

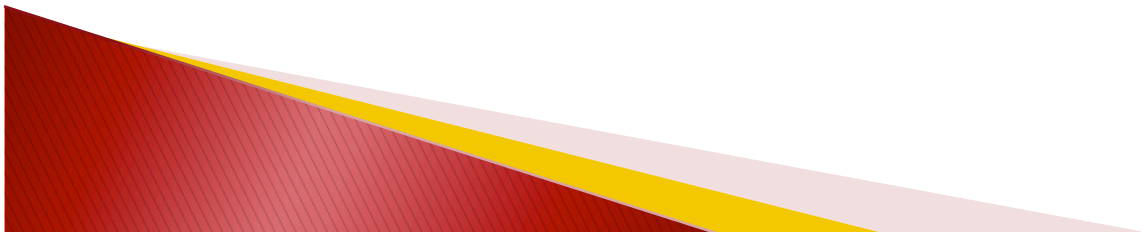
Metrics, Measures and Analysis

Patricia Riley and Lauren Kogen
Annenberg School for Communication

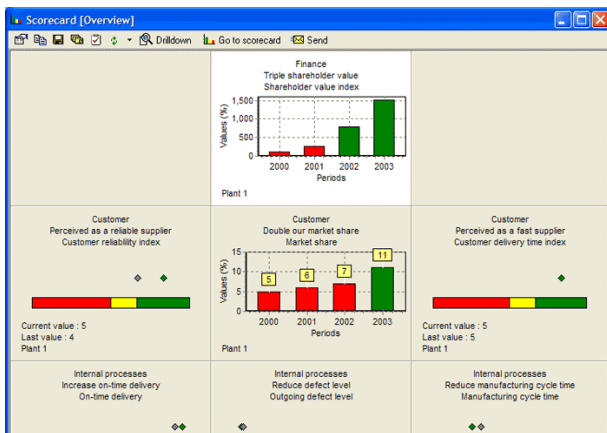


Objectives

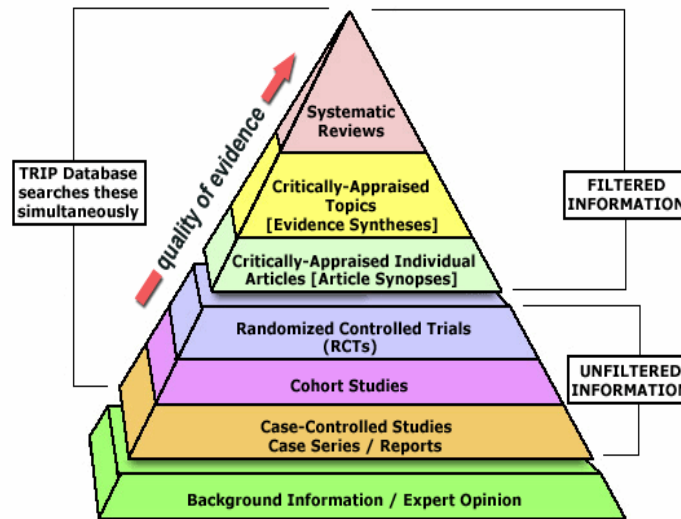
- ▶ Discuss possible approaches to measurement
- ▶ Focus on communication metrics
- ▶ Potential analytical approaches



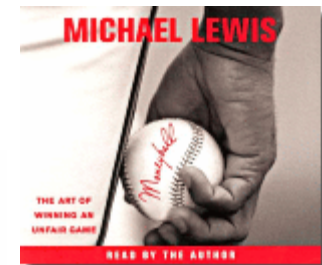
It is a Data-Crunching World!



Corporate Dashboards



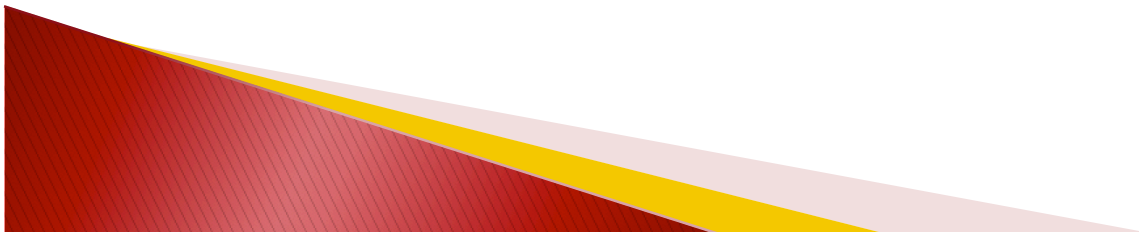
Evidence-Based Medicine



Baseball

Metrics Today

- ▶ Organizations devote significant time, energy and resources to measuring their performance in achieving strategic goals
- ▶ A recent survey found that only 35% of organizations rated their systems of metrics as effective or very effective
- ▶ Today's measurements bear a remarkable resemblance to those from years ago while organizations, media and communication technology have transformed dramatically



How to Develop New Metrics

- ▶ Depends on what is important to the strategy
 - New vision?
 - Enterprise problems?
 - Community issues?
- ▶ Where is the leverage?
 - Bang for the buck
 - Where you have expertise or local knowledge
 - Inflection points
- ▶ Measurement
 - Valid
 - Reliable
- ▶ Measures
 - Lag
 - Lead
 - Coincident
- ▶ What is most difficult?
 - What are the trade-offs?



Examples from the World Bank

Table 7. Types of Communication Intervention Outcomes

Type of Outcome	Number of Studies Evaluated
Behavior change	22
Change in knowledge and attitude	25
Empowerment and capability building	9
Coalition building and partnership	8
Resource development	5

Strategic Communication

• There are many measures of performance but fewer measures that help with preliminary analyses. Similarly there are not many assessment measures.

Analysis

- **Intelligence Preparation of the Environment**
- **Identify audience(s)**
- **Understand internal/external audience(s)**
- **Identify information needs and effective tools**
- **Develop assessment methodology**

Assessment

Qualitative/quantitative analysis

- **Are we achieving our objectives?**
- **Are we achieving our effects?**
- **Are measures correct?**
- **Reassess assigned plans/tasks**
- **Recycle back to policy development**



Period 1

Internal Communications Dashboard

Dashboard Supplied by
THE Lean AGENCY



Current Status

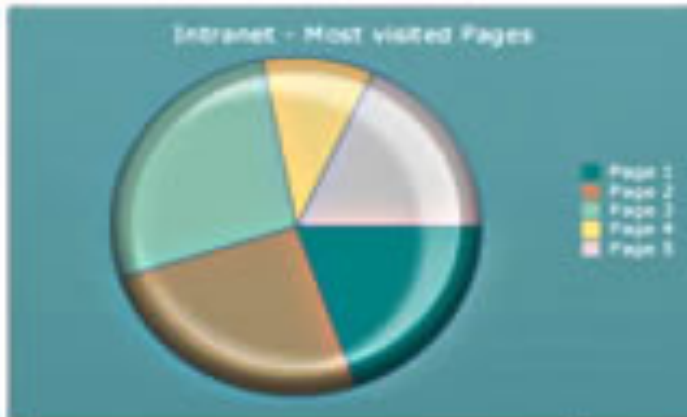
- Activity Programme: ●
- Attitude: ●
- Message Understanding: ●
- Staff Turnover: ●
- Productivity: ●

Key

- No Action
- Normal Situation
- Be Aware
- Action Required

Key Issues Summary

- Newsletter behind schedule
- Events over budget for Q3
- Next online poll imminent
- Absenteeism down over Q4
- Engagement review required in Italy

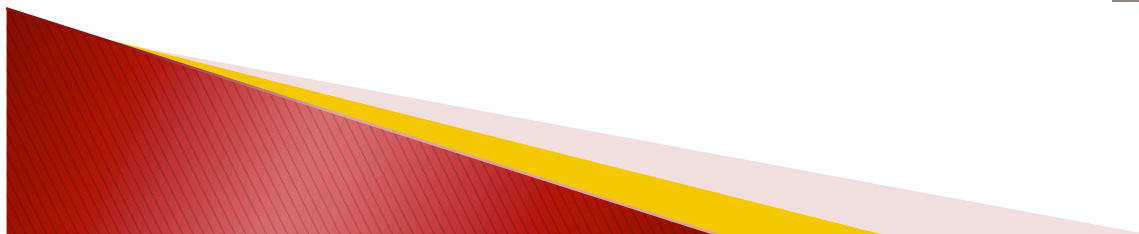


Details

Project owner: Simon Kew
 Department: Internal Comm
 Date: February 2006
 Date last refreshed: January 2006

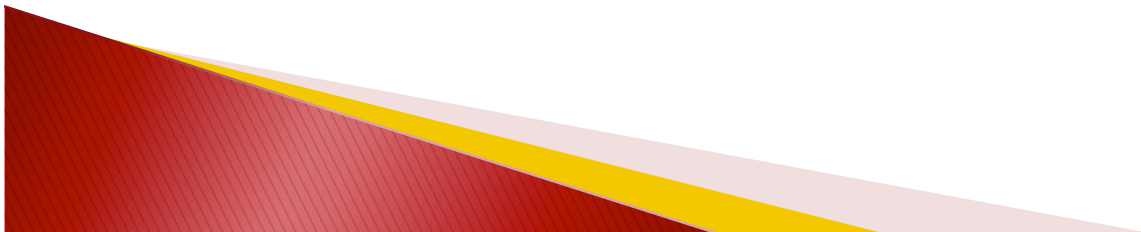
Common Methods

- ▶ Surveys
- ▶ Content analysis of documents, interviews, media stories
- ▶ Communication instruments/tools
- ▶ Online metrics
- ▶ Time series analysis
- ▶ What is most in use now?
- ▶ What needs the most significant investment?



Surveys

- ▶ Panel surveys vs. cross-sectional
- ▶ Random vs. convenience sample
- ▶ In-person vs. mail vs. internet
- ▶ Original vs. secondary data



When surveys are useful

Understanding your audience

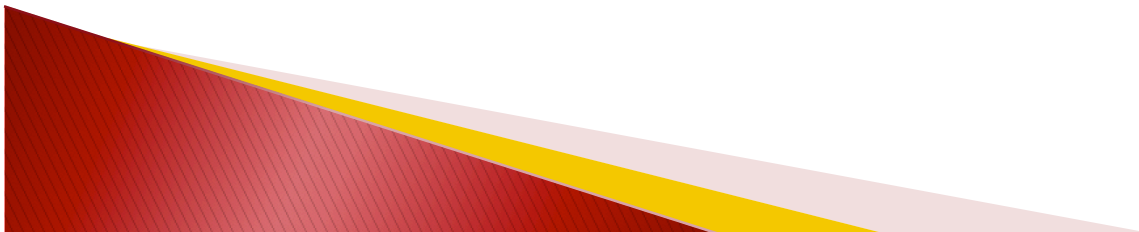
- ▶ Determining target audience
- ▶ Determining appropriate intervention methods
- ▶ Understanding knowledge levels, behaviors, attitudes
- ▶ Examples:
 - Fondation Hironnelle in DRC
 - Frelaria?

Monitoring & Evaluation

- ▶ Baseline and post-intervention surveys on target measures
- ▶ Examples:
 - La Benevolencija in Rwanda

Content Analysis

- ▶ A quantitative research instrument for the systematic description of content
 - Highly selective and structured method
 - Utilized on visual, aural or print media or text content
 - The rules of analysis are standardized to ensure a high degree of reproducibility
- ▶ One objective of the content analysis is to examine large amounts of content with statistical methods.
- ▶ Content analysis reduces the complexity of content as it brings out the central patterns of the coverage
- ▶ Software can make it semi-automated; media tracking



When content analysis is useful

Understanding your environment

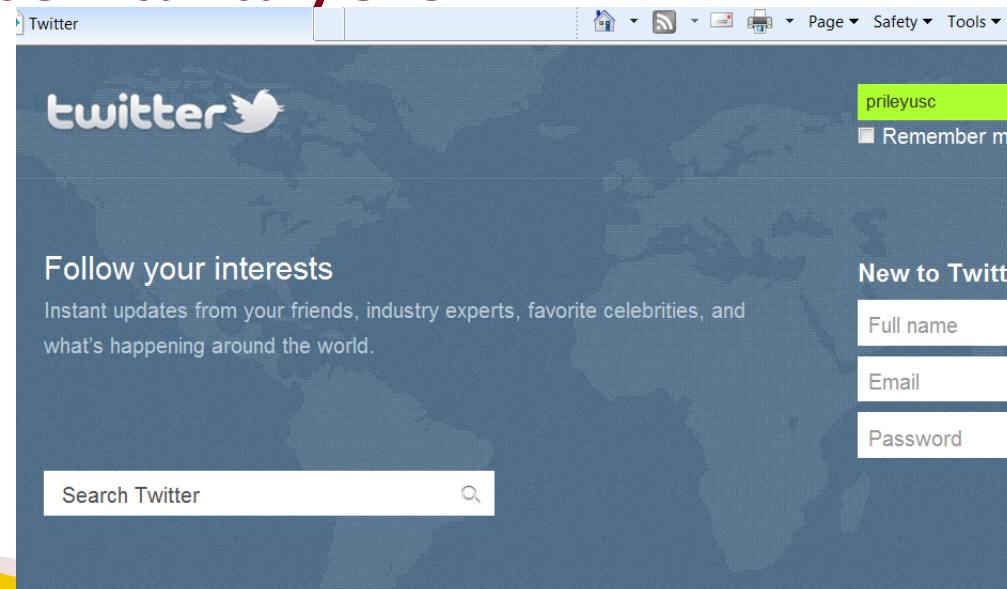
- ▶ Understanding media frames and narratives
- ▶ Assessing media landscapes
- ▶ Understanding terms of a debate / stakeholder positions
- ▶ Examples:
 - La Benevolencija in Rwanda
 - Frelaria?

Monitoring & Evaluation

- ▶ Baseline and post-intervention analyses
- ▶ Examples:
 - La Benevolencija in Rwanda
 - Internews in Bosnia

Qualitative Analysis

- ▶ Focus groups
- ▶ Narrative analysis
- ▶ Discourse analysis
- ▶ Twitter analysis



Web Measures

▶ Google trends



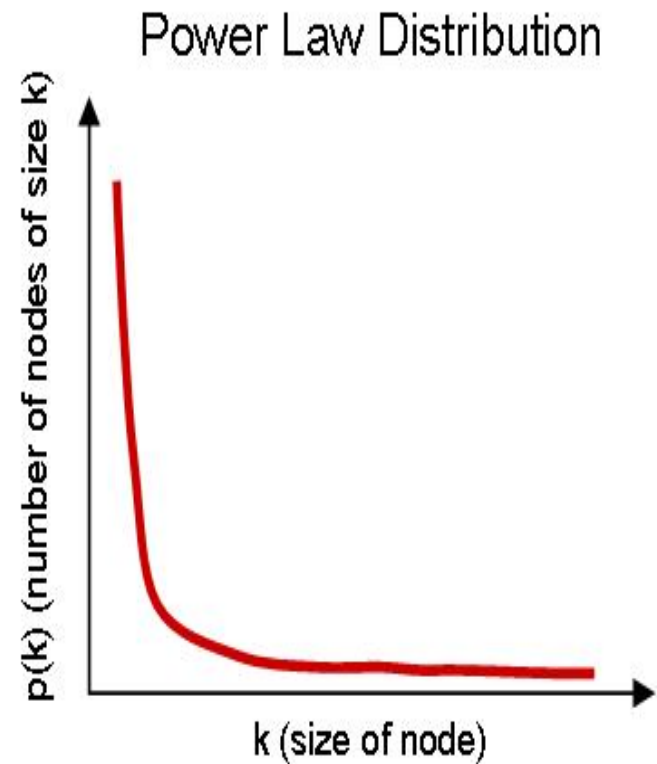
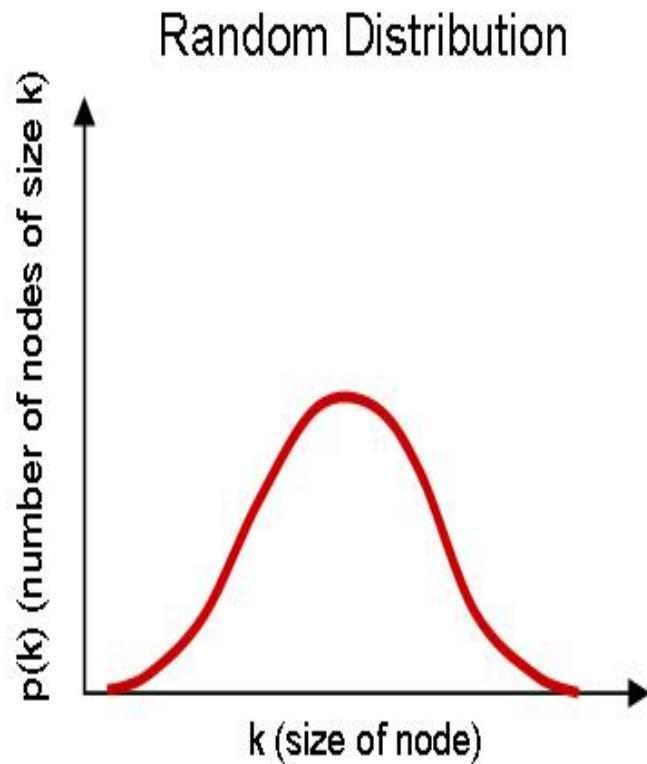
▶ Media Cloud



Website Analytics / KPIs

- ▶ Tracking via Alexa, or similar software for size of audience—SEO working?
- ▶ Check for impact—e.g., presence of information that migrates to traditional brand media and “aggregators with attitude”
- ▶ Check entry points—e.g., did they come through the home page or were they linked in from another site to a story or chart?
- ▶ How many RSS feeds? Bookmarks? Internal links?
- ▶ Page views per visit ratio is key metric for engagement
 - Time spent per page (a less reliable metric)
 - High—more than 5 min.
 - Med—30 sec. to 5 min.
 - Low—less than 30 sec.
- ▶ How many exit the site after search?
- ▶ Bounce rate—how long to get to page designated?
- ▶ Frequency and recency of high use visitor

Power Curve



Network Measures Questions

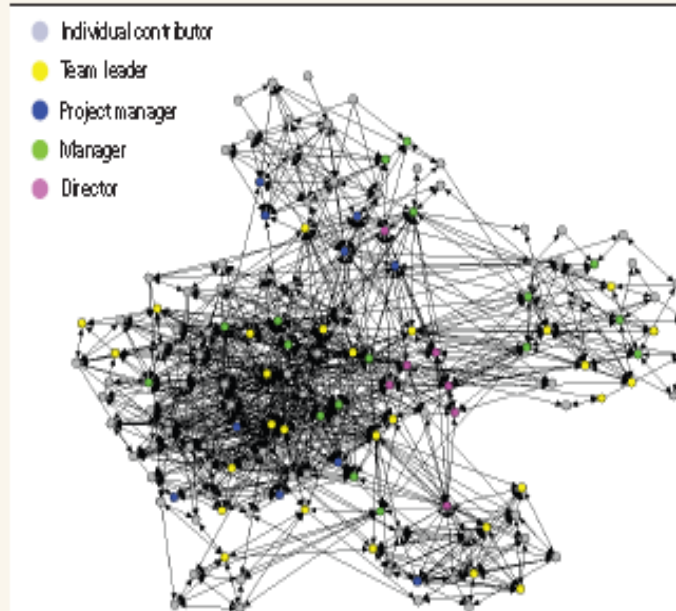
- ▶ What processes occur over time to create and change networks?
 - What leads to the emergence of different organizational forms?
 - What types of communication networks form in the early, middle, and ending phases of the community?
- ▶ How do communication networks predict interaction and other types of networks (e.g., exchange or financial)?
- ▶ How do cultural background and national identity influence the membership, structure and evolution of networks?
 - Do these imported structures and patterns facilitate community, or contribute to divisiveness and conflict in the emerging global community?
 - Do males and females create different network structures or patterns of language use?

A more robust network

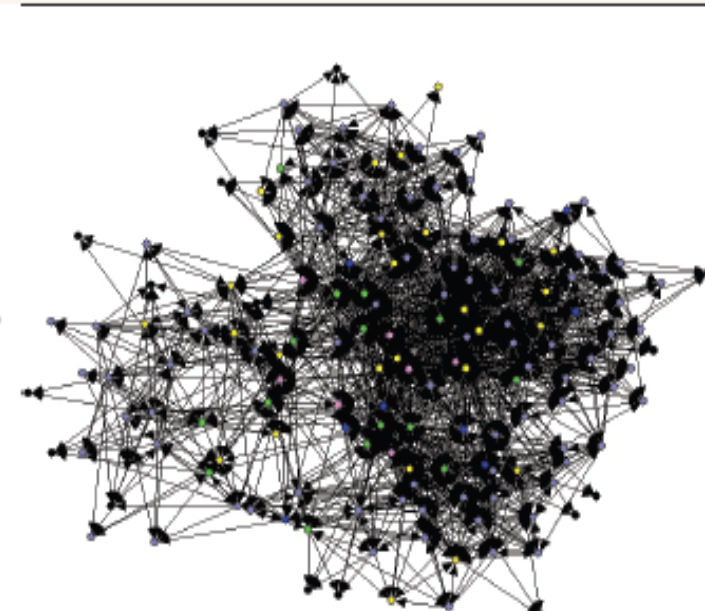
Disguised example of leading provider of outsourcing and IT consulting services, before and after initiative to improve connections, eliminate bottlenecks

Network measures	2003	2005	
Density: overall measurement of network connectedness	6%	8%	Higher density is better
Cohesion: average number of steps required to reach all network members	3.2	2.5	Lower cohesion is better
Centrality: average number of connections per person in network	9	13	Higher centrality is better

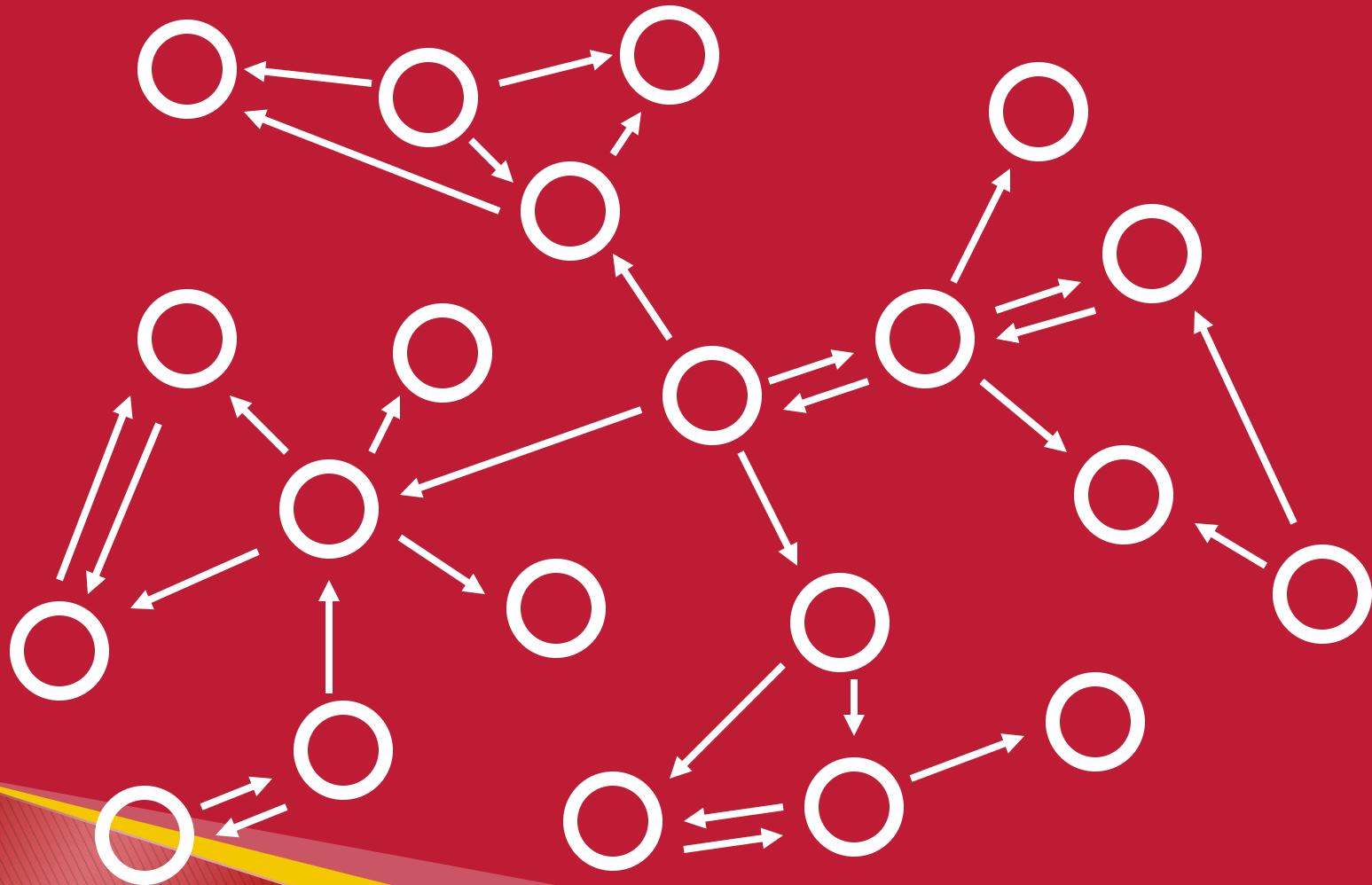
Before: network in 2003¹



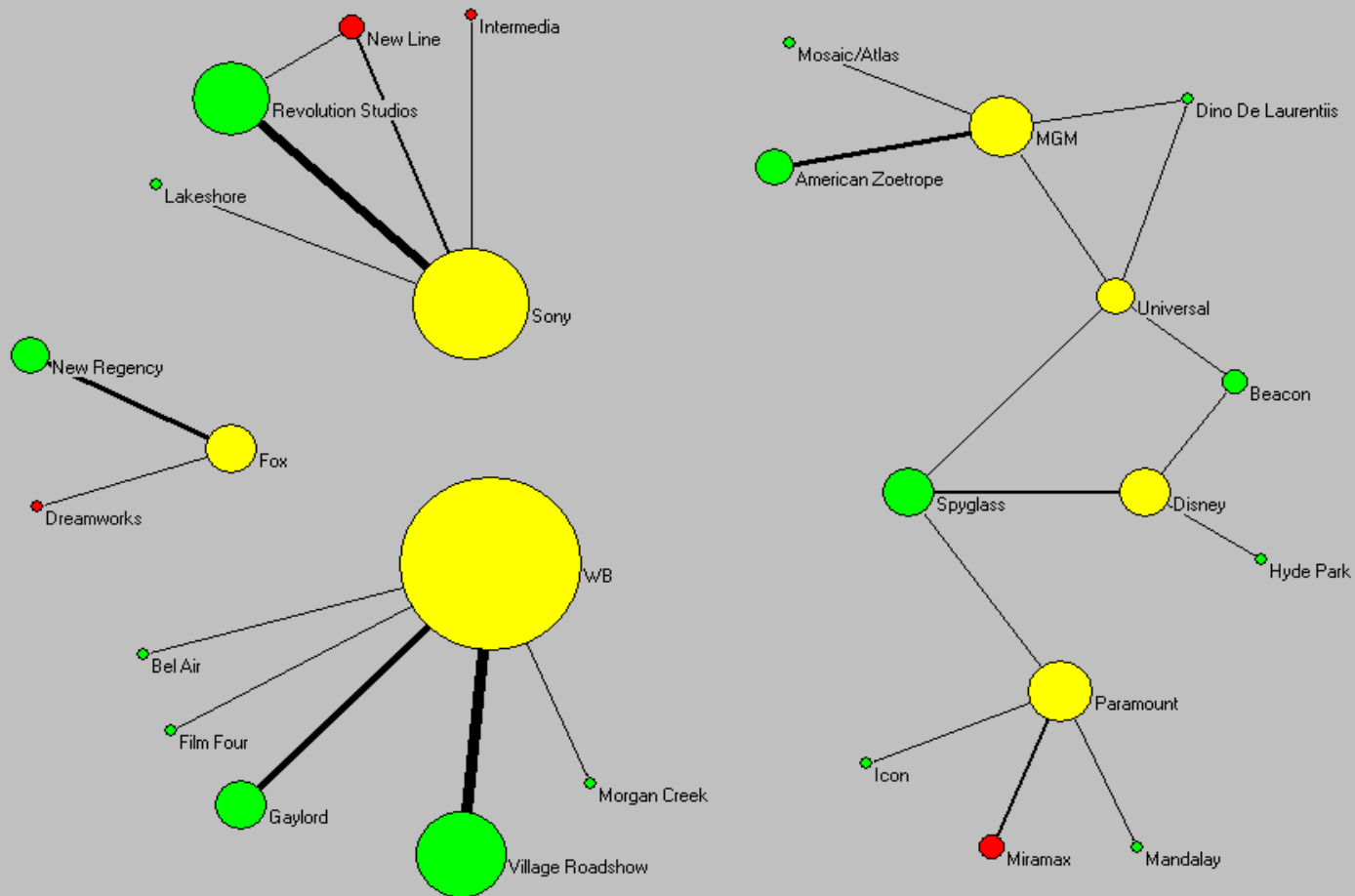
After: network in 2005¹



Social Network Analysis

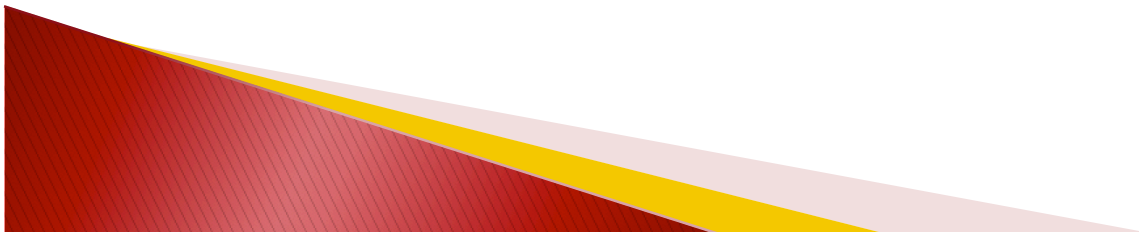


Movie Studio Networks



Data and Analysis

- ▶ Can include transcripts of interaction (e.g., White House study)
- ▶ Links to demographic data (e.g., gender)
- ▶ Identification of networks from patterns of interaction
- ▶ Tools
 - Network analytical techniques (UCINET, p*)
 - Automated content analysis
 - Bot tracking
 - Speaker identification, linking speakers across multiple dialogs, detecting expertise, tracking speaker's opinions, emotions

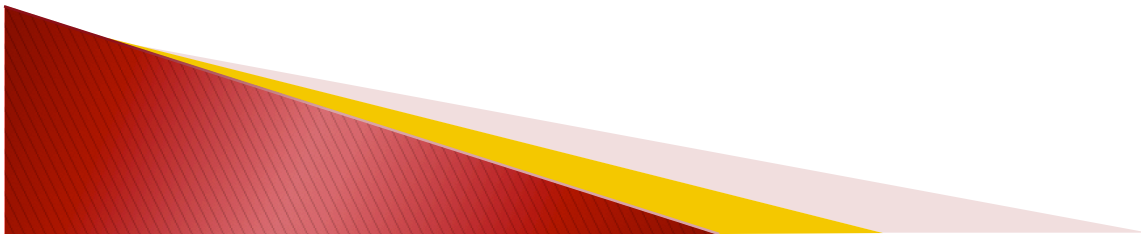


Network Outcomes

- ▶ HIV/AIDs Networks
 - Studied the evolution of AIDS NGOs over a 15 year period
 - Found the birth and death of NGOs and the shape of the overall network were linked to IGO policies and changes in IGO populations
 - The addition and deletion of nodes in the networks was related to media frames and coverage
- ▶ Network comprised of radio stations, record companies, and independent promoters
 - Independent promoters broker relations across “holes” in the network between record companies and radio stations.
 - Explains the durability of the institution in the face of resistance from both record labels and radio stations

Why Mobile Social Network Analysis Has An Important Future

- ▶ People are rarely far from their phones
- ▶ Workplace networks that are now office PC based will increasingly become mobile



Possible Measures/Metrics

Analysis

Assess

What measures do you already have?

What measures will you need to create?

What measures will be the greatest challenge?

What are your final metrics of success?

References

- ▶ Castronova, E. (2001). *Virtual worlds: A first-hand account of market and society on the cyberian frontier*. CESifo Working Paper No. 618. Center for Economic Studies and Ifo Institute for Economic Research, Munich, Germany.
- ▶ Palm, T. (September 19, 2003). *The Birth Of The Mobile MMOG*. http://www.gamasutra.com/resource_guide/20030916/palm_01.shtml
- ▶ Monge, P. R., & Contractor, N. S. (2003). *Theories of communication networks*. New York: Oxford University Press.

