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# The Impact of Production Rates on Sequential Statistics and Distributional Properties in Random Generation

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## Abstract

Recent work suggests that people produce random sequences by tapping into a general ability to derive probabilistic inferences through sampling an internal belief distribution. In contrast, previous work has proposed that participants monitor the production of inherently deterministic sequences, changing strategy when randomness appears low. Experiments exploring this process have highlighted the role of task requirements (e.g., production pace, cognitive load), finding that randomness decreased when demands increased. However, assuming random generation stems from sampling for inference, increasing production rates might affect sequential dependencies and the overall sample distribution independently. For example, increased production rates might result in more predictable sequences but leave the overall distribution of the sample intact. Here, we assessed the effects of production rates on sequential statistics and overall distributional properties in a preregistered experiment in which participants produced people's lifespans. We discuss our results in terms of computational models of sampling for inference.