Recall: Bounded 2-player Motion Planning \([C7]\)
Characterization: 2-player motion planning with DAG gadgets is \(\text{PSPACE}\)-complete iff some gadget is nontrivial: has \(\geq 1\) transition
[Demaine, Hendrickson, Lynch - arXiv 2018]

Examples:

\[
\begin{array}{c}
\text{1} \\
\downarrow a \\
\text{2}
\end{array} & \begin{array}{c}
\text{2} \\
\downarrow \uparrow a \\
\text{1} \\
\text{2}
\end{array}
\]

Single-use 1-way Single-use 2-way

Characterization: team motion planning with DAG gadgets is \(\text{NEXPTIME}\)-complete iff some gadget is nontrivial: has \(\geq 1\) transition
[Demaine, Hendrickson, Lynch - arXiv 2018]

Partial Characterization: 2-player/team motion planning is \(\text{EXPTIME}\)-complete/undecidable if some gadget is deterministic, reversible, and has interacting tunnels: traversal of some tunnel affects traversability of another tunnel (like unbounded 1-player characterization)