



Figure S 1 Network models and their collapsed versions. The collapsed networks (bottom panels) represent simplified versions of the true networks (top panels), where nodes other than Q, Y_1 and Y_2 are ignored, even though they still represent the correct causal flow among these three nodes in the true network. Consider, for example, network c and its collapsed version c' . The path $Q \rightarrow Y_3 \rightarrow Y_1$ in c is collapsed to $Q \rightarrow Y_1$ in c' . The paths $Y_1 \rightarrow Y_5 \rightarrow Y_2$ and $Y_1 \rightarrow Y_6 \rightarrow Y_2$ in c are collapsed to $Y_1 \rightarrow Y_2$ in c' . The path $Q \rightarrow Y_3 \rightarrow Y_4 \rightarrow Y_7 \rightarrow Y_2$ in c is collapsed to $Q \rightarrow Y_2$ in c' .