

Figure 2 (a): Two nodes with a temporal inconsistency forming a cycle ($A \rightarrow B \rightarrow A$), violating the DAG acyclic property.

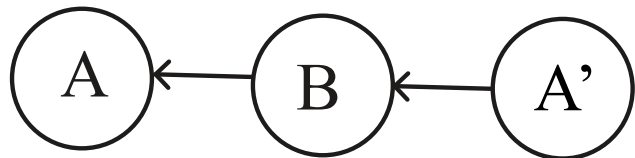


Figure 2 (b): Resolution via preprint insertion. A new node A' represents the later preprint version, creating the acyclic path $A \rightarrow B \rightarrow A'$.

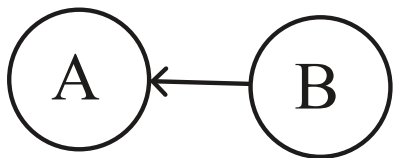


Figure 2 (c): Resolution via edge removal. The forward-pointing edge is deleted to break the cycle.

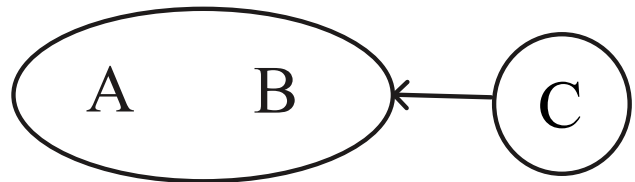


Figure 2 (d): Resolution via node grouping. Nodes A and B merge into a single "family" node inheriting all external connections (e.g., from node C).

Past Time