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Expect the Unexpected: Robust Planning Processes in Speech Production

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Abstract: Speakers benefit from knowing in advance how a word will begin (Meyer, 1990; OSeaghdha & Chen, this conference). However, the ability to form a preparation set is limited: If one of several anticipated items is an odd man out, no plan is formed. Here, we show that this limitation arises in planning and not in execution. Participants prepared sets of four words that shared/did not share onsets, and were cued to produce these and unprepared extra-set words. Prepared words showed a sharing advantage, indicating that the plans were formed. Benefits extended to extra-set words sharing the onset, and even to some non-identical onsets. Unprepared words with different onsets showed a sharing disadvantage, revealing a cost to deviating from the plan. Thus, once formed, plans are quite robust, and show graded consequences for unexpected targets. These findings are likely to be relevant beyond the domain of speech production.