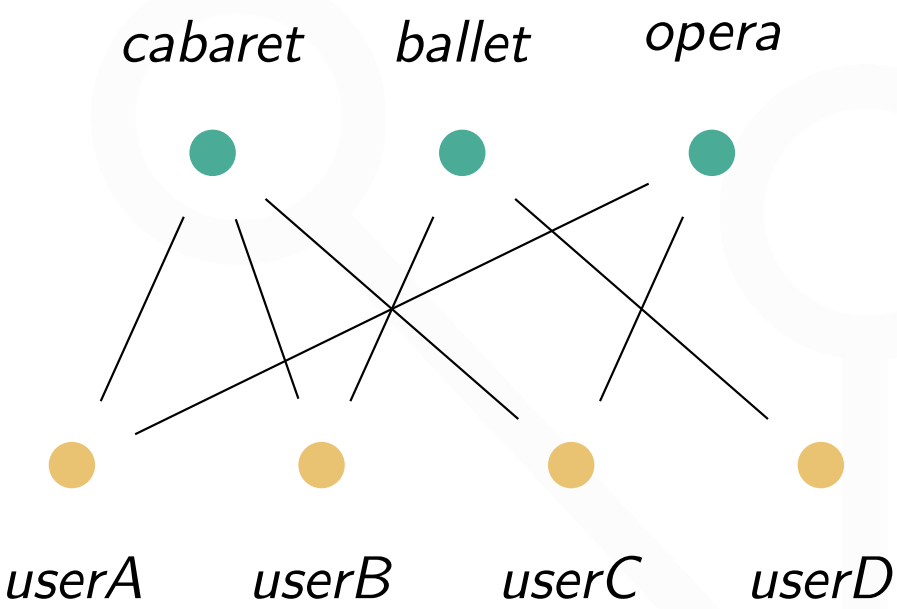
Social networks and their base of implications: **What?**

Object of Investigation, and Formalization



- bipartite networks (common in real world)
- there is a lack of random graph generators

- representation via context
- imagine formal concepts as maximal (bi-)cliques

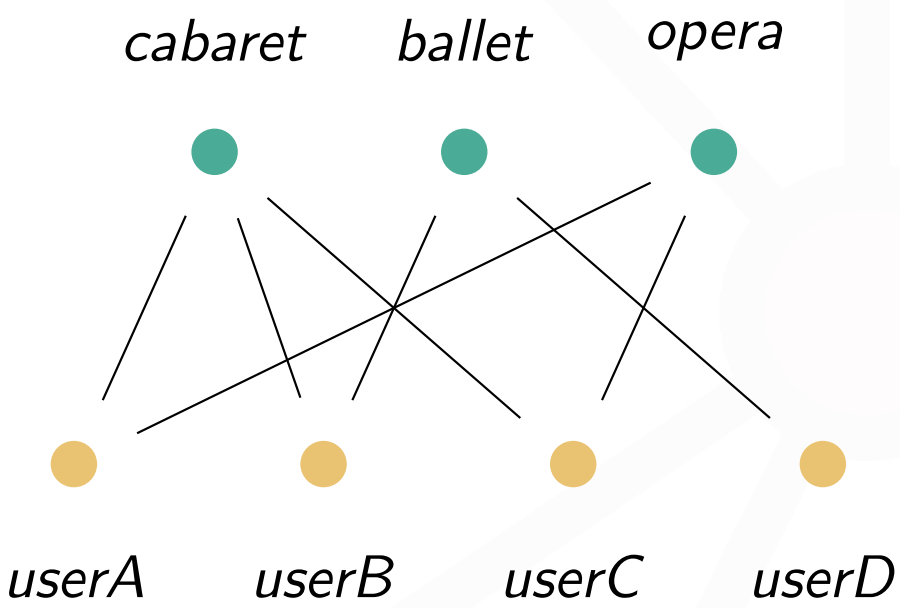
$\mathbb{K}_{misn}$	cabaret	ballet	opera
userA	×		×
userB	×	×	
userC	×		×
userD		×	

Social networks and their base of implications: **How?**

Attribute Implications / Canonical Base

Implication by example:

$\{\text{opera}\} \rightarrow \{\text{cabaret}\}$, so all users who like the opera also like cabaret.
This is true since
$\{\text{opera}\} \rightarrow \{\text{cabaret}\} \Leftrightarrow \{\text{userA,userC}\} \subseteq \{\text{userA,userB,userC}\}$



Canonical base

Base of all implications which is:

- sound
- complete
- non-redundant
- minimal

Social networks and their base of implications: **Results!**

Observations - Introduce a new measure?

You see:

- Different random network generators generate different distributions.