Supplemental Information

Pupillometric signature of implicit learning

of statistical regularities

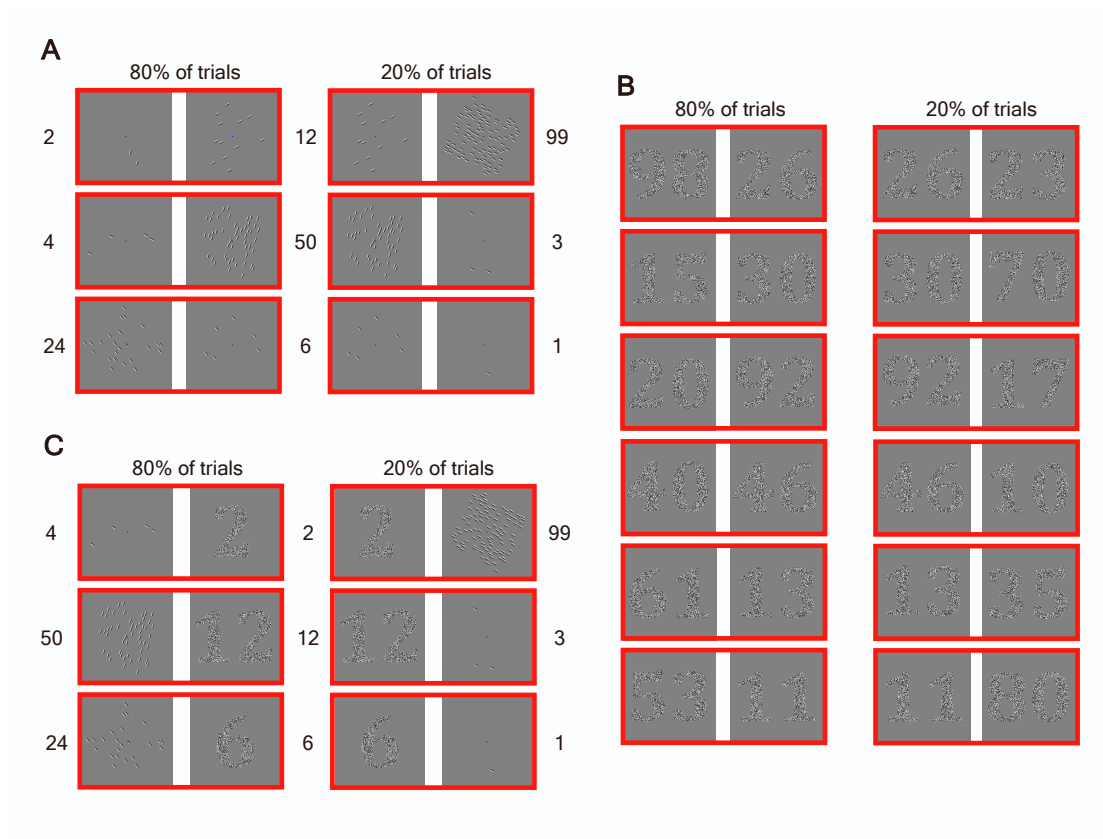Paola Binda, Chiara Terzo, Marco Turi, and David C. Burr

Figure S1. Stimuli and their pairings. Related to Figure 1 and Figure 4

Example stimuli used in the three main conditions. **A.** stimuli for the main experiment (arrays). **B.** stimuli for the digit dyads experiments (in a second condition their orientation was jittered by 30 degrees). **C.** stimuli for the digit and arrays condition. In all cases, the red squares highlight the pairings; pairs are shown in two columns, representing frequent (80%) and infrequent (20%) combinations. The latter were introduced to allow for repetitions of the same numerosity or dyad without disrupting the periodic temporal structure of the sequence.
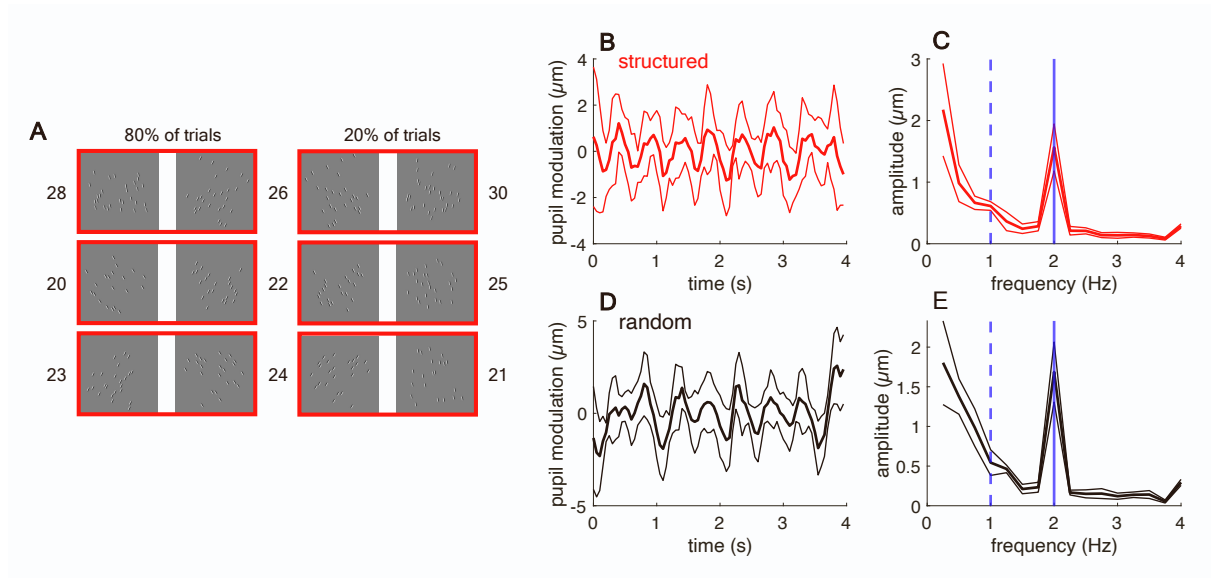
Figure S2. Control Condition. Related to Figure 2. Results from a control condition, where array numerosities were hard to discriminate, as panel **A** shows. **B-E.** pupillometric results presented in the same format as in Figure 2 of the main text. There is no clear response at 1 Hz and pupil traces in the structured and random condition are indistinguishable. Phase coherence analysis showed no significant clustering of the 1 Hz response in the structured condition ($t(5) = 0.8$, $p = 0.464$) or in the random condition ($t(5) = 0.4$, $p = 0.682$) and a non-significant 1 Hz response in the structured condition, log normalized to the random one ($t(5) = 1.1$, $p = 0.306$).