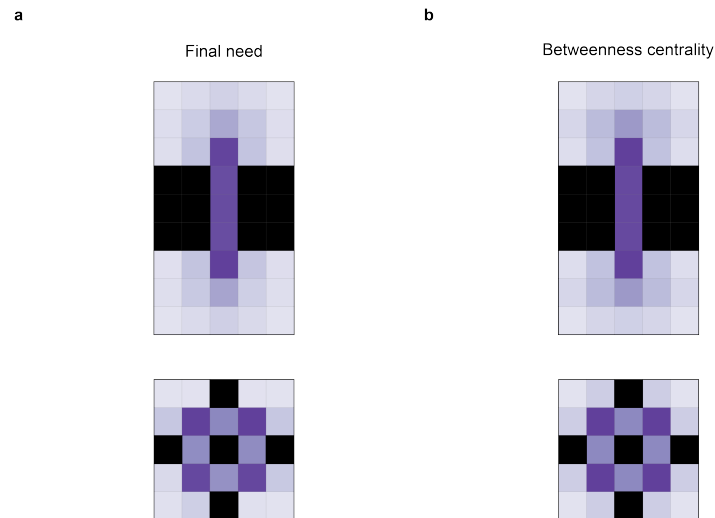# Appendix A. Supplement

Figure A.6: **Need metric captures important elements of environment topology.** **(a)** Examples of final need, reproduced from Fig. 2. **(b)** Betweenness-centrality computed for the bottleneck chamber (top) and the community graph maze (bottom).
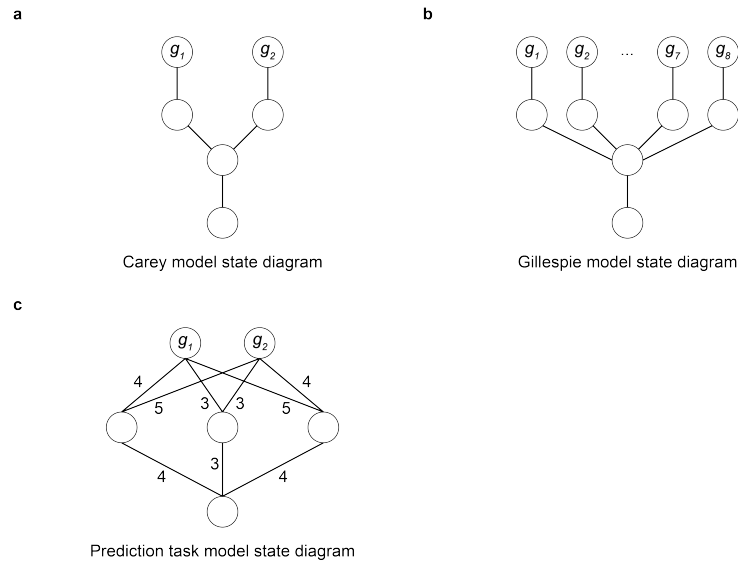
Figure A.7: **State diagrams for the simulations in Sections 3.2 and 3.3.** **(a)** State diagram for our model of Carey et al. [35] **(b)** State diagram for our model of Gillespie et al. [32] **(**c) State diagram for our model of the prediction task in Section 3.3. Numbers indicate distances (e.g., the left bottleneck state requires four steps to reach g_1), which are implemented through intermediate states (not shown).