

university

multivariate networks comprise

- ✓ vertex set with at least one type of edge between pairs of nodes
- ✓ numerical and/or qualitative attributes on the vertices and edges

multivariate network data represented as multigraphs:

composition

structure





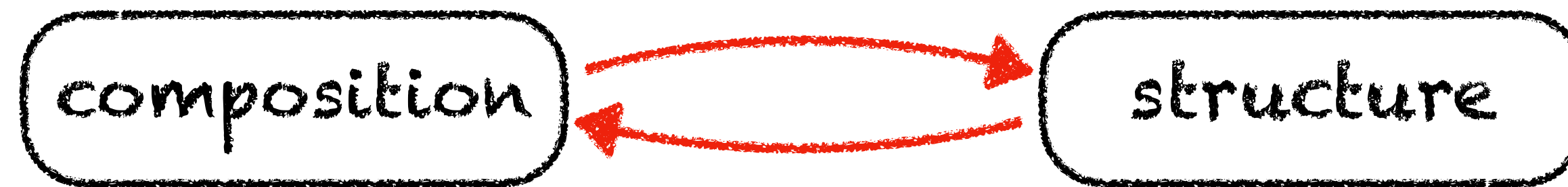
*‘graphs where **multiple edges** and **self-edges** are permitted’*

- ☑ can appear directly in applications (although scarce)
- ☑ can be constructed by different kinds of aggregations in graphs
 - ✓ node aggregation based on node attributes
 - ✓ tie aggregation based on tie attributes

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aggregated multigraphs

example: