Evaluating Organizational Change

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Dissertation-Related Work

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MOTIVATION AND OVERVIEW: EVALUATING ORG CHANGE

Human organizations change all the time, and it's a big deal

- Hundreds of firms either specialize or have specific consulting departments for "organizational restructuring"
- 90% of companies with more than a 1000 employees has recently restructured (BCG, 2012)
- Lots and lots of mergers:
  - Major merger firms handled more than 1000+ mergers in the first half of 2013, for a total valuation of more than 400B (NYTimes, 2013)
  - In terms of valuation (NYTimes, 2013):
    - 40% Happened in the US
    - 60% happened in the rest of the World

These changes rarely produce desired outcomes.

- Organizational restructuring failure rate is between 50 to 70%

- Merger failure – Estimates vary, but even the most conservative estimates suggest that merger success is a 50/50 proposition.

Why do these efforts fail?

- Major reason is **Cultural Issues**
  - Lack of clarity in leadership
    - Shared values improve information transfer (Weick 1987)
    - Without shared values and knowledge, actors have difficulty communicating new goals (Wilson and Ferch 2005)
  - Lack of clarity in proposed direction (why is this change a good idea?)
    - Actors do not do tasks unless given reasons to identify with those tasks (Sheldon, Turban et al. 2003)
    - Guidance from management that ignores or contradicts functional work practice exposes the organization to significant risks (Nathanael and Marmaras 2006)
  - Incompatible corporate cultures

We use surveys to use evaluate corporate culture

- Multi-National Merger and Acquisition has been dealing with this for some time (Shimizu, Hitt et al. 2004)

- But domestic merger analysis has also been looking at incompatible corporate culture as a source of failure (Epstein 2005) (Holt, Armenakis et al. 2007)

- Principally, **surveys** are used to evaluate corporate culture and then develop suggestions for intervention and remediation

But, surveys of org culture are difficult to do well

- Fixed points in Time
- Limited employee exposure
  - Often, survey responders will be self-selected
  - Penetration below executive layer is rare
- Surveys can alarm employees
- Implicit demand characteristics (Orne 1962) can overwhelm

Is there another method we can use to supplement survey techniques?

Organizations generate lots of data

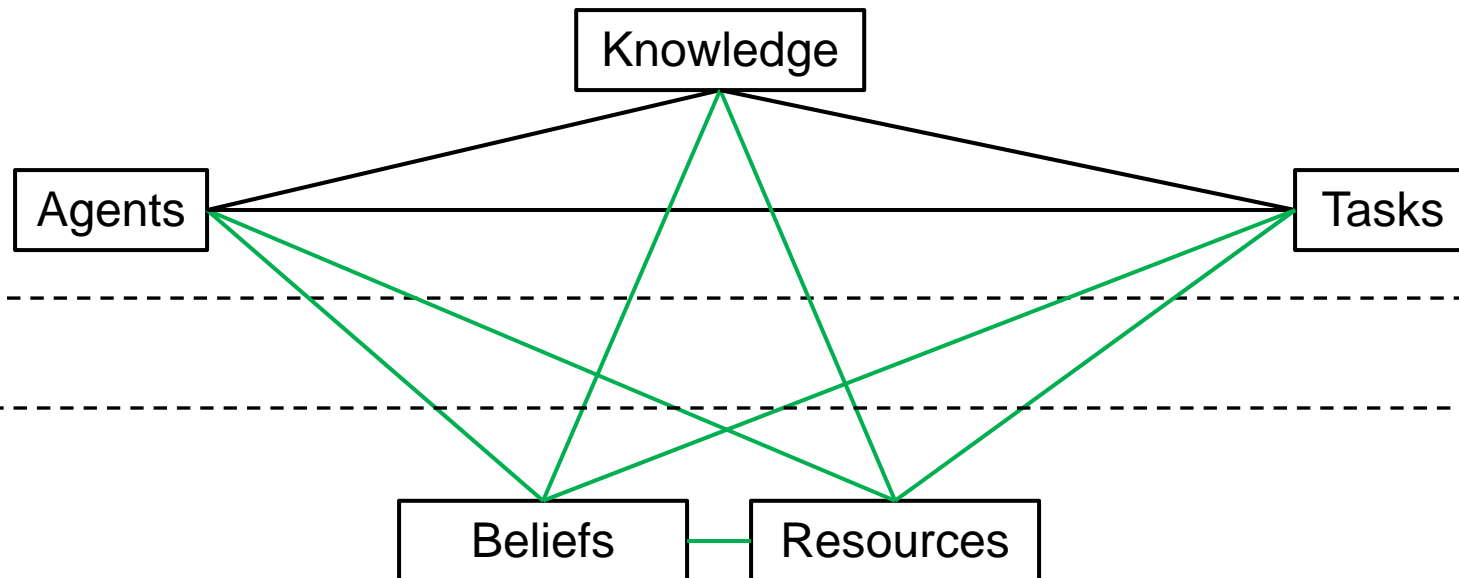Already frequently leveraged | Frequently ignored

Financials

Business Process Activity Tracking Systems

Let's use this (awesome) data!

Collaborative Wikis and Code Repositories

Meta-networks as a representation of the organization

PCANS (Krackhardt & Carley, 1998; Lee and Carley 2004; Cataldo, Herbsleb et al. 2008)

Knowledge

Agents

Tasks

Beliefs

Resources

Importance established in review of organizational characteristics which contributes to resilience, Morgan & Carley, To be submitted

Meta-Networks are ways of representing many relationships

	Agents	Knowledge	Tasks
Agents	"Who Talks to Who"	"Who knows what"	"Who does what"
Knowledge		"What knowledge is linked to what"	"What must be known for each task"
Tasks	Typical PCANS semantics		"What tasks are related to what"

Adapted from Lanham, Morgan, and Carley (2011)

DATA DESCRIPTION

The (Very Excellent) Data

- Fortune 500 Company, purchased another large company
  - Wants to understand the integration process
  - Asked academic researchers if they wanted to help
- Allowed collection of email-server data for multiple months at two points in time
  - Collection Period 1: Right after merger announcement
  - Collection Period 2: A year later
  - Collection Period 3: Another year later
- Encouraged employees to participate in org surveys administered by research team

Survey Data

- Survey was run on a sub-sample of employees. The survey collected various indices, including:
  - Organization Culture (Denison and Mishra 1995)
  - Job Satisfaction (Cammann, Fichman et al. 1983)
  - Commitment to the Organization (Allen and Meyer 1990)
  - Group Identification (van Dick, van Knippenberg et al. 2008)
  - Perceptions of Organizational Justice (Niehoff and Moorman 1993)

- 4849 People surveyed, Year 1
- 4915 People surveyed, Year 2
- 4300 People surveyed, Year 3
- ~11,000 People surveyed in total

Email: Structured and Unstructured Elements

- Email includes both structured data and unstructured data

- Structured Data
  – Timestamp
  – From
  – To, CC, BCC

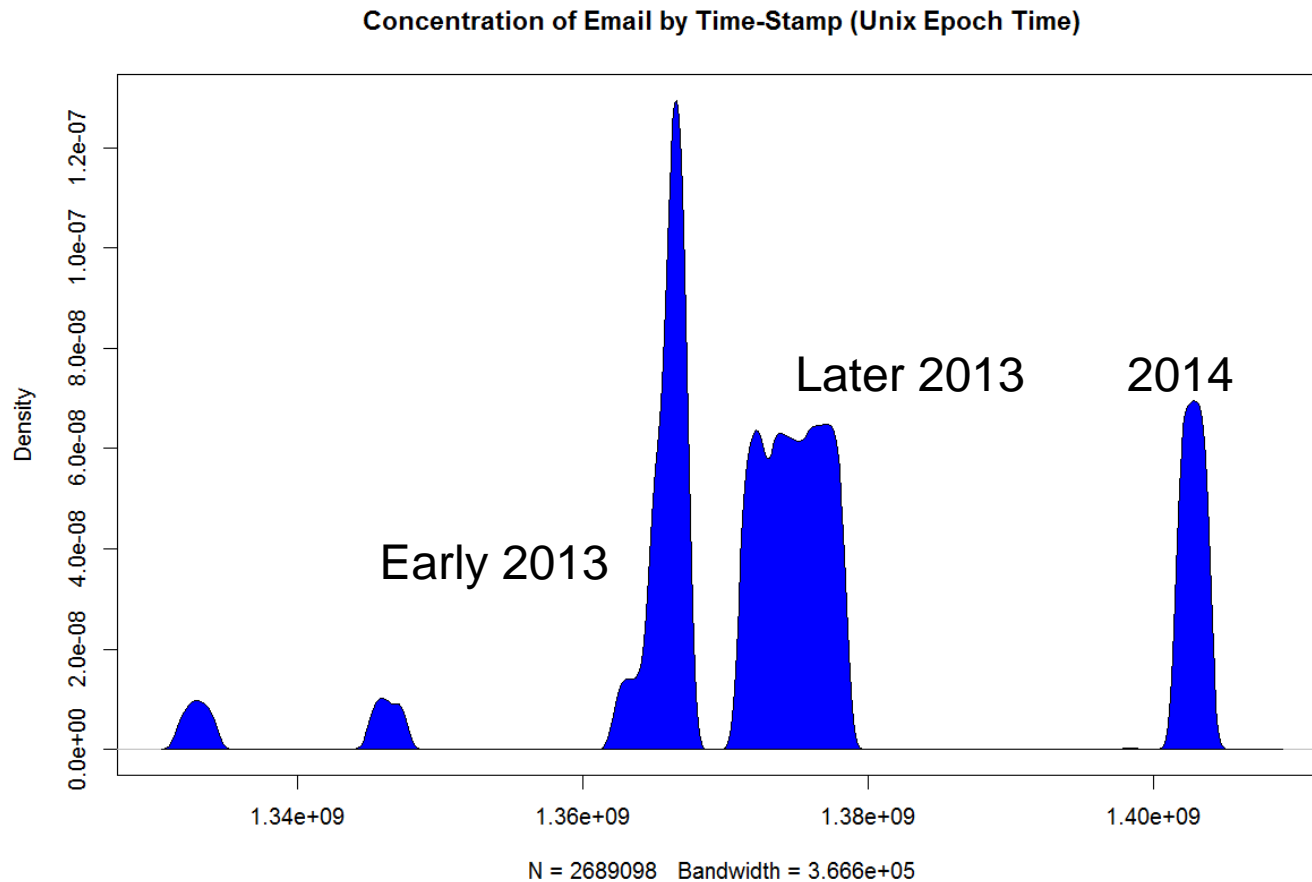- Unstructured Data
  – Subject
  – Body

Email Dataset

- Filtering:
  - English Emails (identified by Tika API)
  - Sent to a small group of people (less than 7)
  - At least one sender and receiver must have taken the survey in any of the three years

- After filtering to 'known actors' from surveys
  - Timeperiod 1 : 233k Emails
  - Timeperiod 2 : 700k Emails
  - Timeperiod 3 : 1M Emails

- Average Subject Length: 32 Characters
- Average Body Length:
  - Total Characters (includes replies): 2000 Characters
  - Novel* Characters: 184 Characters
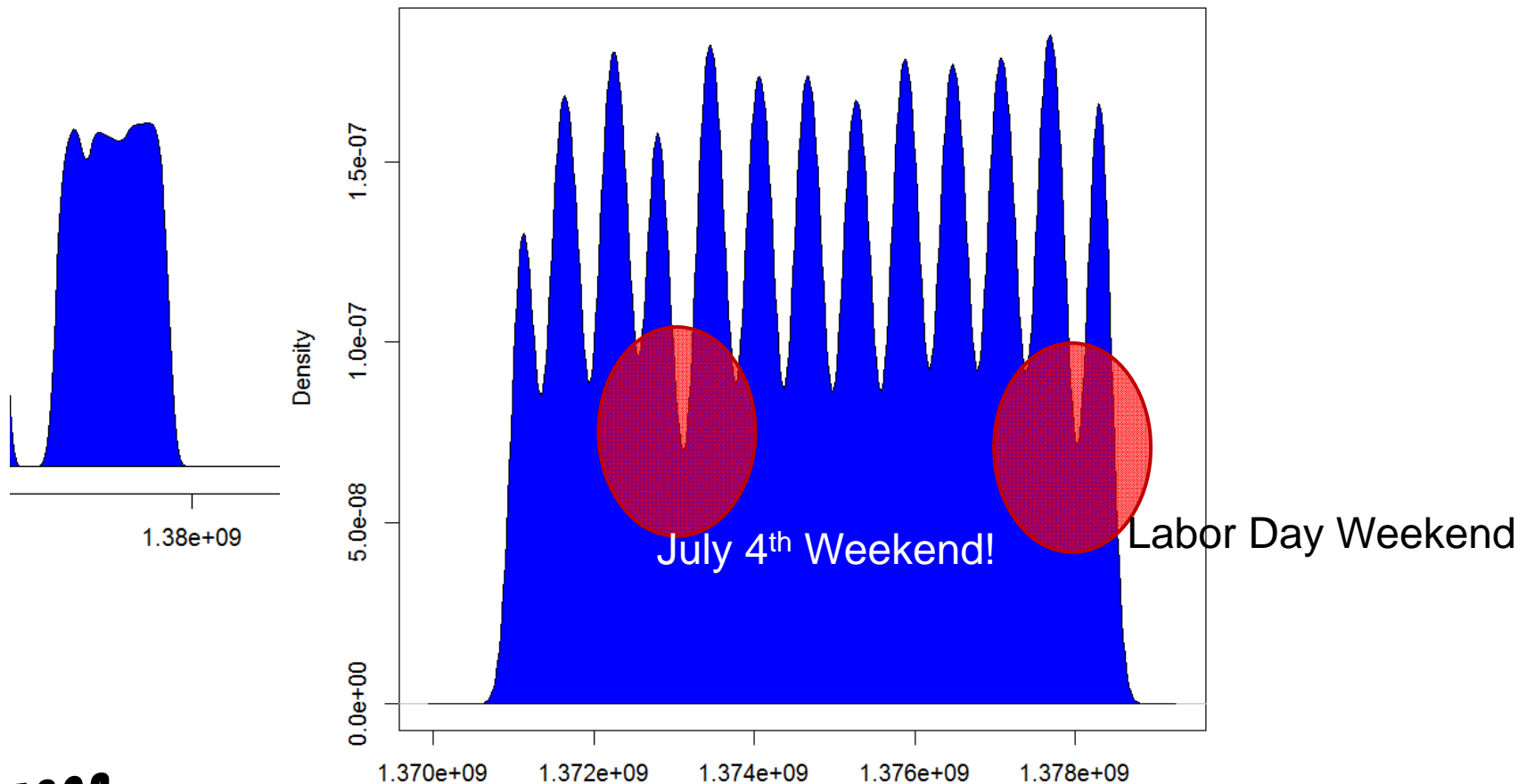
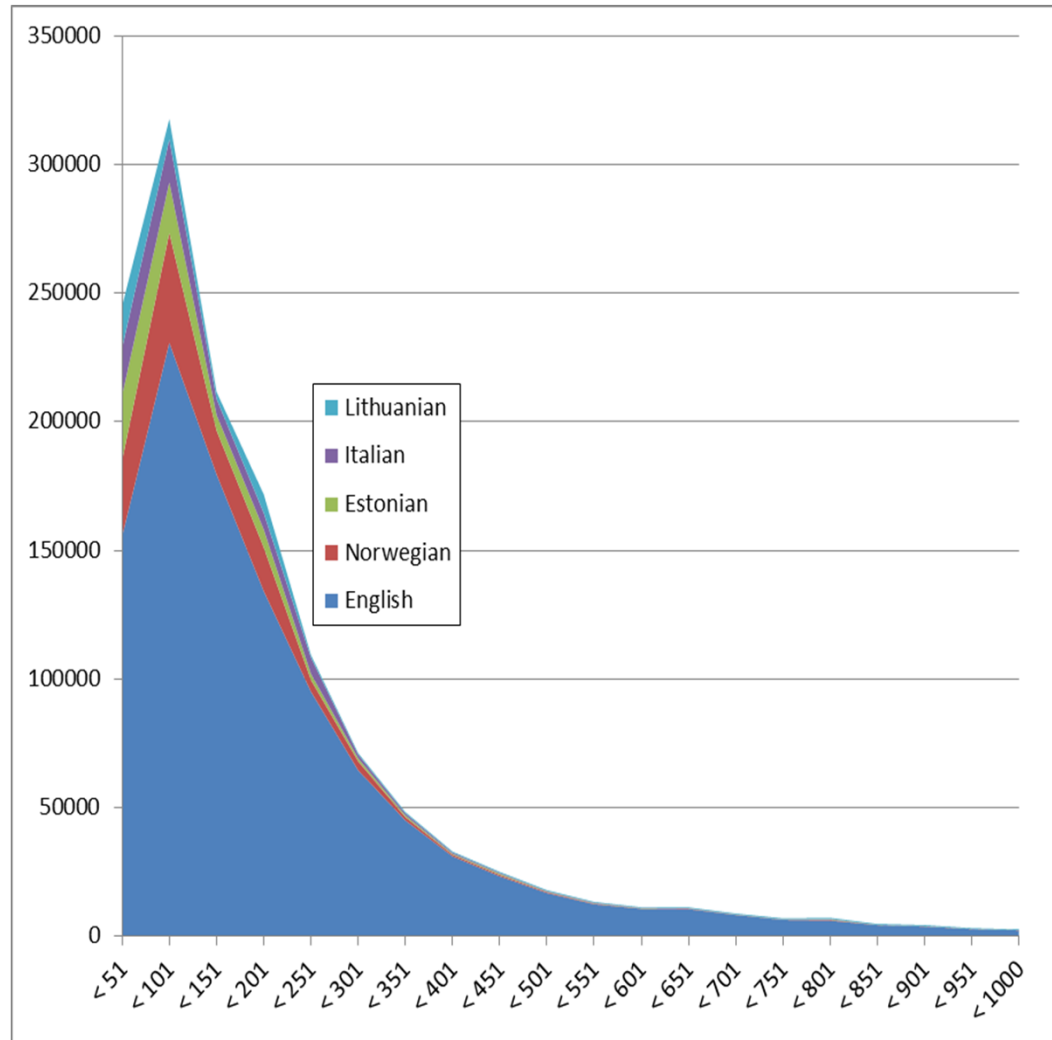* We wrote code to scrape off reply-chains

Email Draws over Time

Concentration of Email by Time-Stamp (Unix Epoch Time)

Later 2013

2014

Early 2013

N = 2689098   Bandwidth = 3.666e+05
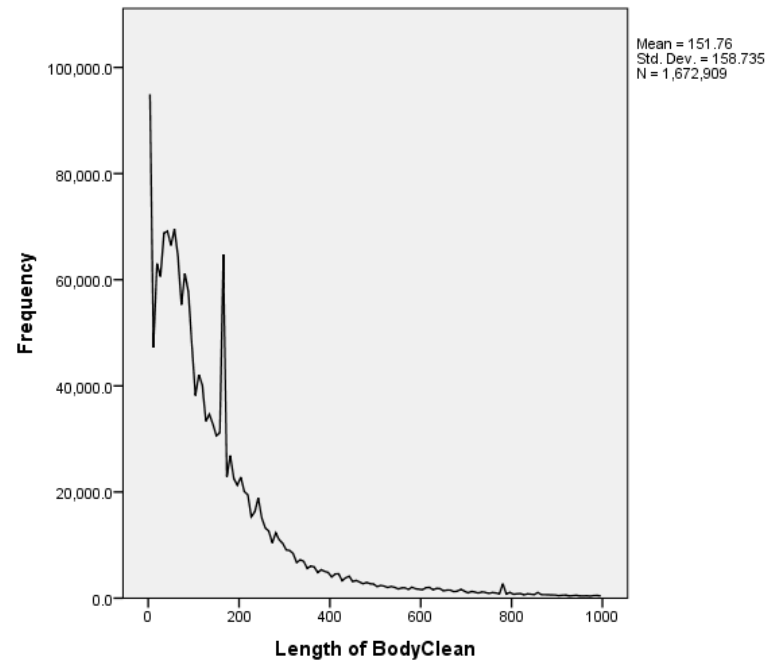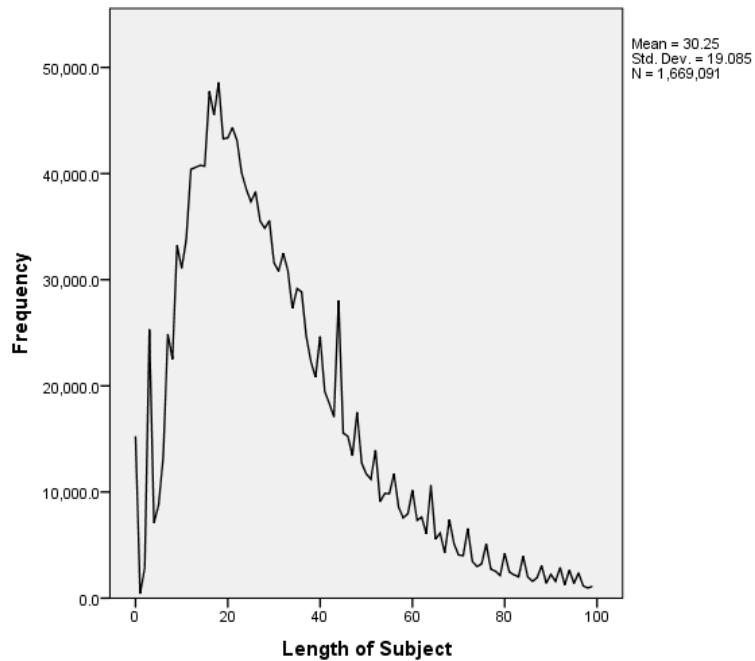
Email Draws Show Expected Frequencies

Concentration of Email by Time-Stamp (Unix Epoch Time)

Distribution of Languages

Distribution of Unstructured Content Lengths

Internal Email Interactions

Employees - Colored by Legacy, Sized by Emails Sent and Received (Direct To/From)

LuxuryCo

StandardCo

MergedCo