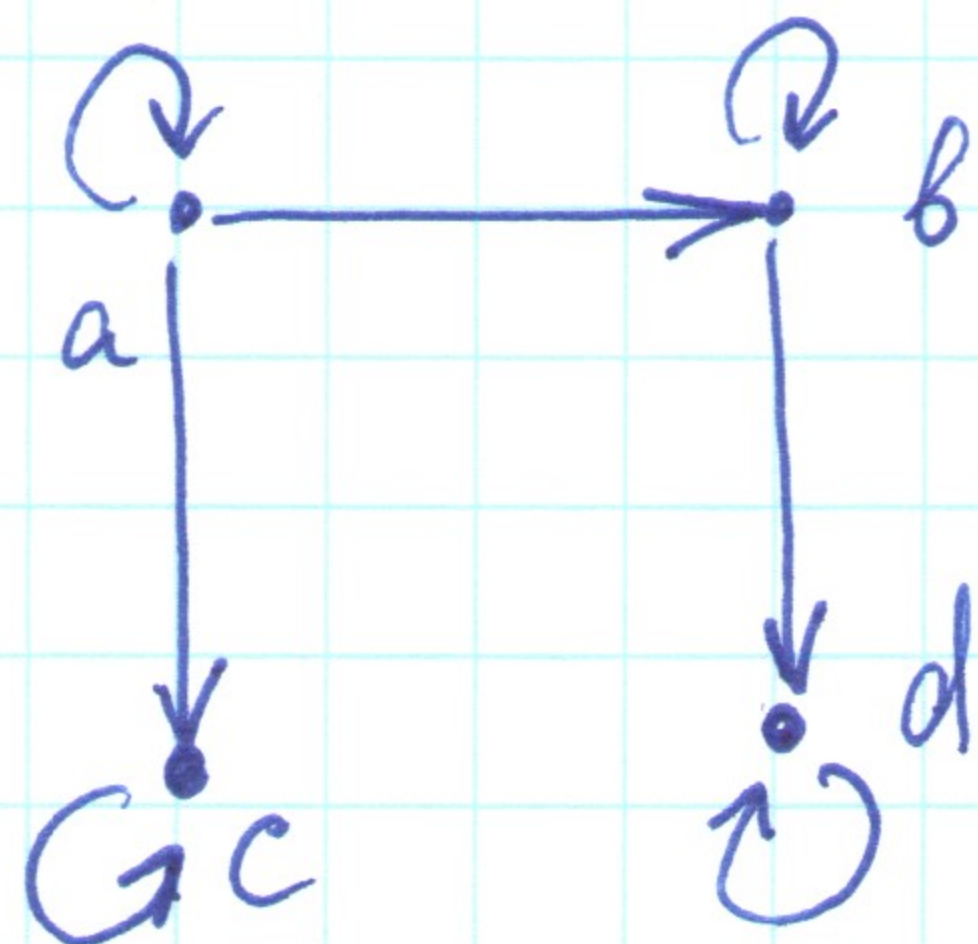


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- reflexive (all loops are present)
- asymmetric (a, b) , but no (b, a)
 (a, c) but no (c, a)
 (b, d) but no (d, b)
- not transitive (a, b) and (b, d) , but no (a, d)

Therefore, it is not a partial order.

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a) $\mathcal{P}(\{0, 1, 2\})$ is set of all possible subsets of $\{0, 1, 2\}$
 power set

$\{0\}$ and $\{1, 2\}$ are two incomparable elements, i.e.
 $\{0\} \not\subseteq \{1, 2\}$. (same for $\{1\}$ and $\{2\}$)

b) $(\{1, 2, 4, 6, 8\}, |)$

4 and 6 are two incomparable elements, because $4 \nmid 6$.
 (same for 6 and 8)