



Figure 1: **Top left:** Experimental interface of the “Track-A-Mole” game. Participants could predict where the mole would appear next by clicking with the mouse to place a cross on a canvas. In this example, the prediction was fairly accurate and resulted in a high score (4 out of 5 stars). The score history for the current pattern-prediction trial is displayed in the top panel, together with a bar indicating the participant’s progress (here, fourth prediction in the first out of 19 pattern-prediction trials in the experiment). **All others:** Patterns used in the experiment, ordered by empirical difficulty. Numbers indicate when in the sequence a position would appear. Patterns are accompanied by high-level program code in our pattern language, from which they were generated.