

Monitoring and control in language production

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Three major theories of monitoring currently exist for language production: the perceptual loop, the forward models, and the conflict-based monitor. I will briefly review findings from behavioral, neuropsychological, neuroimaging, and electrophysiological studies of error detection, and discuss how the conflict-based monitor accommodates these findings, while pointing out the important roles that the other two types of monitor play in the monitoring process. The conflict-based monitor is a framework combining principles of signal detection theory with the operations of a conflict detector, a mechanism that measures the amount of conflict between the activation levels of representations competing for selection. According to this framework, detecting an error is a probabilistic event, and the probability of that event is determined by the amount of competition in the production system. I will further show the utility of this framework for exploring broader concepts such as metacognition and its link to learning. Time permitting, I will preview a model of error repair, and discuss the relationship between conflict monitoring, probability of errors, recruitment of cognitive control, and probability of repairs.