaptor Mode, but sometimes Stimulator Mode

Computer-generated artificial objects, known as greebles, used as stimuli in the maze experiment. *Images courtesy of Michael J. Tarr, Carnegie Mellon University, www.tarrlab.org.*