

Perception of Nonverbal Cues After Right Brain Damage  
(Abstract)

Kristine Lundgren  
Spaulding Rehabilitation Hospital, Boston, Massachusetts

Kenneth L. Moya  
Larry I. Benowitz  
McLean Hospital, Belmont, Massachusetts

Lesions in the left hemisphere often result in deficits in verbal communication, while lesions in the right hemisphere have been traditionally viewed as leaving communication skills intact. However, communication in a more general sense involves more than explicit linguistic messages. Vocal inflection, facial expressions, and body gestures serve as additional channels for conveying information, and communicating one's emotional state and social position, while qualifying and adding emphasis to the verbal message. In the clinical setting patients with right hemisphere damage often appear pragmatically inappropriate in their interactions, failing to adhere to traditional communication rules. We set out to examine whether these changes include deficits in the perception of nonverbal cues. We assessed the ability of 18 right-hemisphere-damaged subjects to perceive emotion from facial expression, body gesture, and randomly spliced and content filtered speech using the Profile of Nonverbal Sensitivity or PONS. Our results indicate that these subjects are significantly impaired in their ability to perceive emotion from facial expression, scoring more than 2 standard deviations below the normal mean. The ability to interpret body gesture was also impaired, with subjects scoring 1.5 standard deviations below the normal mean. To a lesser extent, subjects had difficulty interpreting emotional situations from the temporal quality of speech. We found these deficits in perceiving emotion from nonverbal communication to be independent of the ability to recognize familiar faces, general language functioning, and verbal intelligence. Although our results suggest that these individuals are significantly impaired in their ability to interact with the world around them, communication disorders are often overlooked in this population. Caretakers and family members should be aware of these deficits and encouraged to use a multimodal approach in their interactions with individuals suffering right brain damage. Combining explicit verbal expressions with associated nonverbal cues may be one strategy in circumventing the deficit.