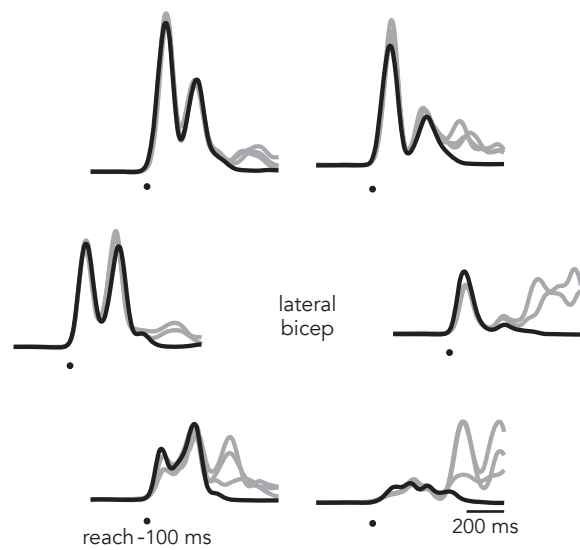


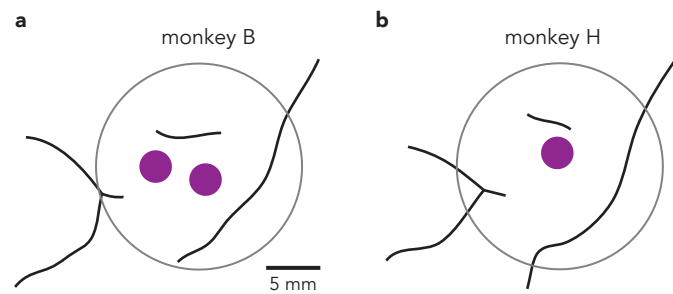
Supplementary Fig. 1



Supplementary Fig. 1| Additional example EMG.

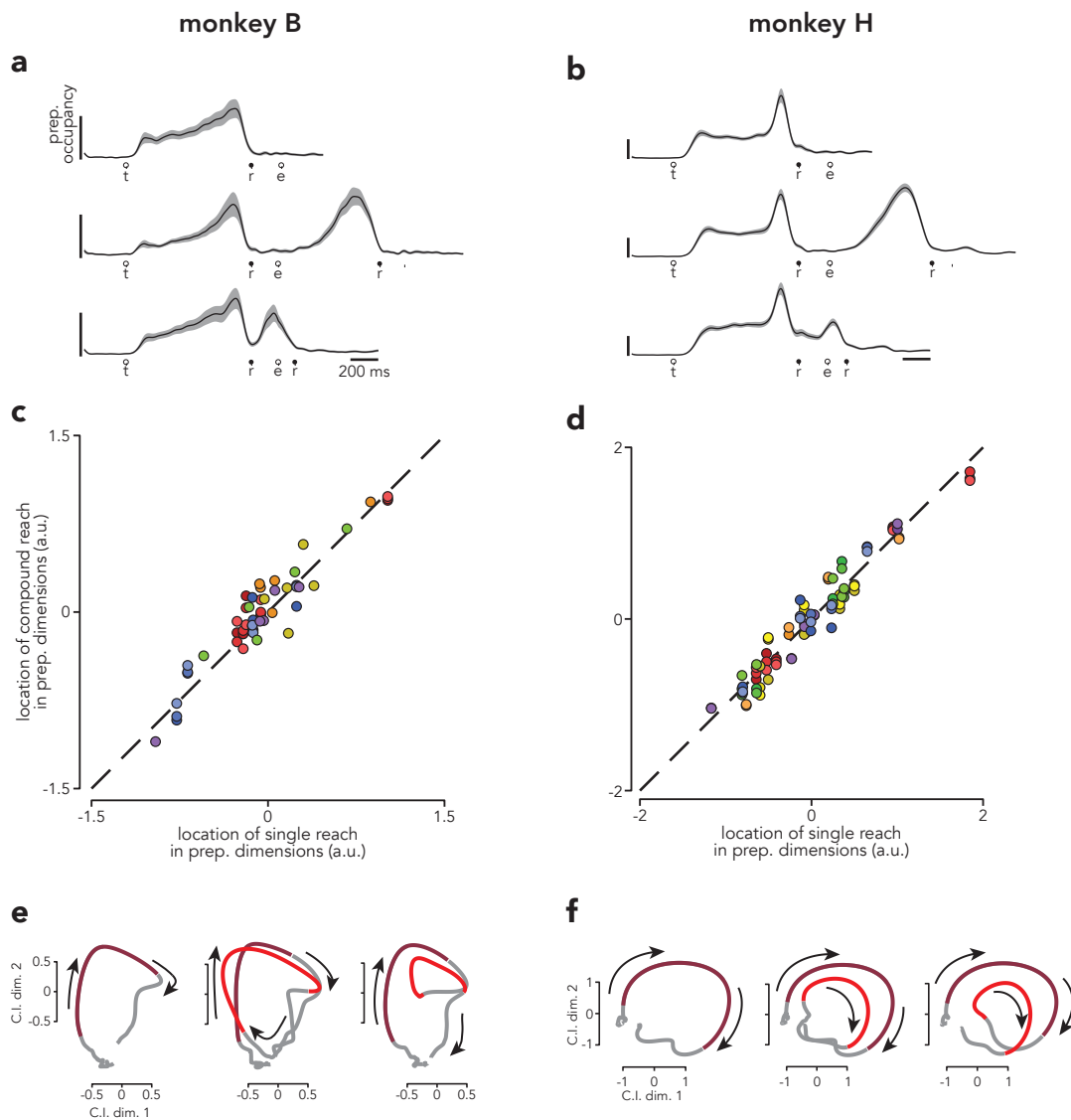
Mean EMG for single (*black*) and compound (*grey*) reach conditions, Monkey H. Circles indicate the time of reach onset minus 100 ms (the approximate latency between EMG onset and reach onset). The vertical scaling of the traces is arbitrary but consistent across all traces.

Supplementary Fig. 2



Supplementary Fig. 2 | Recording locations. a, Location of recording chamber (*grey*) and recording area (*purple*) relative to arcuate sulcus, pre-central dimple, and central sulcus (*black*, left to right). **b,** Same as **a** but for Monkey H.

Supplementary Fig. 3



Supplementary Fig. 3 | Populations of the best-isolated neurons obey the predictions of the independent hypothesis. a,b, Same analysis as Fig. 4d-f,k-m, performed after excluding multi-unit isolations. The restricted populations had 100 and 375 neurons for monkeys B and H, respectively. Circles indicate the time of target onset (t), reach onset (r), and reach end (e). **c,d**, Same, but for the analysis in Fig. 5c-d ($\rho = 0.95$ and 0.97 , respectively). **e,f**, Same, but for the analysis in Fig. 6.