

Problem Set 3: Diagramming Arguments

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Directions: Diagram the the structure of the following arguments by referring to the numbered statements.

1. (1) Mothers intuitively use a type of baby talk with infants that imparts lessons in how to understand a native language (2) because only when talking to their babies (and not to pets or another adult) do mothers speak in a distinctive high pitch, exaggerate the emotional quality of their voices, and draw out the pronunciation of vowels.

2. (1) Broccoli is effective in the treatment of inflammation, ulcers, and cancers of the stomach (2) because broccoli contains the compound sulforaphane, (3) and sulforaphane is effective in treating these stomach disorders.

3. (1) Students who napped for an hour improved in their ability to detect subtle changes in an image. (2) Hence, daytime dozing may enhance a person's capacity to learn certain tasks (3) since students who didn't nap declined in their ability to identify the changes.

4. (1) 2-to-5-day-old infants stare at faces that fix them with a direct gaze and devote less attention to faces with eyes that look to one side, (2) and in 4-month-olds, direct eye contact elicits enhanced brain activity associated with face perception. (3) Hence, the exceptionally early sensitivity to mutual gaze is arguably the major foundation for the later development of social skills.

5. (1) By age 3, children diagnosed with autism have already begun a retreat into social isolation. The evidence is as follows: (2) Three groups of children were studied: those with autism, those with a developmental disorder, and those with no developmental disorder. (3) Each child wore a cap that recorded brain-wave responses as experimenters presented images of his or her mother's face, an unfamiliar woman's face, a favorite toy from home, and an unfamiliar toy. (4) Spikes in the brain's electrical activity signaled recognition of the mother's face and the favorite toy in both healthy children and those with disorders other than autism. (5) Brain-wave responses of autistic children indicated that they distinguished favorite toys from novel ones but not their mother's faces from strangers'.

Adaptation Sources:

1. Bruce Bower, "Baby Talk Goes to the Dogs, and Cats," *Science News*, Vol. 161, No. 22 (June 1, 2002), 349.
2. Ben Harder, "Eat Broccoli, Beat Bacteria," *Science News*, Vol. 161, No. 22 (June 1, 2002), 340.
3. Bruce Bower, "Snooze Power," *Science News*, Vol. 161, No. 22 (June 1, 2002), 341.
4. Bruce Bower, "The Eyes Have It," *Science News*, Vol. 162, No. 1 (July 6, 2002), 4.
5. Bruce Bower, "Autism Leaves Kids Lost in Face," *Science News*, Vol. 161, No. 26 (June 29, 2002), 408.

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