

# From the Madness of Crowds to the Creativity of Swarms – Leveraging AI for Collaboration and Creativity

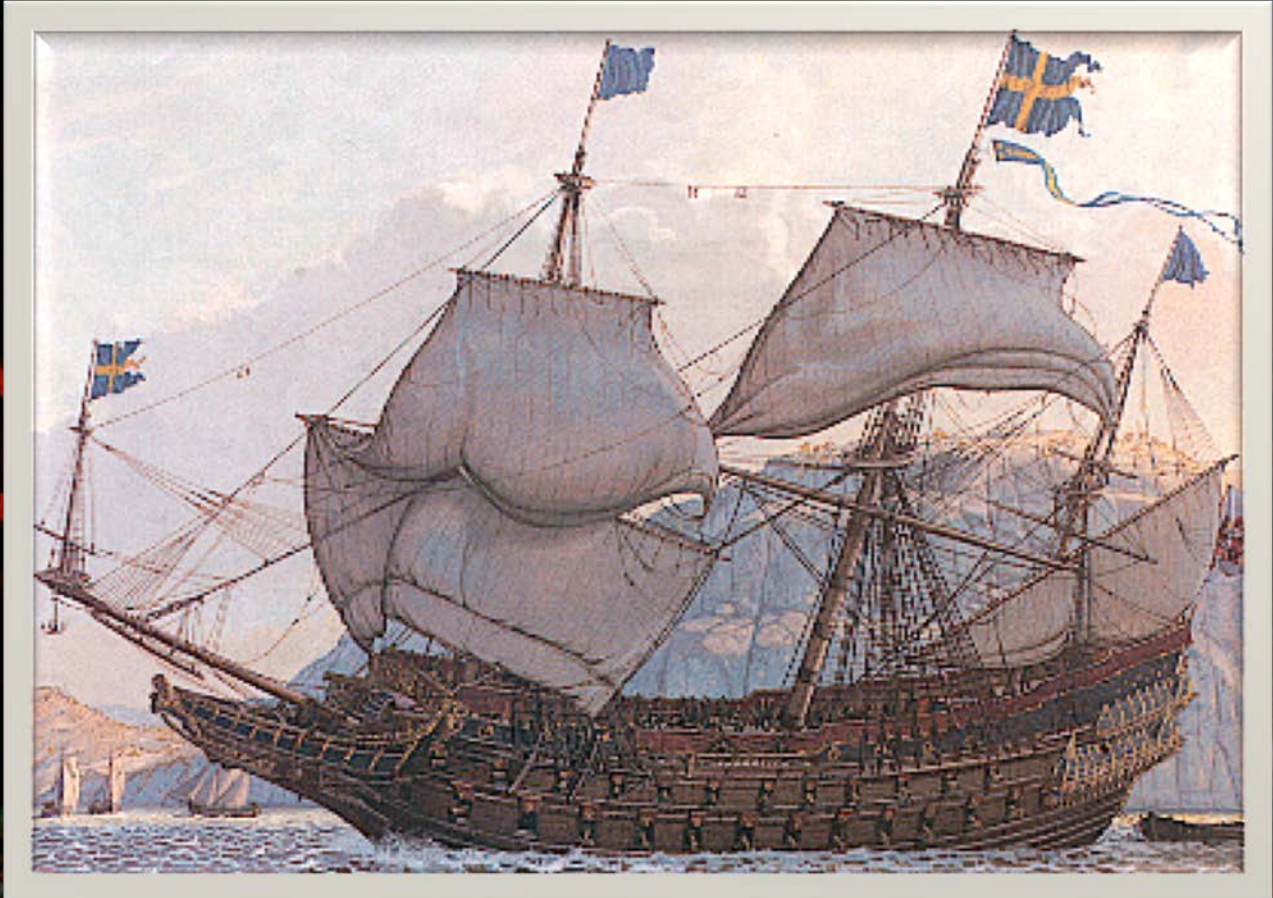
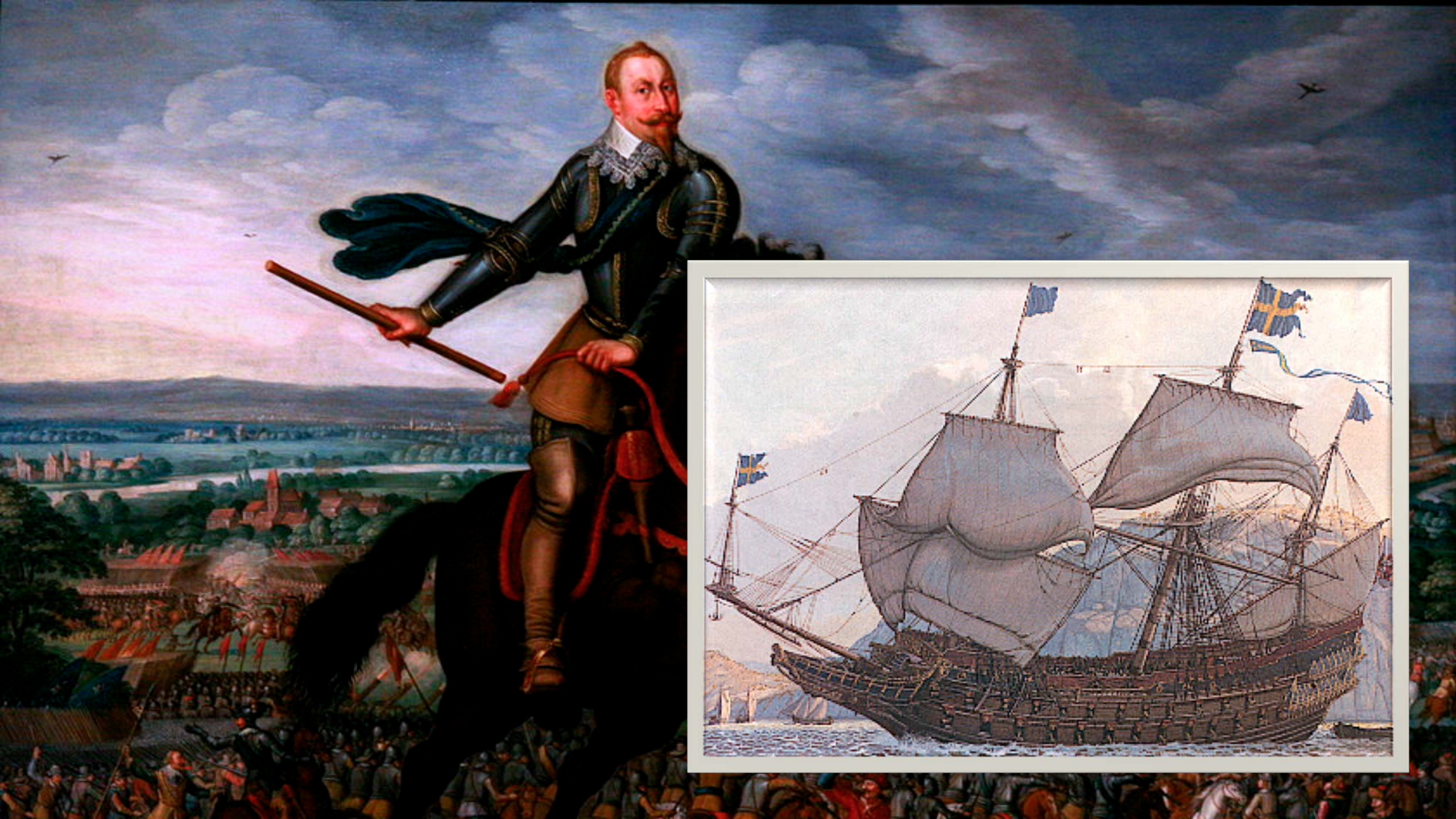


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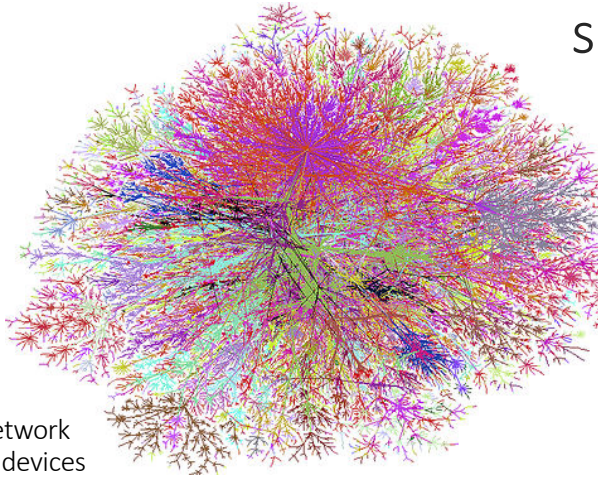


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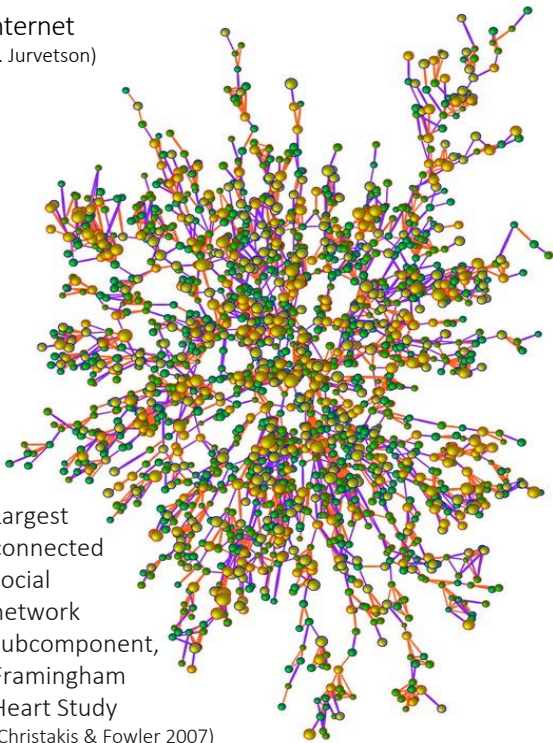
Step 1 - COINS

**Networks** represent interaction structures among sets of connected units.

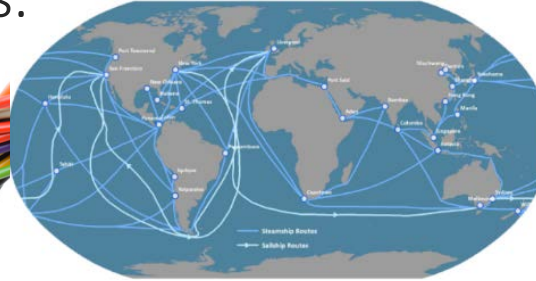


Network of devices within the Internet

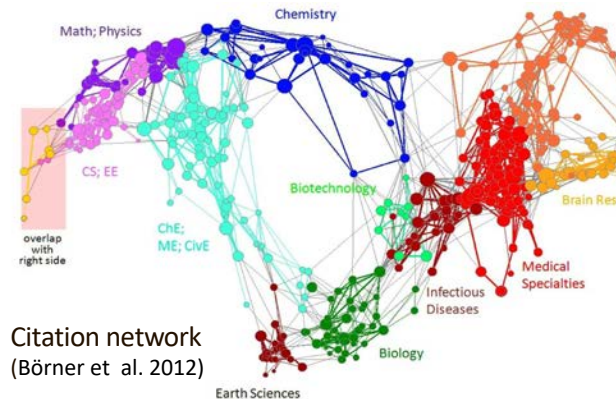
(S. Juvetson)



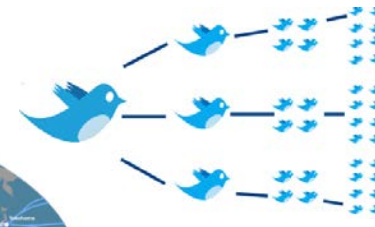
Largest connected social network subcomponent, Framingham Heart Study  
(Christakis & Fowler 2007)



World Trade Routes, 1912  
W.S. Morison.



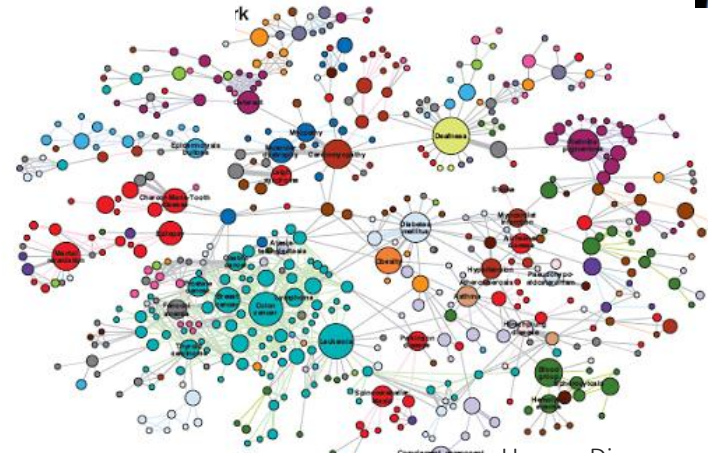
Citation network  
(Börner et al. 2012)



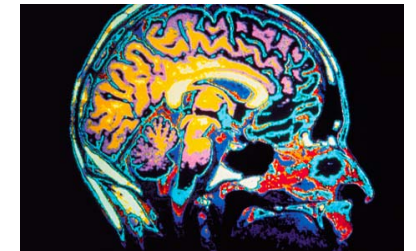
Knowledge and social networks



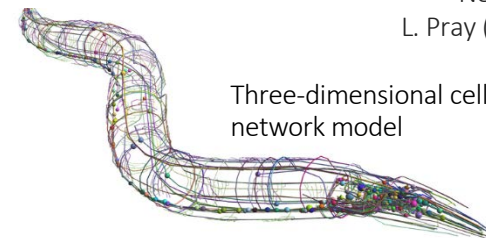
Economic networks include the stock exchange and currency markets.



Human Disease Network  
L. Pray (2008)



A number of biological systems may be modeled as networks. Human and other living beings are organic networks.



Three-dimensional cellular network model





creator

COIN

Collaborative  
Innovation Network

3-15

CLN

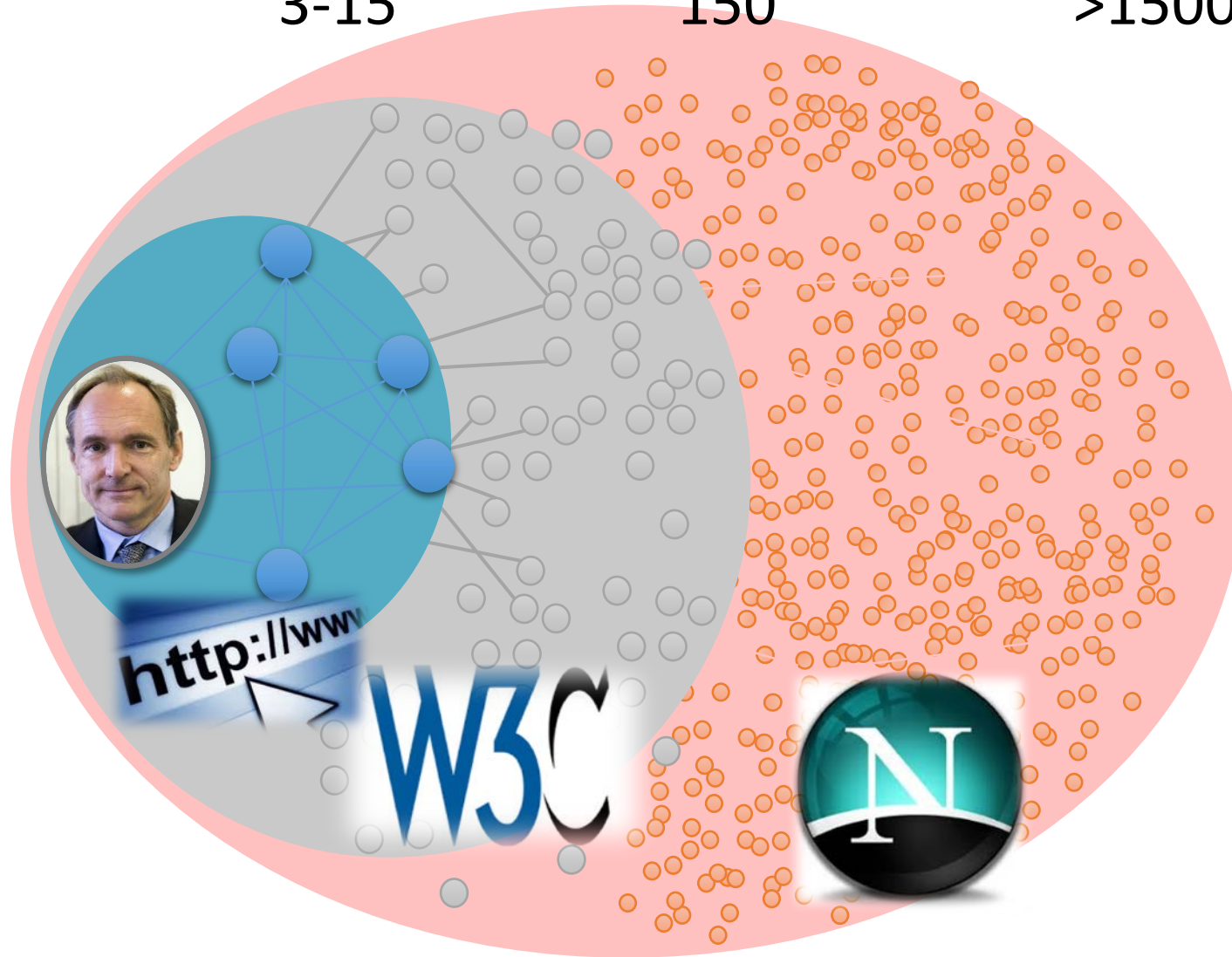
Collaborative  
Learning Network

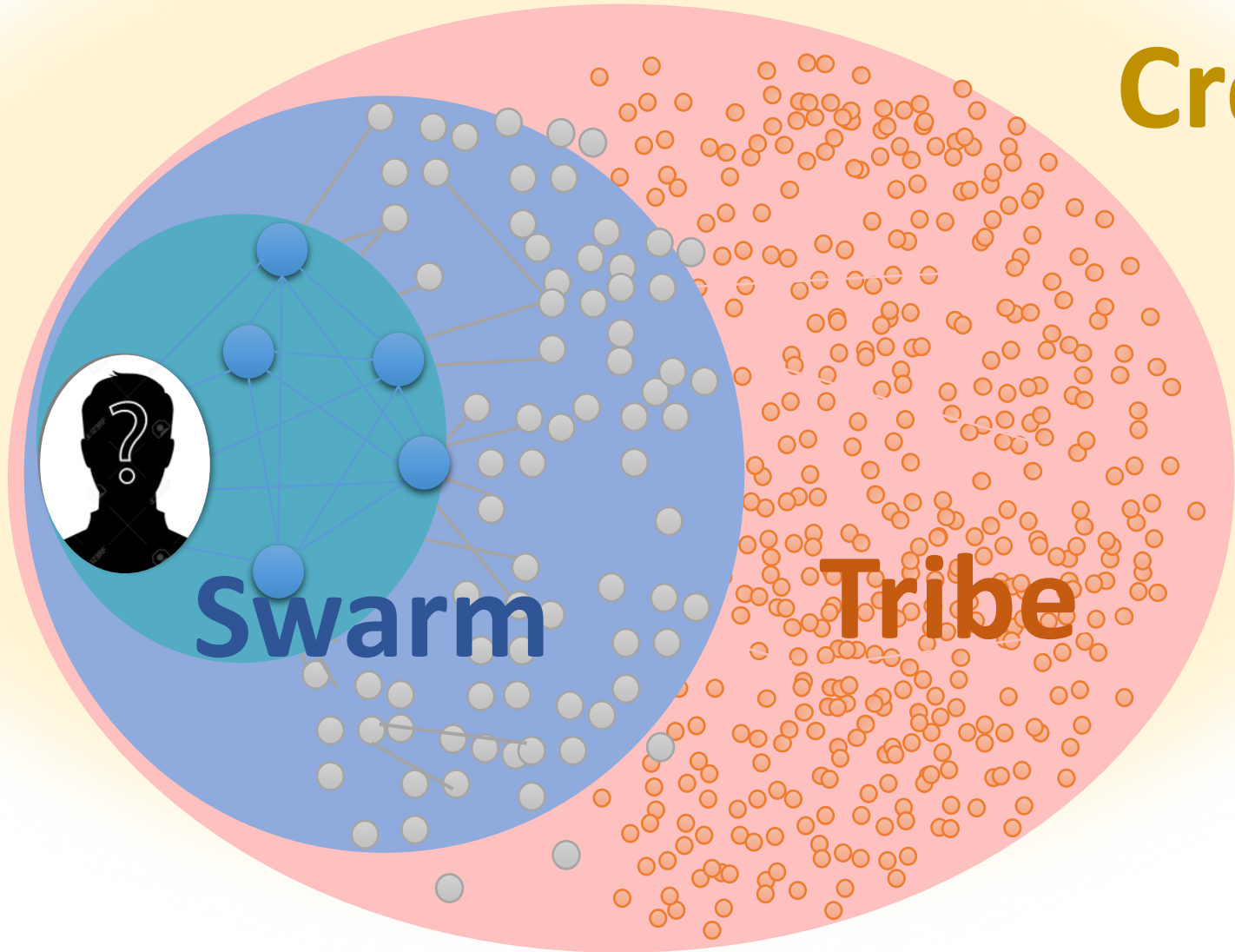
~ 150

CIN

Collaborative  
Interest Network

>1500





**Crowd**

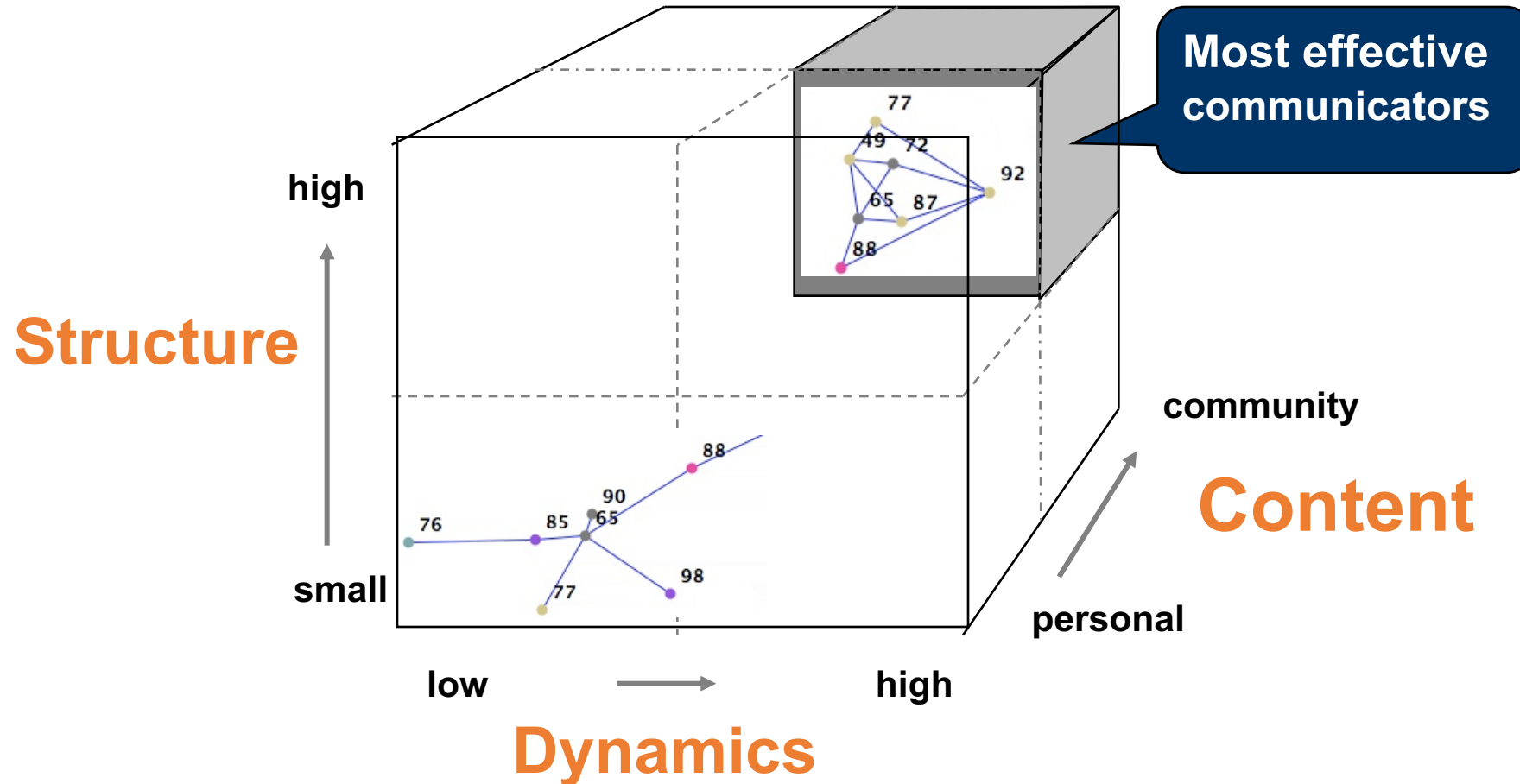
**Swarm**

**Tribe**

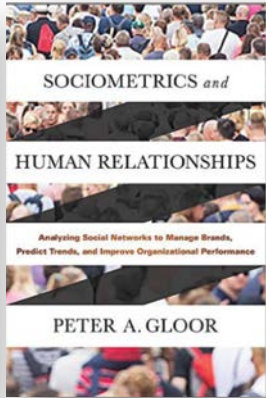
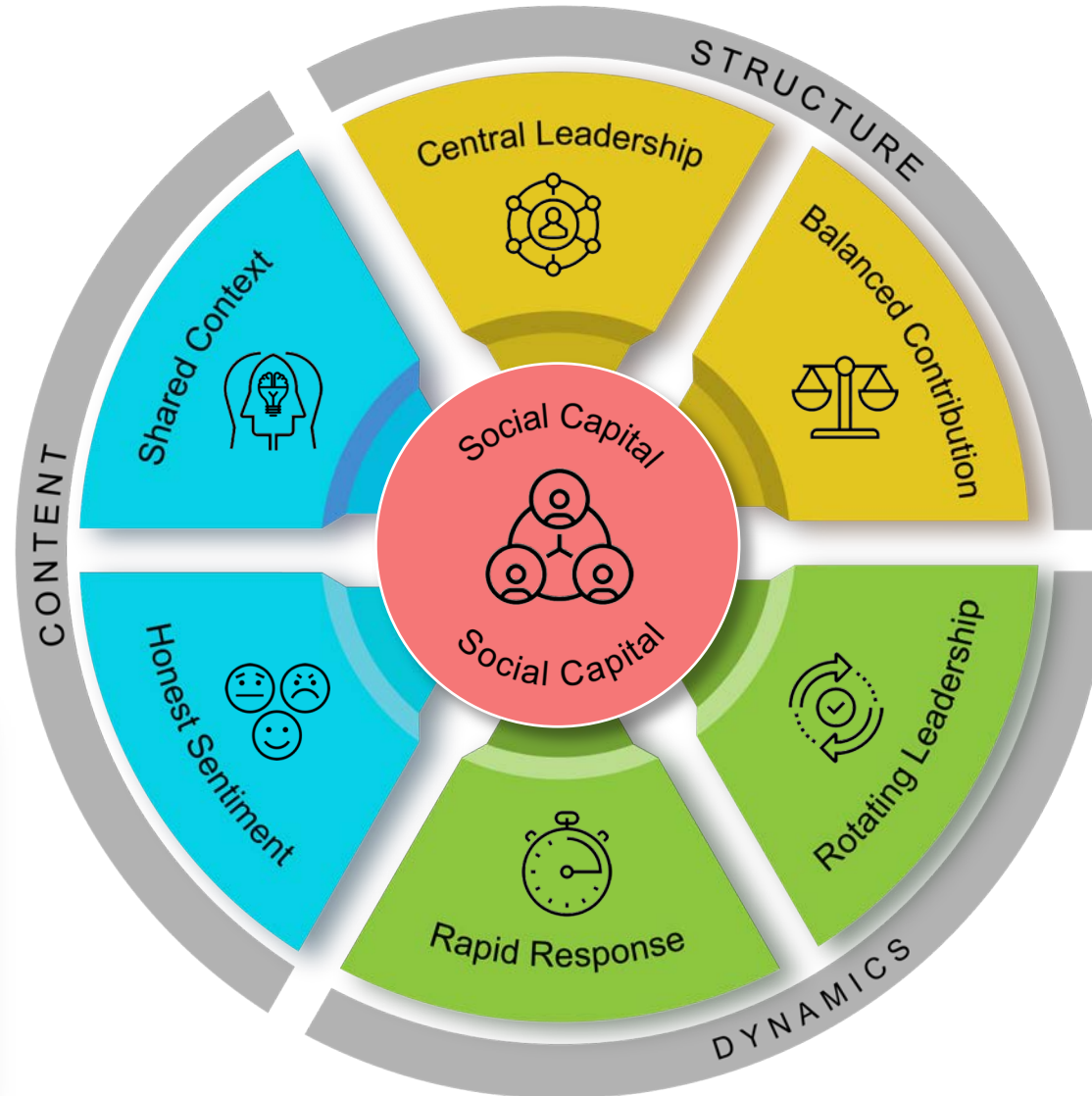
# Step 2 – 7 Signals for the Swarm



# People for Innovation

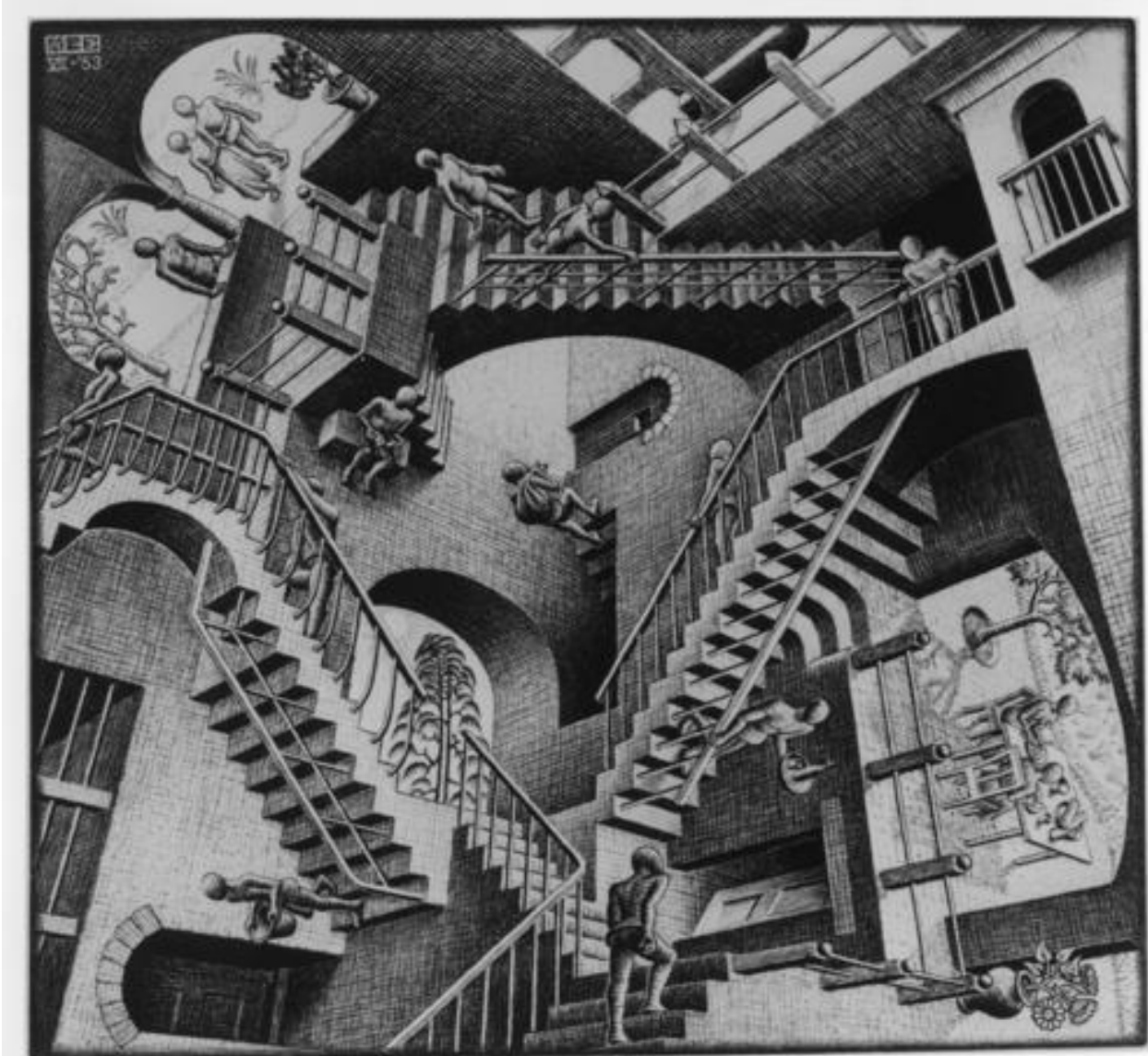


# 7 Honest Signals of Collaboration



Step 3 - Tribes

Everybody lives in a different reality





CHRISTOPHER

NORMAL

ST CHRISTOPHER

UV

ST CHRISTOPHER

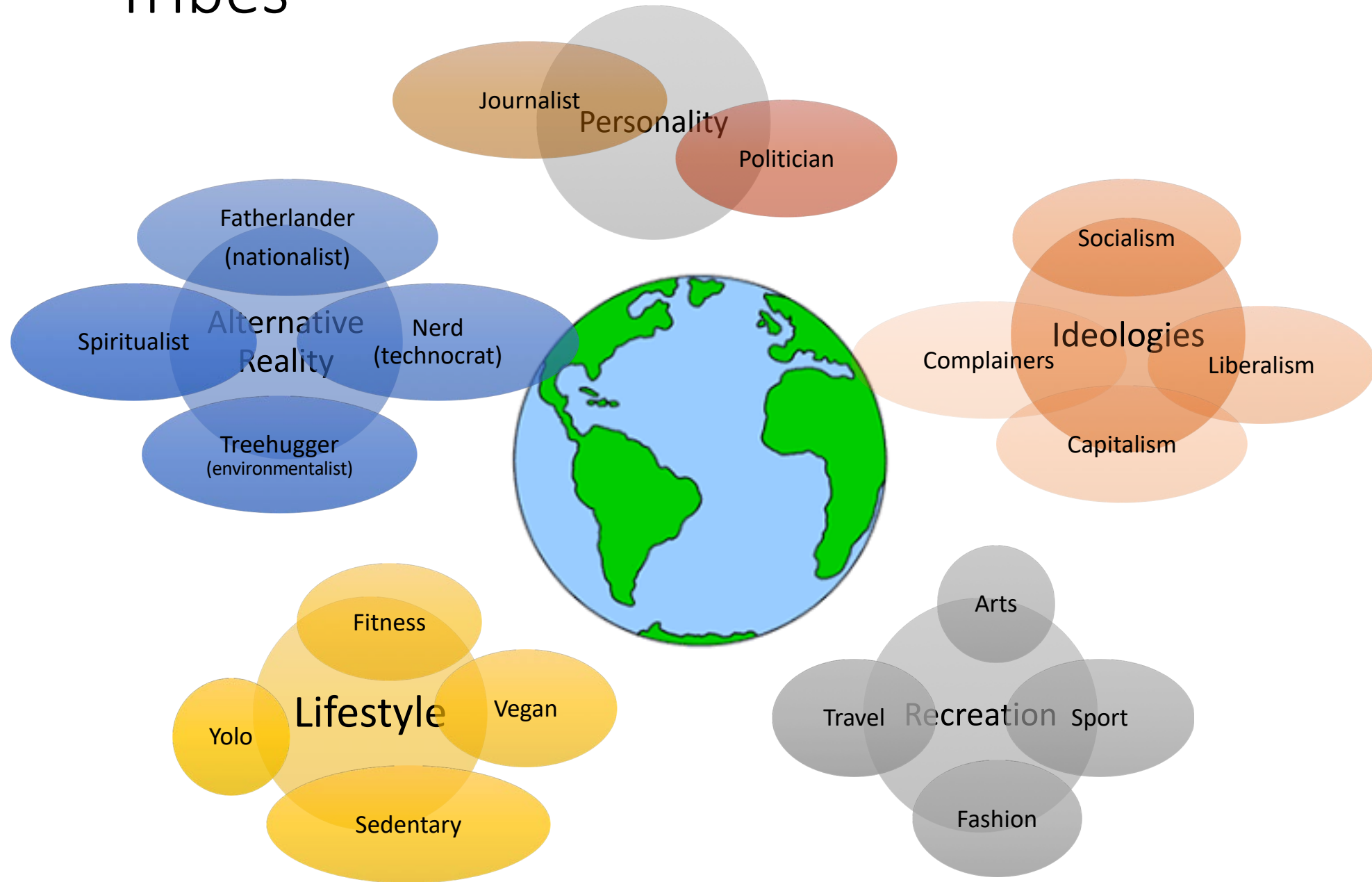
IRR

ST CHRISTOPHER

X-F



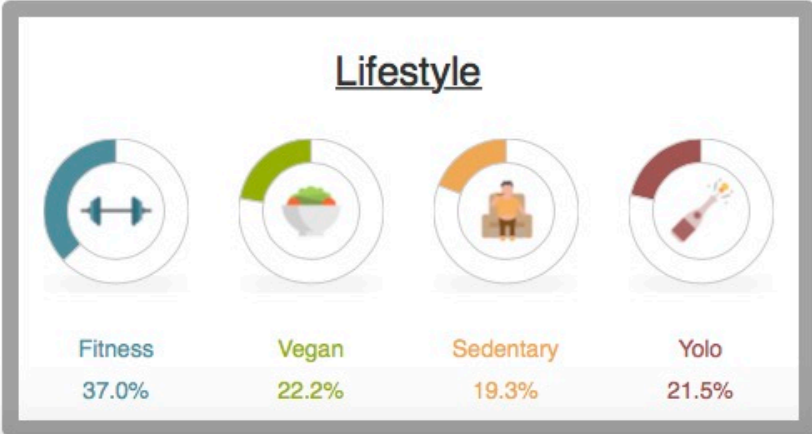
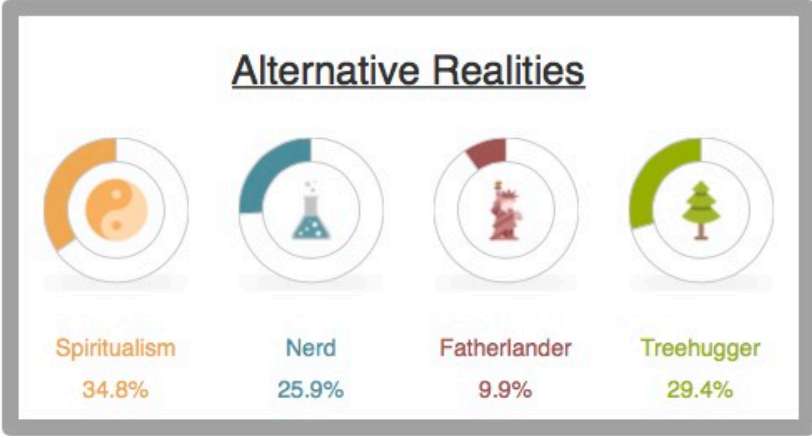
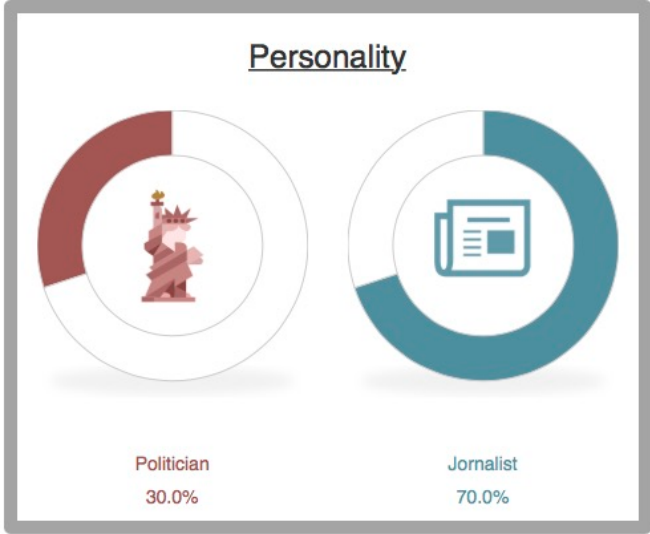
# Tribes





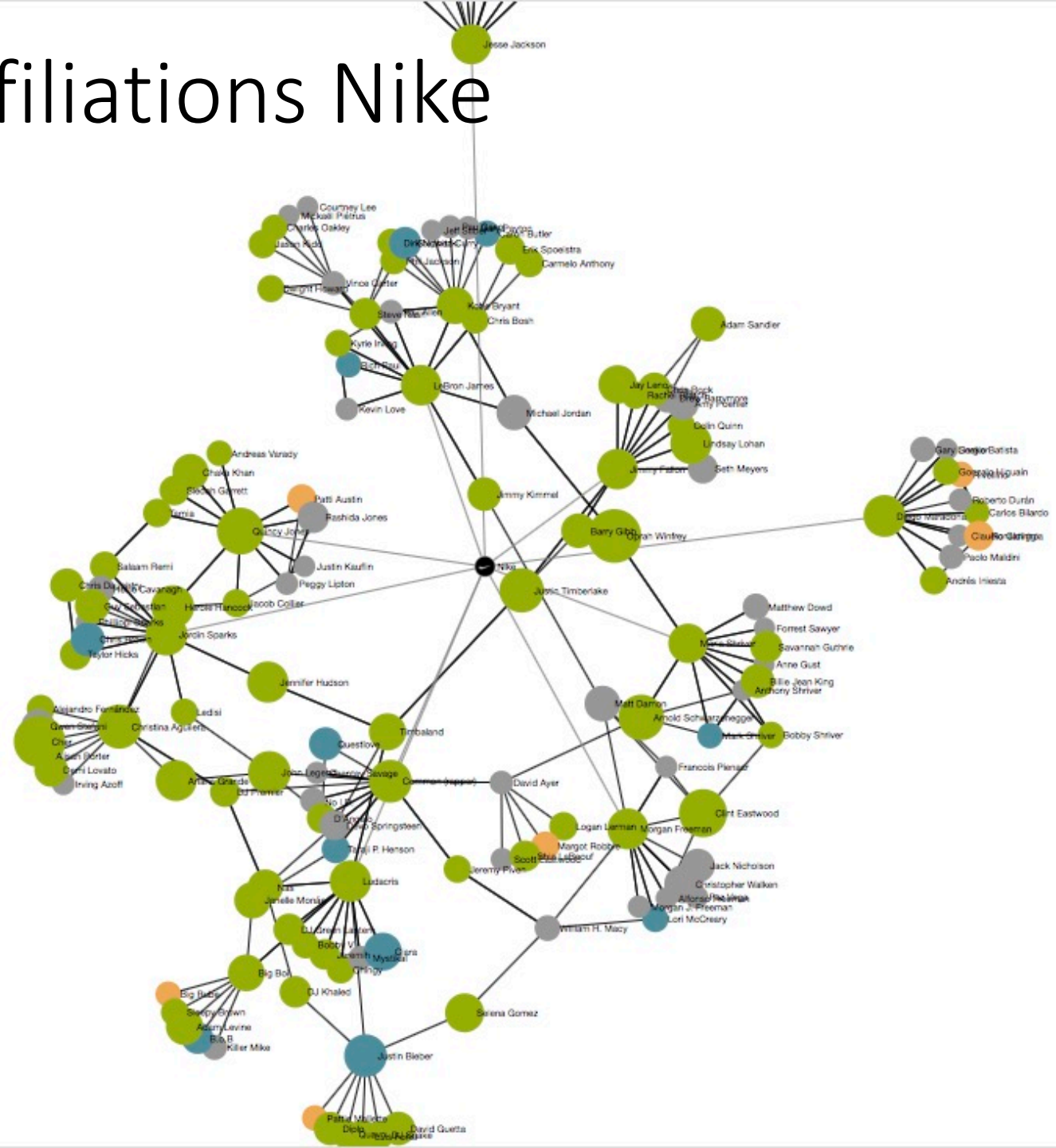
adidas

\* click on tribe icons for see tweets



# Tribal Affiliations Nike

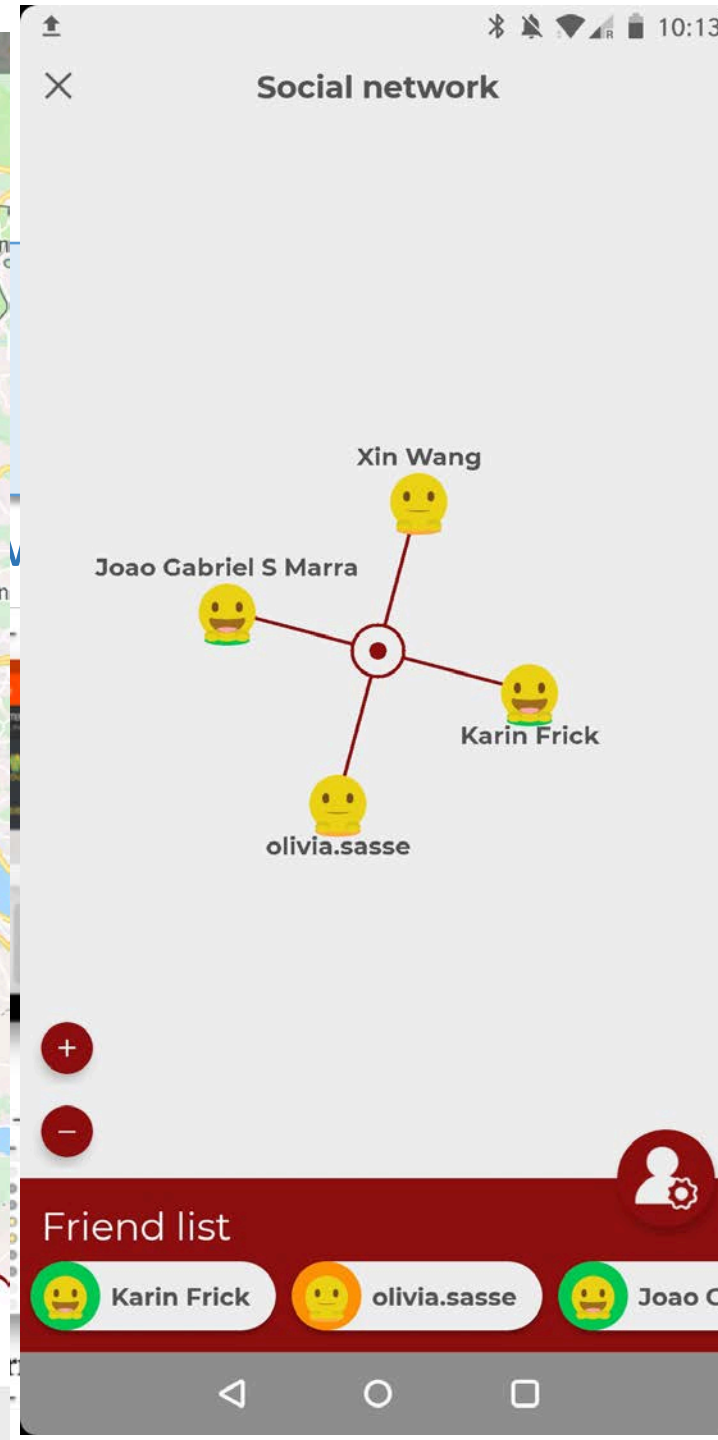
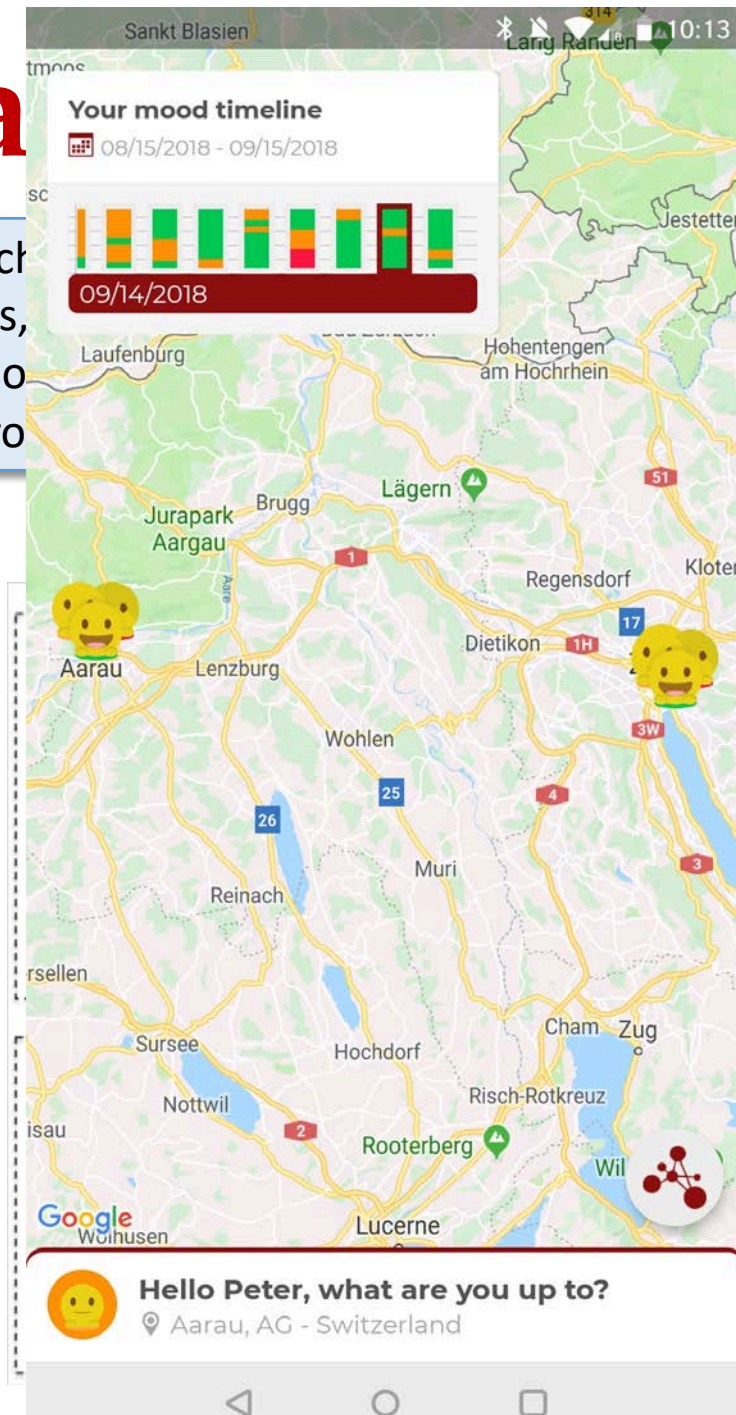
- Fatherlander: 0
- Nerd: 14
- Treenugger: 82
- Spiritualism: 6



# Step 4 – Happiness

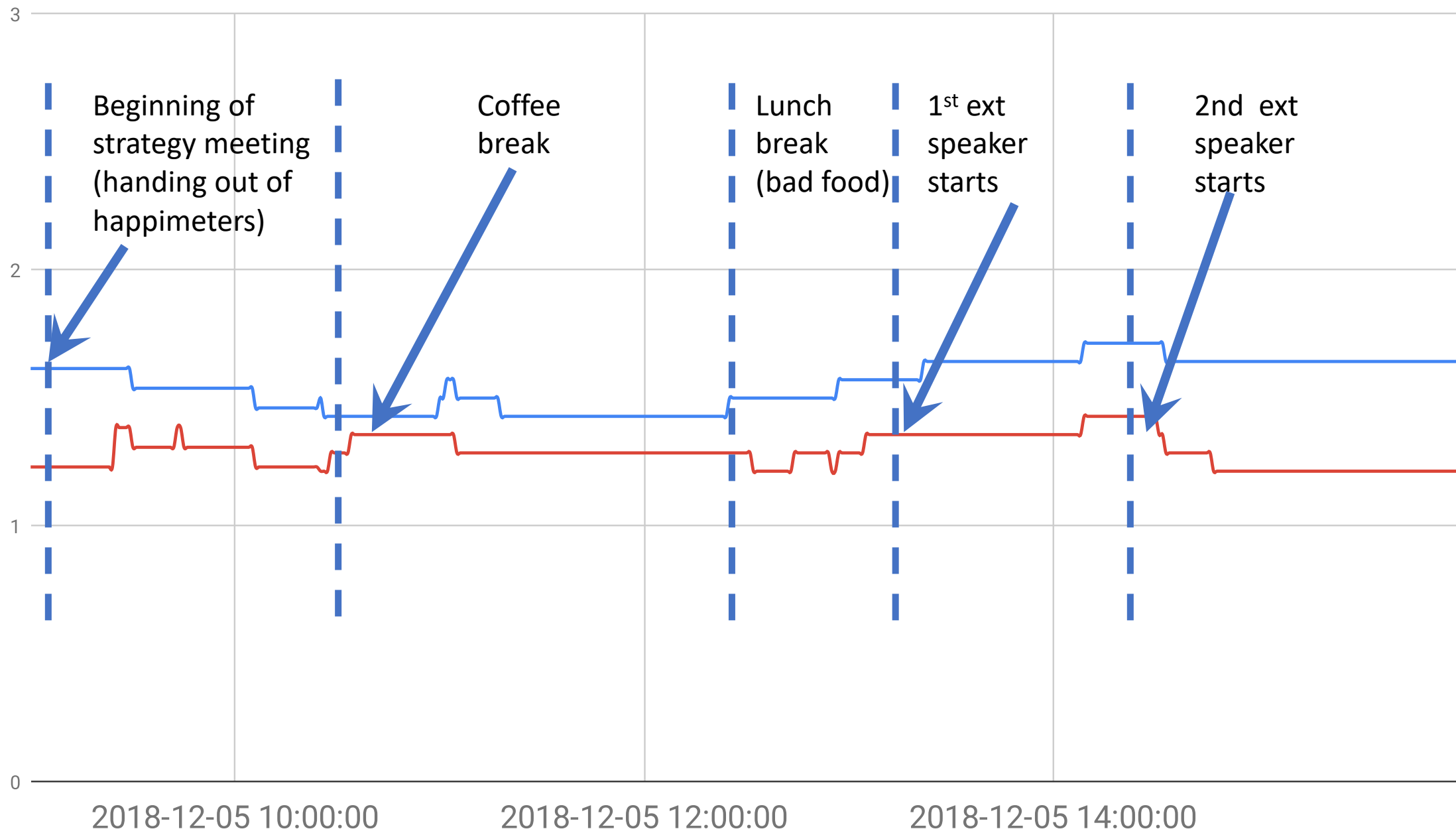
# Ha

Smartwatch  
(happiness,  
body senso  
energy, pro



ack  
nd

— ACTIVATION — HAPPINESS



Step 5

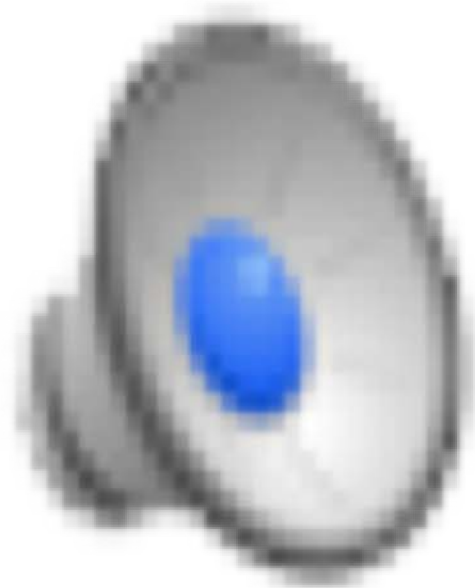
Social Quantum Physics



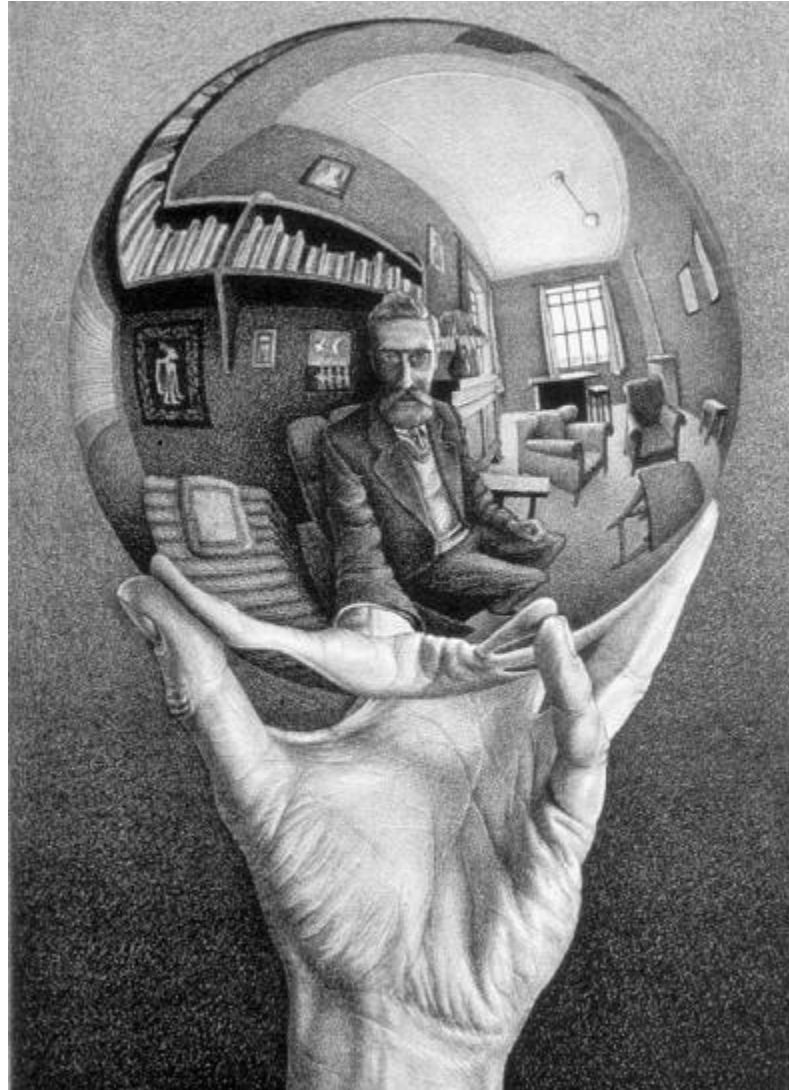
# Creating Entanglement



# Entanglement



A virtual mirror gives truth about self  
(Heisenberg principle)



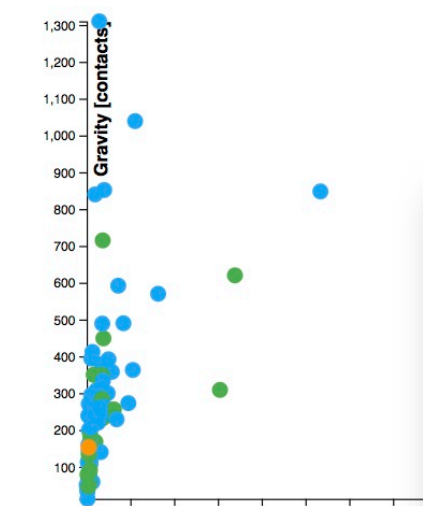
5.35.249.27

Messages sent

Y-axis

Gravity

explanations



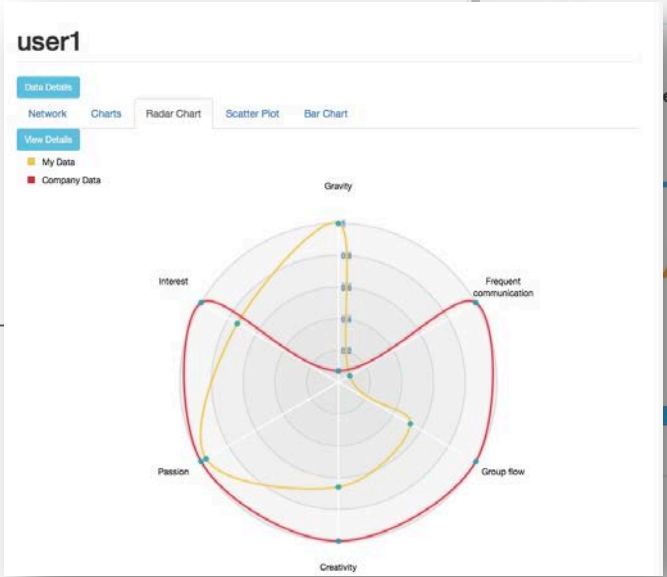
5.35.249.27

# user1

Home Page   Your network   Group comparison   Personal data   **Time evolution**

Gravity

explanations



10:56 AM

# user1

Home Page   **Your network**   Group comparison

Show labels

Number of links 831/831

explanations

- My data
- Other people
- My team

# Increasing Groupflow in Practice

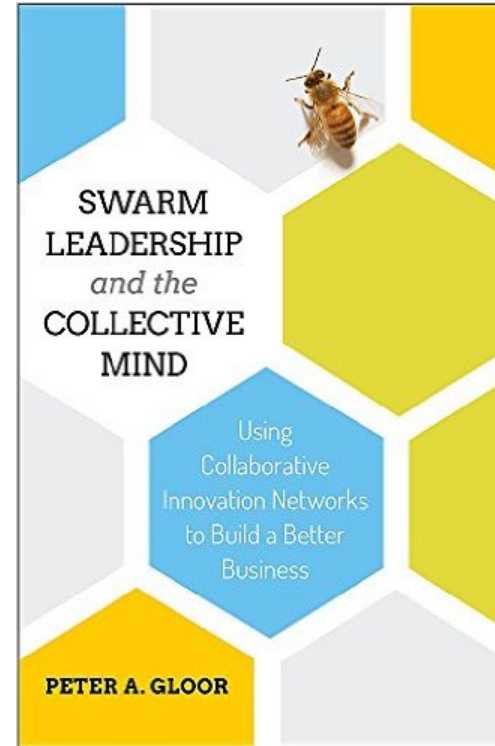
What	Where	How	Outcome
R&D collaboration	R&D department at 90,000 people global energy company	Virtual Mirror: E-Mail of 4000 R&D staff members	Reward most creative (overlooked) researchers
Project collaboration	Engineering at 150,000 people global car company	Virtual Mirror: E-Mail of 2000 engineers working on new car	Predict project success & failure 3 months ahead
Customer satisfaction	240 large corporate clients of global outsourcing firm	Virtual Mirror: NPS replaced by honest signals from e-mail	Increase customer satisfaction by 17%
Employee satisfaction	Managers at 70,000 people outsourcing firm	Track behavior change in e-mail of unhappy staff (leavers)	Identify leavers 3 month before they want to leave
Online Marketing	Online campaign of German retail bank	Find most successful adwords with seven honest signals	Increased online product sales by 89%
Predict Oscars	Forums of movie lovers in IMDB	Use honest signals with social media	Correctly predict Oscars in December (due in March)
Predict Oil Price	Google search logs, Twitter, and Wikipedia search & edit	Combine honest signals in social media with oil price	Predict Oil prices 3 days ahead with 95% accuracy
Student happiness	4 university courses with 20 to 30 students each	Happimeter tracks happiness, stress and understanding	Happier students through teacher intervention

# Thank You

Tom Allen  
Adam Almozlino  
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Wayne Yuhasz  
Qiaoyun Yun  
Xue Zhang  
Antonio Zilli  
Kang Zhang  
Yan Zhao  
Yuhong Zhou  
Kevin Zogg  
Matthaeus Zylka



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