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# Attention Shift and Verb Labels in Event Memory

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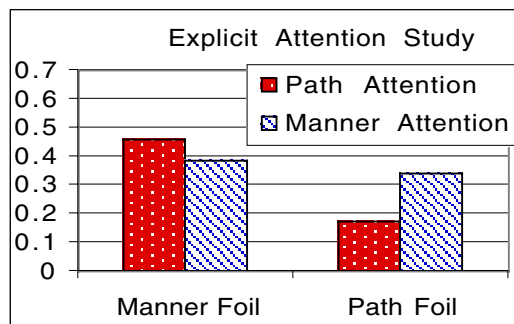
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Events, unlike objects, pass by once and give only one opportunity to encode and retain information. How does the language accompanying events influence what is remembered? To what can people selectively attend, and what directs their attention?

In prior work (Billman & Krych, 1998) we found an interaction between type of visual recognition error and verb heard at encoding, such that people were more likely to notice changes in manner when they had heard an appropriate manner verb (e.g., hop, jog, skip) than an appropriate path verb (e.g., enter, cross, leave), and more likely to notice changes in path when they had heard a path verb than a manner verb. This effect was clearest when the foil events were changes such that the original verb would no longer appropriately apply to them. Thus, the effect of the encoding verb on memory might have resulted from using the verb as a discriminative cue during recognition, from using the verb to direct attention at encoding, or both.

## Explicit Attention Study

In the present studies we investigate whether attention can be directed to the manner or to the path of motion events. We used realistic, animated event clips of ordinary motion events. Half the events showed a self-generated motion (e.g. strolling man circles a car) and half a caused motion (e.g. cat rolls a pencil to make it

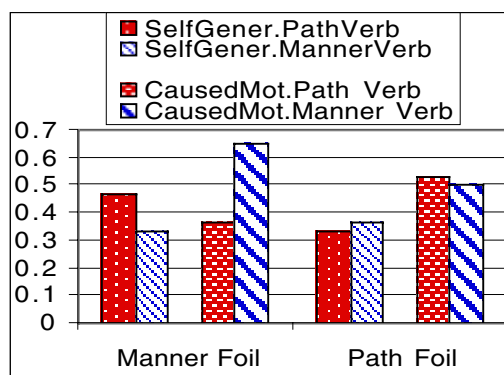


fall). Test items were very similar to the originals. In the Explicit Instruction Study we told participants to pay attention to path or to manner. As predicted, participants made fewer errors on items which changed the corresponding aspect of the event. (interaction of encoding condition x foil type,  $F(2,32)=4.71$ ,  $p<.05$ ). These data suggest a boundary for how much shifts of

attention at encoding can aid recognition for our task and stimuli.

## Verb Study

In the Verb Study, events were accompanied by a descriptive manner verb, path verb, or no language.



Verbs always described the moving figure (e.g. “rolling” or “falling”). If hearing a path or manner verb shifts attention this might benefit memory for the corresponding aspects, even when the verb itself provides no discriminative information at recognition. A three way interaction,  $F(4,156) = 2.775$ ,  $p < .05$ , among verb condition, type of event (self-motion or caused-motion), and type of recognition stimulus (path foil, manner foil, or original scene) on errors indicated the two types of events were affected differently. In the self-generated events, path verbs improved rejection of path foils and manner verbs improved the rejection of manner foils, as predicted, but the opposite pattern was found with the caused motion events. The mapping of the verb onto the moving figure is more complex in these events (it is the pencil not the animate entity which rolls) and this may be involved.

## Acknowledgements

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Billman, D & Krych, M. (1998). Path and manner verbs in action: Effects of “Skipping” or “Exiting” on event memory. *Proceedings of the Twentieth Annual Conference of the Cognitive Science Society* Hillsdale, NJ: Lawrence Erlbaum Associates.