Putting the Communication into Organizational Communication

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Keynote Address, 17th Annual Organizational Communication Mini-Conference
October 2, 2004  St. Louis University
Understanding “face to face interactions within an office environment is of particular interest, especially because complex information is rarely transmitted in an office environment by any other means. … Effectively harnessing this face-to-face communication channel has the potential to revolutionize the field of knowledge management.”

By ????
Point 1

People in organizational communication rarely study communication
Empirical OC Research since 2000

- Preliminary results of a review in progress
- Selecting candidate articles
  - Web of Science database using keywords “organizational communication” (500)
  - Comabstracts database using keyword “organization” (also matches “organizational”)
  - Manual review of all issues of Management Communication Quarterly (200)
- Made initial selection from titles:
  - Seemed empirical & org comm related
  - Articles passing initial screen: 631
Coding Articles for Comm

- Made most judgments based on the abstract (some cases full text)
- Single coders rated each for “immediacy” of communication studied:
  - Direct
    - Actual message behavior
    - Record created
    - EX: Conversation analysis of a recorded and transcribed meeting; content analysis of e-mail streams
  - Secondary (one or more of)
    - No records created
    - Studies accounts of other communication
    - Studies text that is not a direct message
    - EX: Participant observation; analysis of web sites or reports
  - Residual
    - Focuses on residues of communication
    - Studies or critiques of organizational structure/function
    - Studies of attitudes, emotions, perceptions, structures
- 503 Cases Coded
Type of Communication Studied (2000-2004)

- Residual: 90%
- Secondary: 7%
- Direct: 3%
Examples of the 90%

- Survey-based attitude/perception research
- Network studies based on perceived comm (e.g., most of them)
- Interviews about general feelings/reactions toward orgs and their communication practices
- Impact of training programs
- Historical critical analyses
- Studies of structure and its effects on members
- Formal models that do not depend on real empirical data
Point 2

We don’t study communication because we take the path of least resistance
It’s **hard** to study communication

- **Recordings**
  - Can be hard to get
  - Make human subjects committees nervous
  - Can affect the interaction

- **Transcriptions**
  - Difficult to find good transcribers
  - Transcription is expensive
  - Transcription is time consuming and requires management

- **Coding/Analysis (e.g. qual and quant)**
  - Scheme development
  - Coder/analyst training
  - Quality assessment/improvement
…and there’s so much of it

- Existing CA studies focus on meetings
- Ethnographers are using computer databases
- Organizations produce massive quantities of textual messages like e-mail:
  - EX: Enron database -- top 150 people, 3 years, 500K emails
- When we look at talk, the numbers get truly frightening
Organizational Talk

- Gronn (1984, ASQ) study
  - 2 days Principal → 300 transcript pages
  - “half-talk” assumption → 75 pages/day
  - times 5 days → 375 pages/work-week

- Use “the Gronn” to estimate volume
  - Small, 50 person organization, one work week → 50 Gronn → 18,750 pages

- Let’s scale up, shall we?
So we study discourse about communication

- Focus on *residues* of communication
  - in memory
  - in social structure

- Participants do the filtering and aggregation

- Controls effects of context
Point 3

While we are busy not studying communication, others are doing it for us.
And they’re not from places you might expect

- Engineers from MIT Media Lab’s Social Computing project.
- Developed a “first of its kind” system for detecting FTF communication based on processing of audio signals
Sound Indicating Communication

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This technique as applied to a group

Fig. 2. The three speaking segments have high mutual information ($MI > 0.3$), indicative of a conversation between the speakers. It can be see that each voicing segment is the noisy complements of the remaining two.
This technique as applied to a group

![Voicing Segments of Nine Speakers](image)

**Fig. 3.** The voicing segments and interest level of a one-hour meeting.
Point 4

Unless we give studies of communication a bigger piece of the pie we risk becoming irrelevant
It has happened before

- Abbott, *Chaos of Disciplines*: Continual process of disciplinary differentiation

- “Specialists in knowledge tend to withdraw into pure work because the complexity of the thing known eventually tends to get in the way of knowledge of the system itself” (p. 22).

- When discipline withdraws from its empirical roots another one steps in to fill the void

- Example: Sociology and Anthropology withdrew into “inward, professional concerns that left the terrain of general social commentary open to humanists, who have invaded it with vigor and insight” (p. 22).
Disciplinary behavior is playing into the pattern

- Swing of the pendulum
  - Turning point was Alta conference in 80s
  - Subsequent movement away from close study of behavior to more “pure” concerns
  - Analysis of residues of comm in attitudes/opinions and structure
    - Post-positivism
    - Interpretive research
    - Critical research

- Problem is at a collective level

- Significant risks
  - We are ignoring our reason for existence and being drawn into more bourgeois, metaphysical scholarship
  - Meanwhile computer geeks (in addition to more traditional competitors) are now plowing our richest fields
Point 5

There are steps we must take to return to our roots
Step 1: Reclaim study of interaction in individual research projects

- Collective problem requires individual level solutions
- Must not be seen as a “specialty”
- Take advantage of access opportunities
- Good idea even for people with dissertations underway
Step 2: Be resourceful about getting data

- Seek existing data & research contexts that allow detailed comm study

Examples

- Work settings where things are already recorded/monitored (call centers, emergency centers, air traffic control, restaurants)
- Linguistic Data Consortium at Penn
- Enron dataset http://www-2.cs.cmu.edu/~enron
Step 3: Embrace help from science and technology

- Learn about cutting-edge technology relevant to the study of communication
  - Learn more about computers!
  - EX: enron_email.tar.gz
- Forge collaborations with computer geeks and others who are interested in this subject
  - Find and read their lit (Tip: Proceedings > Journals)
  - Attend their conferences
  - Seek out and meet their representatives on your campus
- Let go of the anti-science/anti-numbers/anti-computers attitudes
  - Passé discourse that exposes us to risk
  - Conversation detection systems can clearly help even critics and interpretivists
  - Continuing to shun this work = dogmatism
Step 4: Develop collaborations within discipline

- Sharing the burden
  - Effort: “Many hands make light work”
  - Resources: Technology is expensive

- Develop databases to share this expensive data

- Reduce entry costs for students and new faculty
EX: ASU Software Factory

Mission
- Support ASU research projects with professional software development services
- Provide a unique learning experience for students
- Perform leading edge software engineering and social science research

History
- Prop 301 funded: planning (FY02), implementation (FY03, 04, 05)
- Opened in August 2002
SF Structure

ASU Research Projects

Software Factory

Director=Project Manager (AP)

Software Factory Employees (Grad, UG)

Technician

Research, Program Evaluation & Tech Transfer

$Specs & domain

Finished software
“Real” goal: Ubiquitous observation

- Record participants whenever they are at work
- Provide means to time synchronize recordings
- Automatically log and store recordings
- Collect other relevant data
- Make data available to other researchers
Olympus DS-2000 Recorder

- Records 11 hours on one 64 MB smart card
- (Supposedly) runs 22 hours on a set of batteries
- Very small and light
- Auto-download via USB
- Uses highly compressed audio format
Check in/out system

NIST Time Server → Check in/out

Check In Req → LOG

LOG → SFDB

SFDB → DSS File

Check Out Req → UserID

Audio Time Stamp → Check In Req
Data collected so far

- 2 years of operation
- 30+ participants
- 10,000 hours of audio
- 400 interviews
- 100 weekly perceived networks surveys
- Identity/Identification surveys for first year
- Ethnographic notes
- Time tracking (logs)
- Project management & SE data
Current challenges/priorities

- Funding :-(
- “Contrail” software
  - Detect “objective” FTF comm measures to compare with perceived
  - Identify and isolate conversations for sampling
- “Code switching”
- Opening data to others
In summary...

1. We’re not studying comm...
2. because it’s hard
3. But others are studying it...
4. and this puts us at risk
5. Thus we should all take steps to study more communication