



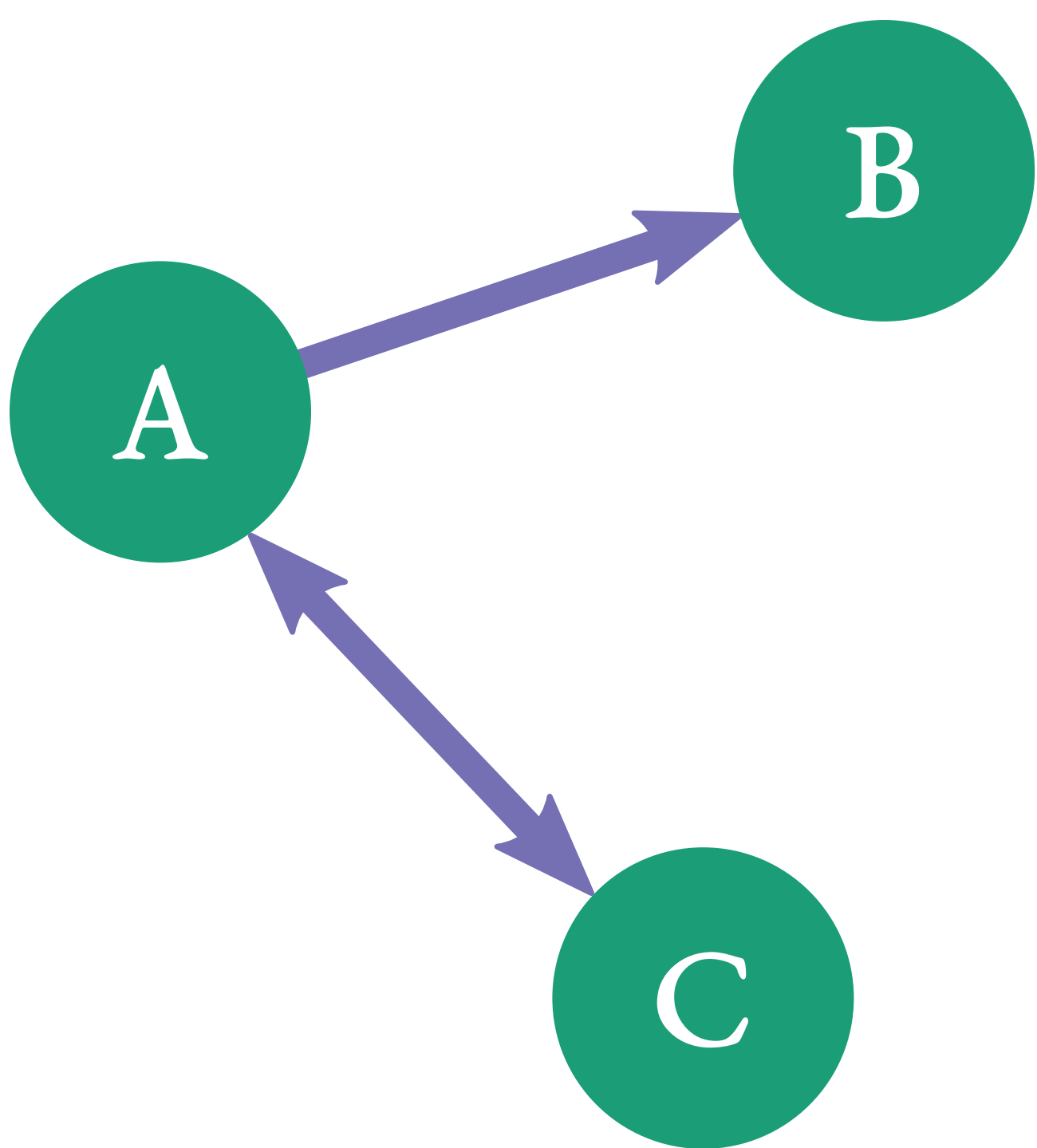
Mure.js: Toward Flexible Authoring and Reshaping of Networks

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Most current data wrangling tools focus on tabular data. One reason that graph data wrangling can be challenging is that the relationship between a graph abstraction and the raw data is more open-ended:

How are **nodes**, **edges**, and **attributes** interpreted from raw data?

This directed graph could be represented...



... as an Adjacency Matrix:

	A	B	C	
A				Nodes: rows + columns Edges: cells Attributes: cell values
B				
C				

... as Node-link Lists:

Nodes: unique strings			
A	B	C	
B			
C	A		
Edges: strings in same row Attributes: attached metadata			

... or as Relational Tables:

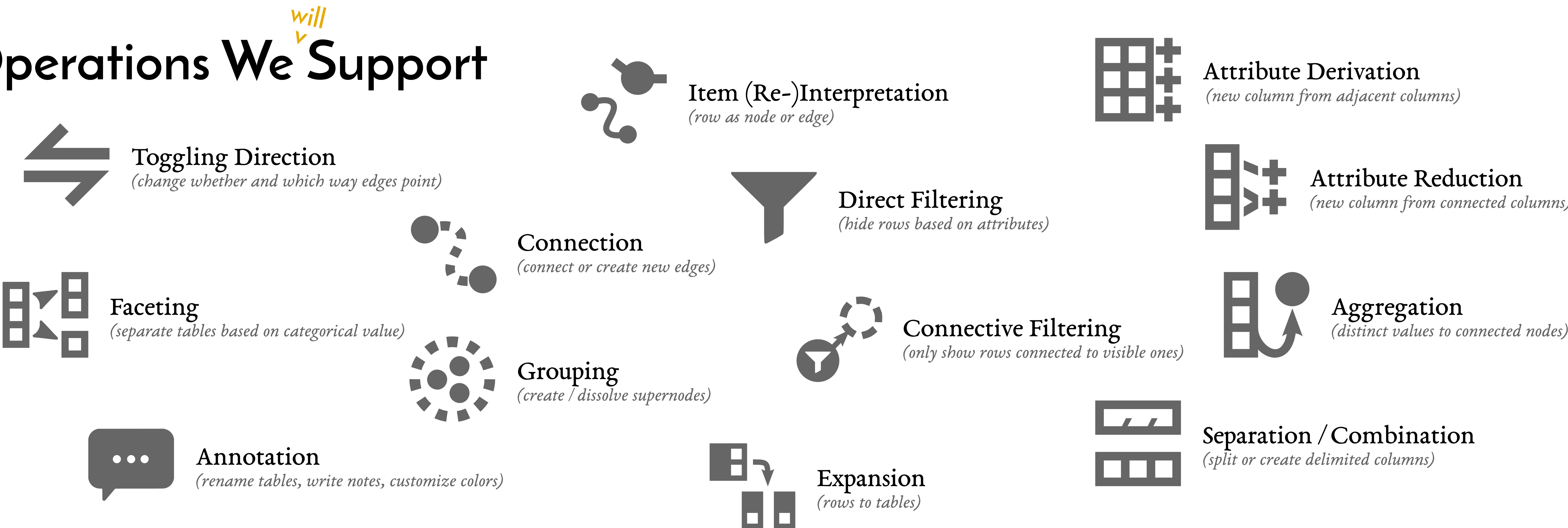
Node table		Edge table	
A		A	B
B		A	C
C		C	A
Attributes: additional columns			

Each structure has different strengths and weaknesses, such as support for node vs edge attributes, storage, etc. However, data abstractions based solely on the raw data may not map well to users' mental models or tasks.

What if our task requires a different data abstraction?

We present **origraph**, a data wrangling tool for interpreting—and re-interpreting—graph data. Its canonical format is a set of relational tables, but unlike existing approaches, which tables are considered nodes, which are edges, the meaning of attributes, and other considerations are exposed to the user for flexible refactoring.

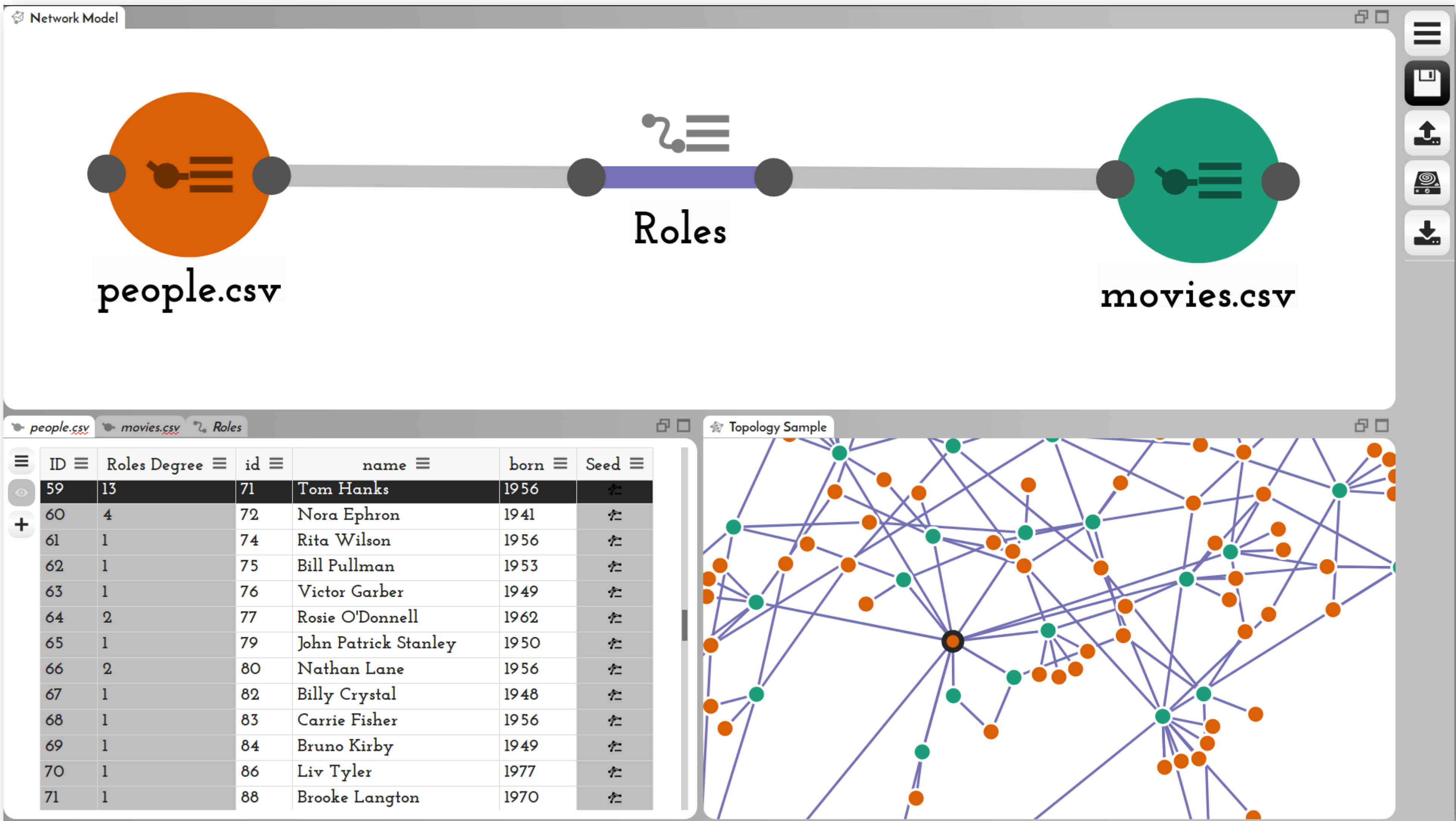
Operations We Support



Work in Progress

Our primary goal is to support reshaping small graphs interactively in the browser, and to make that process as expressive as possible. However, because the operations that we support are generalizable, it will be possible export an **origraph.js** script, based on interactions with a sample of a larger graph, that is capable of wrangling the full graph offline.

You can play with a pre-alpha version of the interactive tool at origraph.github.io, and follow or contribute to its open source development at github.com/origraph



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