**Strategic control of location and ordinal context in visual working memory**

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Working memory task performance often requires a representation of an item’s context (e.g., where or when it was presented) in addition to its identity. In this study, we varied context-binding demands along two dimensions -- high vs. low, and location vs. ordinal position -- while healthy young adults (n = 15) performed delayed-recognition-of-orientation during fMRI scanning. Each trial began with the sequential presentation (500 ms, 250 ms ISI) of three oriented-grating samples, each at a different location, followed by an 8-second delay, followed by a probe (orientation patch with a superimposed digit). Depending on the pretrial instruction cue, subjects decided whether the probe matched the sample that had appeared at the probe’s LOCATION, at the location of the sample whose ordinal position corresponded to the digit (“ORDER”), or any of the three samples (context “IRRELEVANT”). Delay-period signal in parietal cortex was higher for LOCATION and ORDER than for IRRELEVANT trials. Multivariate decoding revealed strong sensitivity to context binding requirements and to the critical dimension of context throughout the trial in both occipital and parietal areas. Multivariate inverted encoding modeling yielded 3 key results in occipital cortex: 1) robust reconstruction of the physical location of the probe; 2) robustly negative reconstruction of the location corresponding to the probe’s digit; 3) failure to reconstruct the location of samples on IRRELEVANT trials. These results replicate evidence for a role for parietal cortex in context-binding and demonstrate that the neural representation of location context is subject to strategic control.