Boundary Extension at a Glance and across an Eye Movement

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Does boundary extension (BE) occur rapidly enough to support integration of successive views during visual scanning? Or might a very short-term visual buffer briefly maintain a veridical representation? On each of 36 trials, a single 250-ms scene-photo was followed by a masked interval and immediate repetition of the same scene (same view or different view). The repetition was rated on a 5-pt scale as "same", "more close-up" or "more wide-angle". In Experiment 1 (N=72), mask duration was either 250 or 42 ms. Robust BE occurred in both cases. In Experiment 2 (N=22), stimulus and test pictures appeared in different screen locations, requiring a saccade; test onset was gaze contingent (mean time between stimulus and test = 274 ms; EyeLink II). Transsaccadic memory included boundary extension; viewers correctly identified distractors, but identical views looked "too close-up". Layout extrapolation is available early enough to support view integration during visual scanning.