$P_{ij} = P(X_{t+1} = j \mid X_t = i)$ What types do they prefer in the next lap? Count of $i \rightarrow j$ transitions Total count of transitions from iOverall X A1 B1 A2 B2 Probability Lap type **Transition Matrix** 50% 0 0.7 Passive 0.67 0.23 0.01 0.07 0.01 No Licking 0.6 **Passive** 0.70 0.07 0.13 0.02 0.03 0.04 Licking 0.5 Active 0.35 0.42 0.07 0.01 0.14 Licking 0.4 i Active 0.02 0.34 0.38 0.11 0.01 0.15 0.3 **Precise** Aborted 0.2 X 0.12 0.15 0.03 0.58 0.11 No Licking **Aborted** 0.1 0.02 0.26 0.26 0.04 0.14 0.28 Licking 20 60 80 100 120 40 Position (cm) $M_{ij} = rac{P_{ij}}{\pi_j} = rac{P(X_{t+1} = j \mid X_t = i)}{P(X_t = j)}$ $\log_{10}(M_{ij})$ **Passive Passive Passive** No Licking Licking No Licking Active **Passive** Licking **Precise** Active Licking Active **Precise** Aborted No Licking Active **Aborted Aborted** Licking Licking No Licking Passive No Licking Passive Licking Active Licking Aborted No Licking Aborted Licking Aborted Licking

