



Figure 3.3.: **Complex networks can be formed by implicit and explicit relations..** Authorship networks are bipartite networks. If an article *A* is cited in a book *B*, one assumes, that authors of *B* know the content of *A*. This assumption is expressed as implicit link (see dashed gray link in left box). Citation and co-authorship networks are unipartite networks. They contain only nodes of one type. Bipartite mappings allow a transformation of bipartite networks by replacing one node type and its associated links (book and authorship) by a new link type (*'is co-author of'*) shown as a dashed blue arrow in the right box.