

**Supplementary materials for**  
**Assessing the “bias” in human randomness perception**

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### S1: Expected frequencies for window lengths $k = 3, 5, 6$

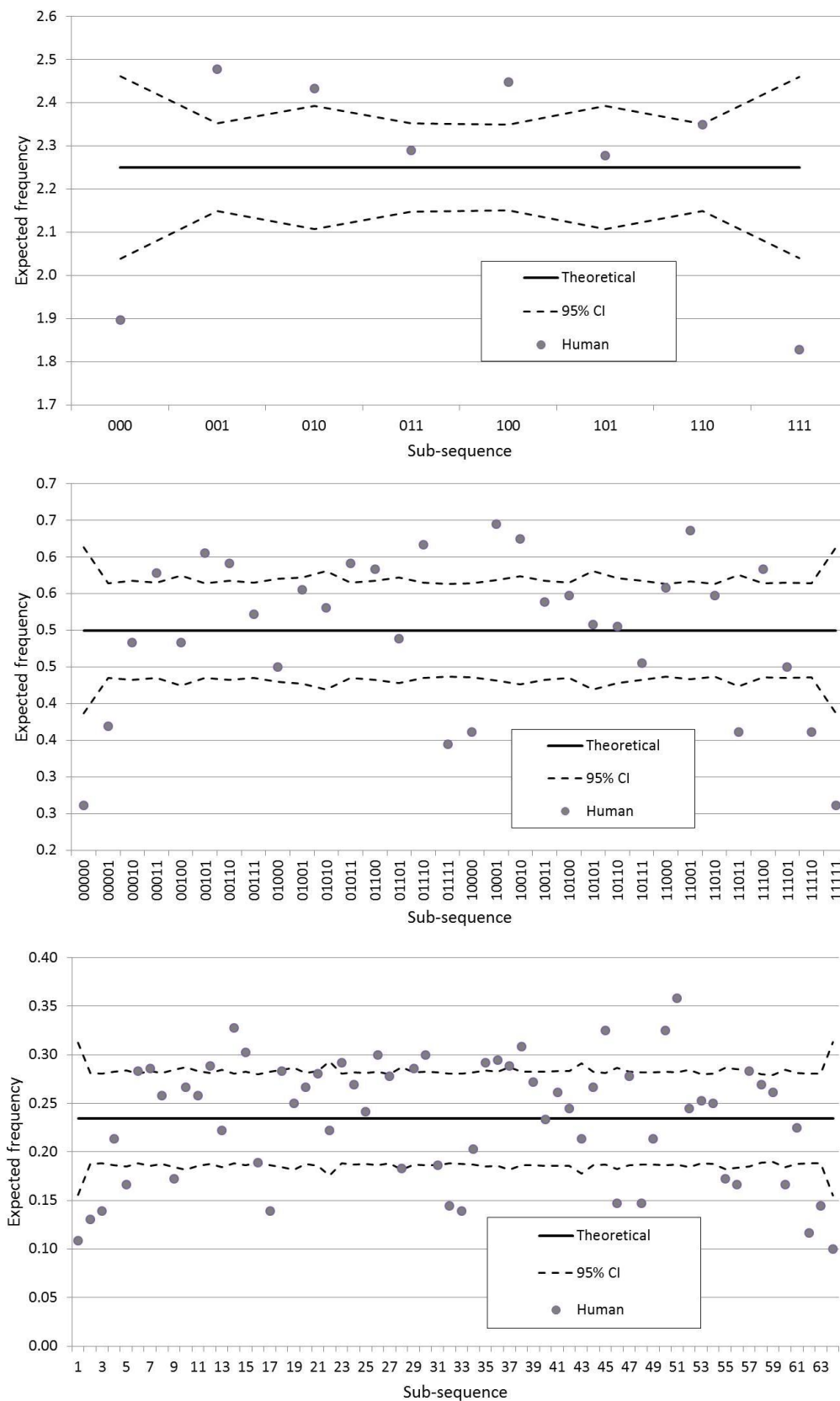


Figure S1: Expected frequencies for varying window length;  $k = 3$  (top panel),  $k = 5$ , middle panel,  $k = 6$  (bottom panel). These figures are analogous to those seen in figure1A of the main text.

## S2: Occurrence rates for window lengths $k = 3, 5, 6$

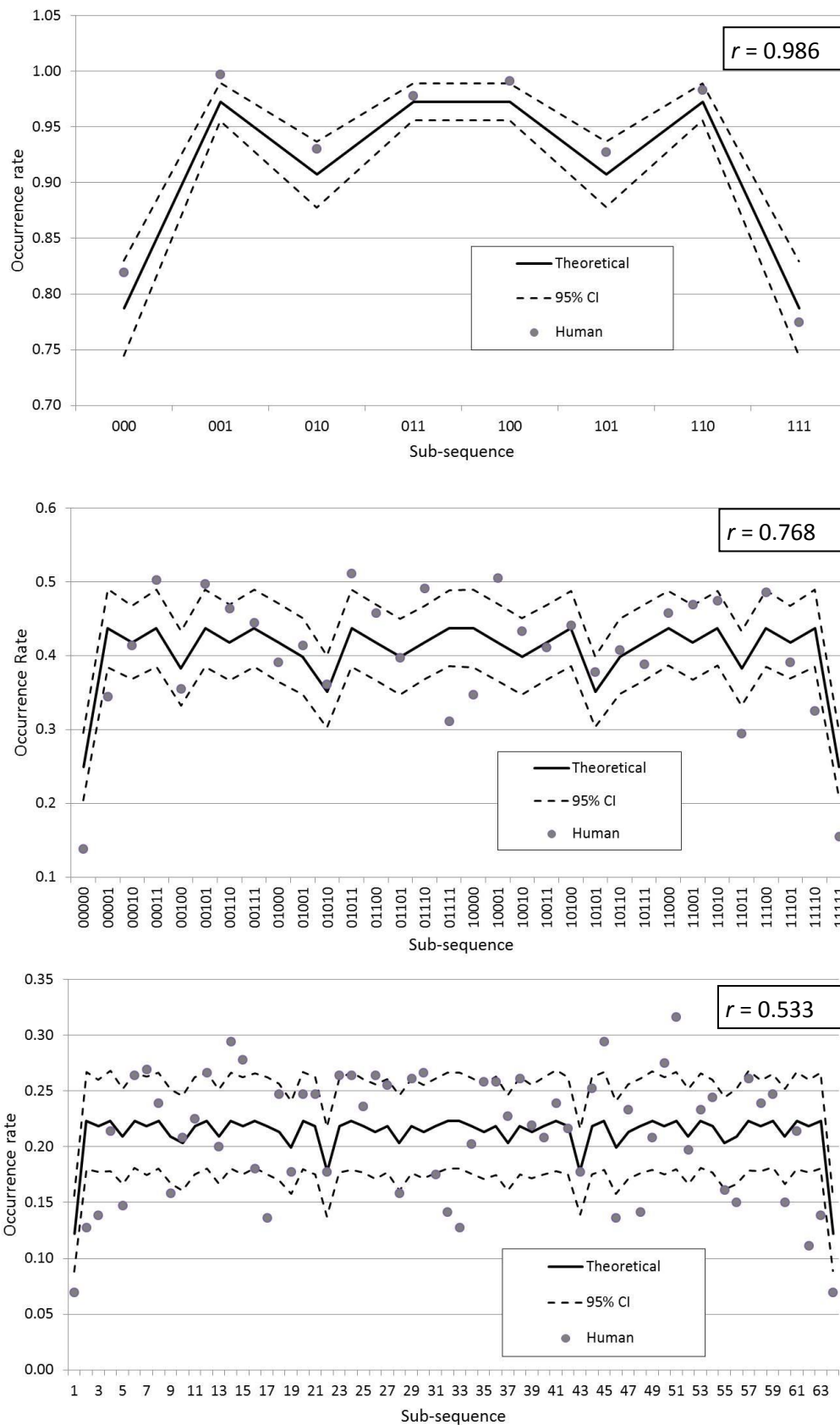
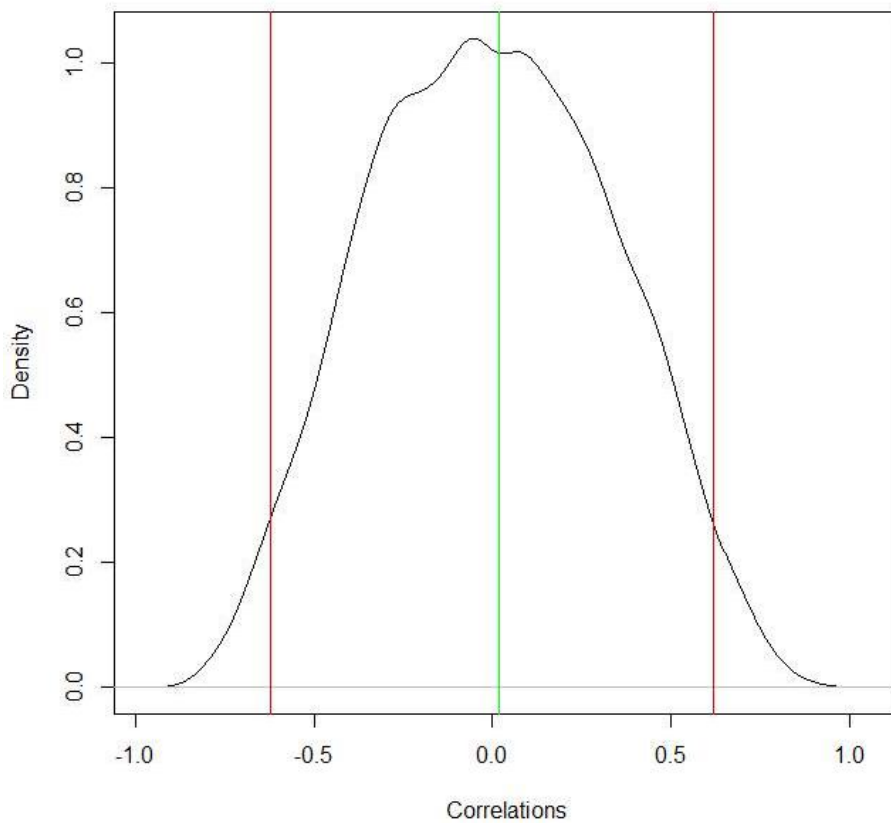


Figure S2: Occurrence rates for varying window length;  $k = 3$  (top panel),  $k = 5$ , middle panel,  $k = 6$  (bottom panel). These figures are analogous to those seen in figure1B of the main text.

### S3: Correlation between $k = 4$ subsequences in generated and observed sequence



*Figure S3: Subsequence frequencies ( $k = 4$ ) were generated for the  $30 \times 20$  bit sequences observed in the presentation phase. These frequencies were correlated against equivalent frequencies obtained from 1000 more  $30 \times 20$  bit sequences generated by an unbiased random process. The distribution of correlation coefficients is shown in black together with the 95% confidence intervals for the distribution indicated by red vertical lines. For comparison, the green vertical line shows the correlation between the equivalent frequencies for the aggregate participant-generated sequences and those observed in the presentation phase. This analysis suggests that the generated sequences did not have an atypically high correlation with those from the sequence observed in the presentation phase.*