MIT Trust Data Alliance

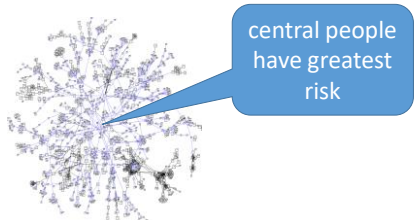
"this will change everything" UN Secretary General's Office

European Union Presidency Opening Keynote Speech

- Analytics for your organization
- Blockchain-based data control
- AI on distributed, encrypted data

Participants in trust.mit.edu alliance

Medical Problem: reduce virus spread

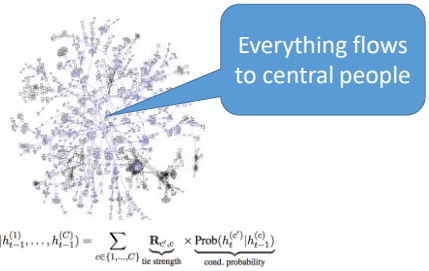


$$\text{Prob}(h_t^{\{c'\}}|h_{t-1}^{\{1\}},\ldots,h_{t-1}^{\{C\}}) = \sum_{c\in\{1,\ldots,C\}} \underbrace{\mathbf{R}_{c',c}}_{\text{tie strength}} \times \underbrace{\text{Prob}(h_t^{\{c'\}}|h_{t-1}^{\{c\}})}_{\text{cond. probability}}$$

Standard Recommendations

- No unnecessary travel, no meetings
- No physical contact, clean surfaces, scheduling, video
- Personal Hygiene, handwashing, gloves, masks, gowns
- Maintain Distance: very generous spaces, no cueing
- Ubiquitous surveillance, treatment protocols

Problem: information spread and virus spread are similar

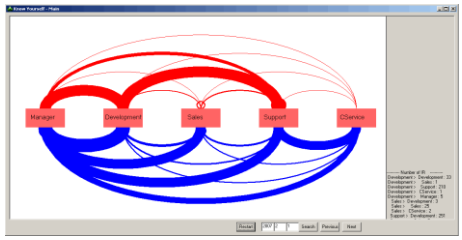


$$\text{Prob}(h_t^{(c')}|h_{t-1}^{(1)},\ldots,h_{t-1}^{(C)}) = \sum_{c\in\{1,\ldots,C\}} \underbrace{\mathbf{R}_{c',c}}_{\text{tie strength}} \times \underbrace{\text{Prob}(h_t^{(c')}|h_{t-1}^{(c)})}_{\text{cond. probability}}$$

Solution?

- **Go virtual!**
- **But this is not so simple as it looks…**

Problem: informal comms are *half* of decision quality



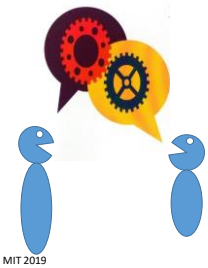
Harvard Business Review: Breakthrough Idea of the Year

Problem: mental health needs informal comms

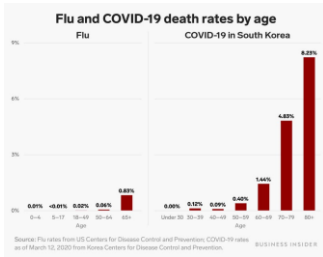
mind health depends on two-way, useful social interaction

just as

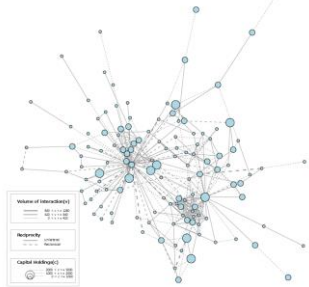
body health depends on repeated physical exertion



Problem: Solidarity…are we all in this together?



Problem: Trust is built on two-way interactions

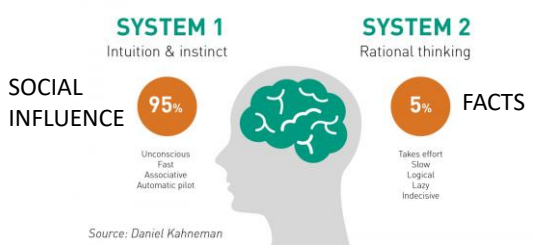


Frequency of two-way interactions predicts trust behaviors

behavior change: social incentives far more effective than individual incentives

130 people, 18 months data

One more problem: facts don't change behavior



So normal procedures have serious problems:

- No contact: hurts decisions, mental health, trust and solidarity
- Personal Hygiene: really hard, inadequate facilities
- Maintain Distance: expensive, often impractical
- Ubiquitous surveillance, rigid protocols:

A Wicked Problem: Flow of Ideas vs
Flow of Virus vs
Mental Health vs
Trust, Solidarity

All depend on social interactions
….and in very similar ways

How can we maximize idea flow, minimize virus flow, and maintain mental health and trust?

Minimize Problems by Managing Trade-offs

Infection vs Idea Flow

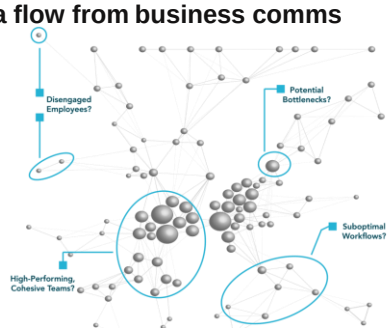
- Keep track of both idea flow and infection flow
- Lower cost of idea flow: secret voting in groups
  idea markets for innovation

Keep track of idea flow from business comms

Humanyze

http://humanyze.com

Idea flow:
avoid silos, bottlenecks, isolates



Note: this company is spin-off of Pentland lab

Map crowded areas in real-time (MIT campus)

Minimize Problems by Managing Trade-offs

Infection vs Trust, Mental Health, Solidarity

- Everybody heard, engaged. Peer-to-peer rewards.
- "flu buddies," maintain constant social support
- Motivate changes by making personal risk clear
- Consider local workspaces (e.g., WeWork)

Ginger.io

Social Support: emotional support in less than 60 seconds

Immediate human interaction, personalized using behavior data, has very large effect on average depression scores

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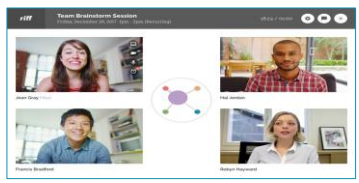
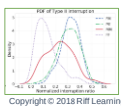
Make sure everyone feels heard, part of team

riff

riffanalytics.ai





Video and audio instrumentation to determine sentiment and bias from volume, tone and time stamps

Personalized AI-generated interventions that nudge people to improve their interactions

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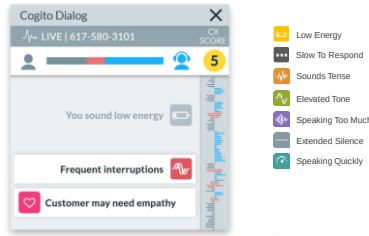
Engagement: "collision avoidance" in conversations

cogito

www.cogitocorp.com



provides ~30% improvement in customer satisfaction
provides ~60% improvement in employee stress

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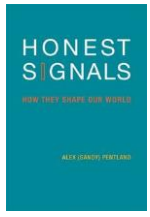

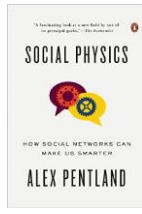

Read more!