



Proskurin, Manakov and Karpova, Figure 1 - figure supplement 3 | Strategy encoding in the ACC. Cross-validated performance errors for linear classifiers trained to distinguish components of different strategies based on ACC neural activity in a decoding window anchored on side (choice) port entry. $n=36$ sessions, $N=4$ animals for all basic sequence task comparisons; $n=9$ sessions, $N=3$ animals for competitor sessions; $n=11$ sessions, $N=1$ animal for circularly permuted strategies; $n=8$ sessions, $N=3$ animals for 1st R in 'RRL' vs 'RLL' (or L in 'LLR' vs 'LRR' decoding). ***, $p < 0.001$.

Note that in the non-sequential task, animals were eligible to receive a reward at the chosen port only if their choice differed from that predicted by the computer (a virtual competitor) programmed to search the history of animal's performance for behavioral patterns (Barracough et al., 2004; Tervo et al., 2014). Our previous work had established that when challenged with a virtual competitor that they cannot defeat by counter-prediction, rats switch to a 'stochastic' mode, effectively abandoning strategic stringing together of individual choices into action sequences and making an independent choice on each trial (Tervo et al., 2014).