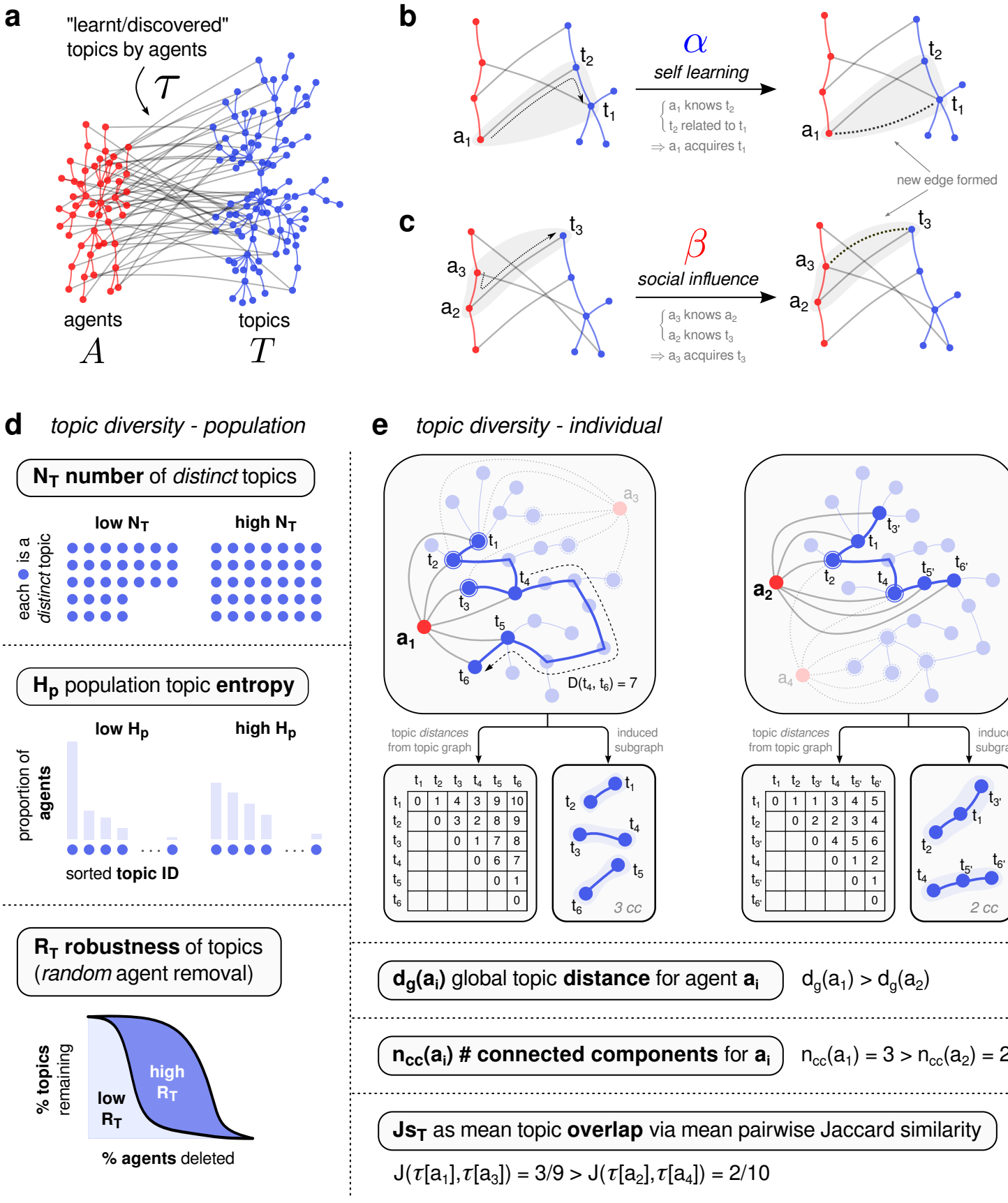
a
"learnt/discovered"
topics by agents
τ
agents
A
topics
T
b
α
self learning
a1 knows t2
t2 related to t1
⇒ a1 acquires t1
new edge formed
c
β
social influence
a3 knows a2
a2 knows t3
⇒ a3 acquires t3
d
topic diversity - population
NT number of distinct topics
low NT
high NT
each is a distinct topic
Hp population topic entropy
low Hp
high Hp
proportion of agents
sorted topic ID
RT robustness of topics
(random agent removal)
% topics remaining
low RT
high RT
% agents deleted
e
topic diversity - individual
D(t4, t6) = 7
topic distances from topic graph
induced subgraph
3 cc
2 cc
dg(ai) global topic distance for agent ai
dg(a1) > dg(a2)
ncc(ai) # connected components for ai
ncc(a1) = 3 > ncc(a2) = 2
JsT as mean topic overlap via mean pairwise Jaccard similarity
J(τ[a1],τ[a3]) = 3/9 > J(τ[a2],τ[a4]) = 2/10