

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

Describing Causal Events: Evidence from Patients with Focal Brain Injury

Permalink

<https://escholarship.org/uc/item/1v0686g6>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 37(0)

Authors

Ozer, Demet

Bostan, Idil

Chatterjee, Anjan

et al.

Publication Date

2015

Peer reviewed

Describing Causal Events: Evidence from Patients with Focal Brain Injury

Demet Ozer

Koc University

Idil Bostan

Koc University

Anjan Chatterjee

University of Pennsylvania

Tilbe Goksun

Koc University

Abstract: We investigated (1) how focal brain-injured patients describe causal events (causal verb like “push” and the instrument of the action like “the stick”) in speech and co-speech gestures and (2) whether gestures compensate for their impaired verbalization. 16 left hemisphere damaged (LHD), 16 right hemisphere damaged (RHD) and 14 controls were asked to describe causal events (22 video clips). The correct use of causal action components in speech and iconic gestures referring to these actions were coded. Results indicated that LHD patients were less accurate in using both components in speech compared to RHD and controls. There was no difference in the number of iconic gestures among groups. Yet, LHD patients were more likely to omit or misuse both components in speech and in gesture than RHD and controls. Particularly, damage to the left inferior and middle frontal gyrus resulted in problems in both modalities, suggesting conceptual deficits of causality.