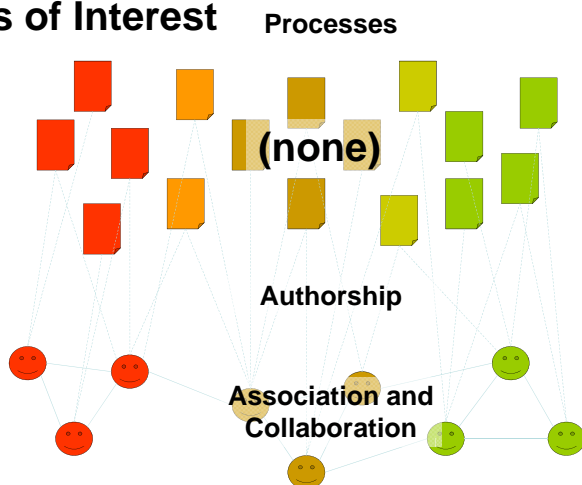


Social Dynamics Drive Scientific Emergence

Research Areas of Interest

- Document Space**
- Highly **visible**
 - Dynamically **Passive**

- Social Space**
- Largely **hidden**
 - Dynamically **Active**



- Analytics**
- Topic Analysis
 - Document Clustering

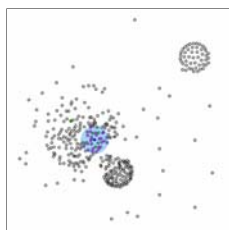
- Models**
- Cognitive **Convergence & Collapse**
 - **Generation** of New Disciplines

Key Observations:

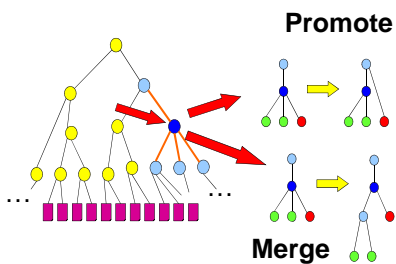
- Most of what we can **see** is in **Document Space**
- Most of what **happens** is in **Social Space**
- Success requires **connecting** these

Qualifications & Capabilities

- Analytics: Self-organizing documents**
- Scalable, any-time

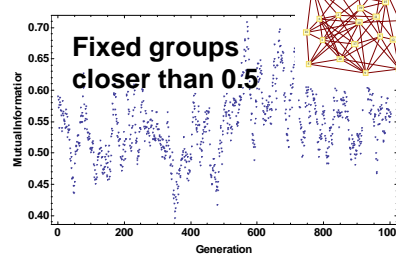
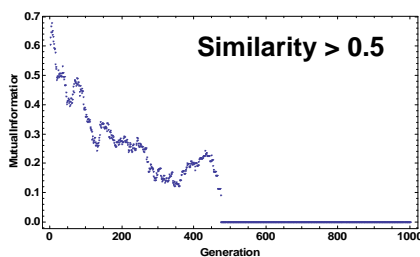


Force-based clustering (CASE)

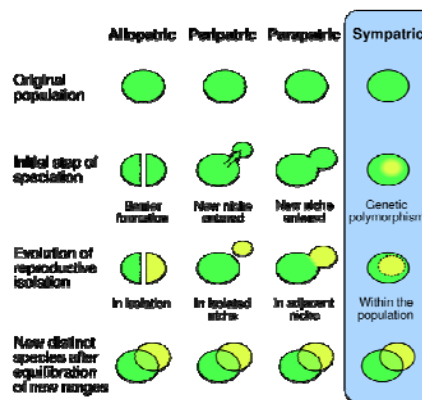


Swarming hierarchical clustering (NIMD)

- Models of collective cognitive dynamics**
- Diachronic, probabilistic modeling platform



Convergence and collapse (CASE)



Topic formation (based on speciation)

Team Sought

We bring

- **IARPA/IC** experience
- Scalable, any-time **clustering**
- **Modeling** of collective cognitive dynamics

We seek

- Experience in **scientometrics**
- **Natural language** processing
- **Topic modeling**
- **Machine learning** open to hybrid approaches

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