

Socio-technical systems for successful innovation

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ICT CLUSTER VARNA

BSMEPA
BULGARIAN SMALL AND MEDIUM ENTERPRISES PROMOTION AGENCY

BAPHA

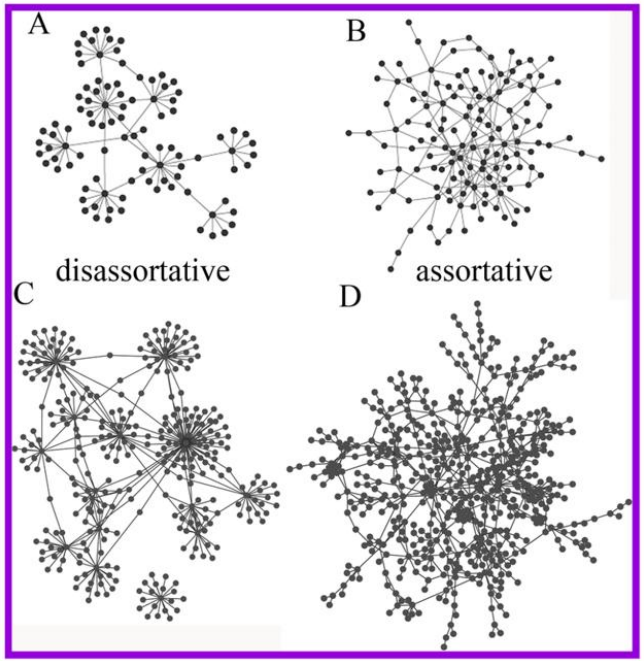
BRAIN++
AI FACTORY

ARC FUND

Different configurations of socio-technical networks

Disassortative:

- Opposites attract
- A few “brokers”
- Constructive friction
- Fragile because of lack of redundancy



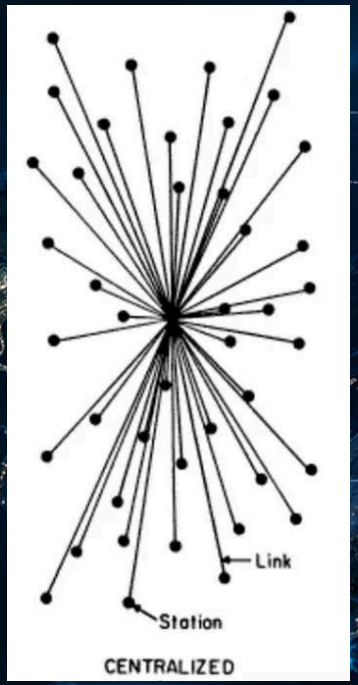
Hao & Li, 2011

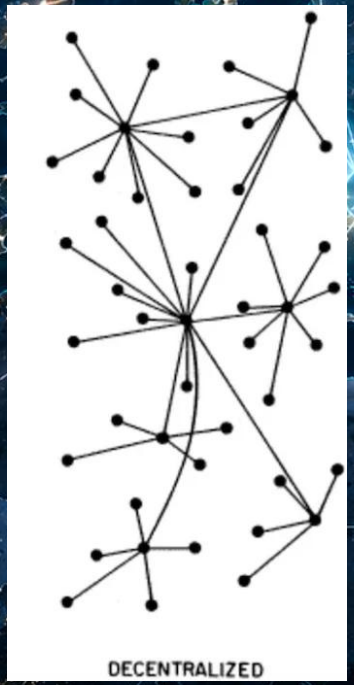
Assortative:

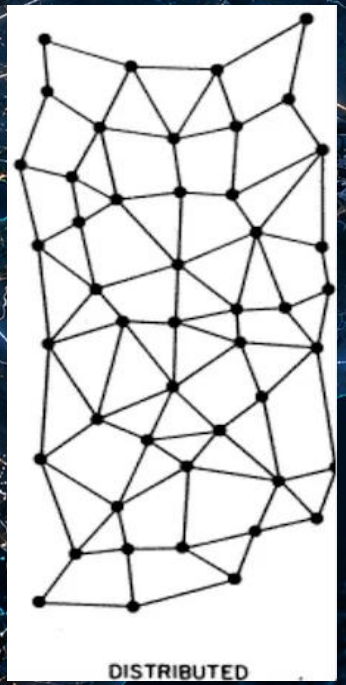
- Like connects with like
- Elitist
- Fragile because of unclear structure

How about a hybrid model?

Control, authority and power in the network







Aim for robustness

- Durable socio-technical environments are **not resilient, but robust**

Robustness implies:

- Redundancy
- Heterogeneity
- Interdependency and symbiosis
- Adaptability
- Scalability
- Cooperation instead of competition
- Random instead of structured information exchange

Instead of

"How do we extract the maximum value from a technology as quickly as possible?"

a robust tech development model asks,

"How do we ensure technology successfully adapts, survives, and remains durably viable across unpredictable deviations?"