TRB Session 518

"Major disruptions to personal travel: behavioral response and the role of telecommunications"

Qing Shen, University of Maryland, presiding

Sponsored by the Telecommunications and Travel Behavior Committee

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What Does Media Choice Research Reveal About Transportation Disruption?

By John Niles @ Global Telematics
For TRB Annual Meeting @ Washington, DC
January 23, 2007

Important!
This is a telecommunications session.

- ▸ Please make sure your cell phone is ON.

- ▸ Prize awarded for the best ring tone.

- ▸ Tell the caller to call back later.

Modes of Transportation
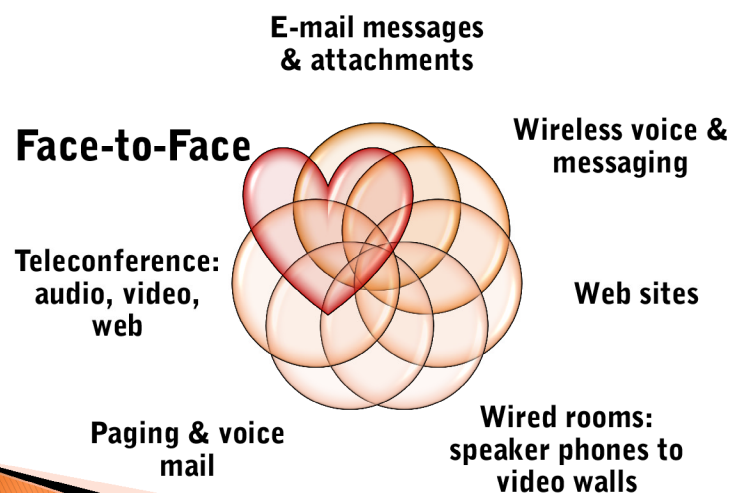# Media of Communications

Passenger Transportation	Communications
Automobiles	Physical documents
Trains and buses	Telephones
Walking and bicycles	E-mail and file transfer
Ships and boats	Video
Aircraft	Face-to-face interaction (FTF)

Teleworking & Online Shopping = Media Choice Issues

How much face-to-face interaction?

What kind of remote electronic communications media?

Modes of communication more varied and complex, but FTF still stands tall
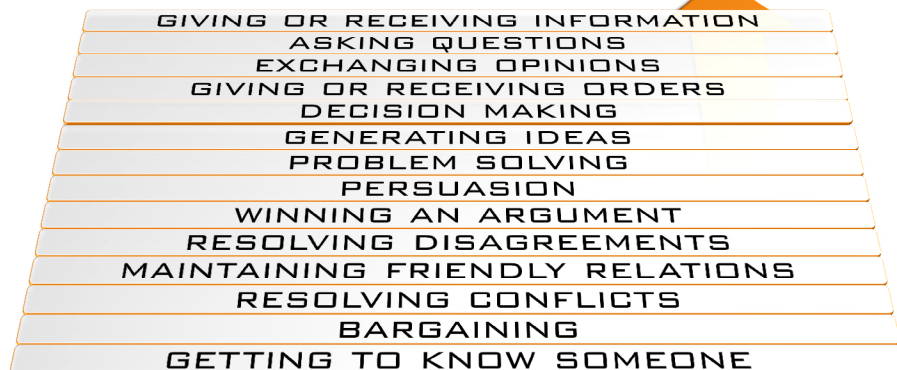
E-mail messages
& attachments

Face-to-Face

Wireless voice &
messaging

Teleconference:
audio, video,
web

Web sites

Paging & voice
mail

Wired rooms:
speaker phones to
video walls

Importance of
Face to Face (FTF)
Communications Media/Mode
at TRB:
Requires Transportation!

Q: What is media choice theory?
A: Media can be selected that best support functional requirements

TELECONFERENCING

GIVING OR RECEIVING INFORMATION
ASKING QUESTIONS
EXCHANGING OPINIONS
GIVING OR RECEIVING ORDERS
DECISION MAKING
GENERATING IDEAS
PROBLEM SOLVING
PERSUASION
WINNING AN ARGUMENT
RESOLVING DISAGREEMENTS
MAINTAINING FRIENDLY RELATIONS
RESOLVING CONFLICTS
BARGAINING
GETTING TO KNOW SOMEONE

Short, J. A., Williams, E., & Christie, B. 1976. *The social psychology of telecommunication. London:* John Wiley & Sons.
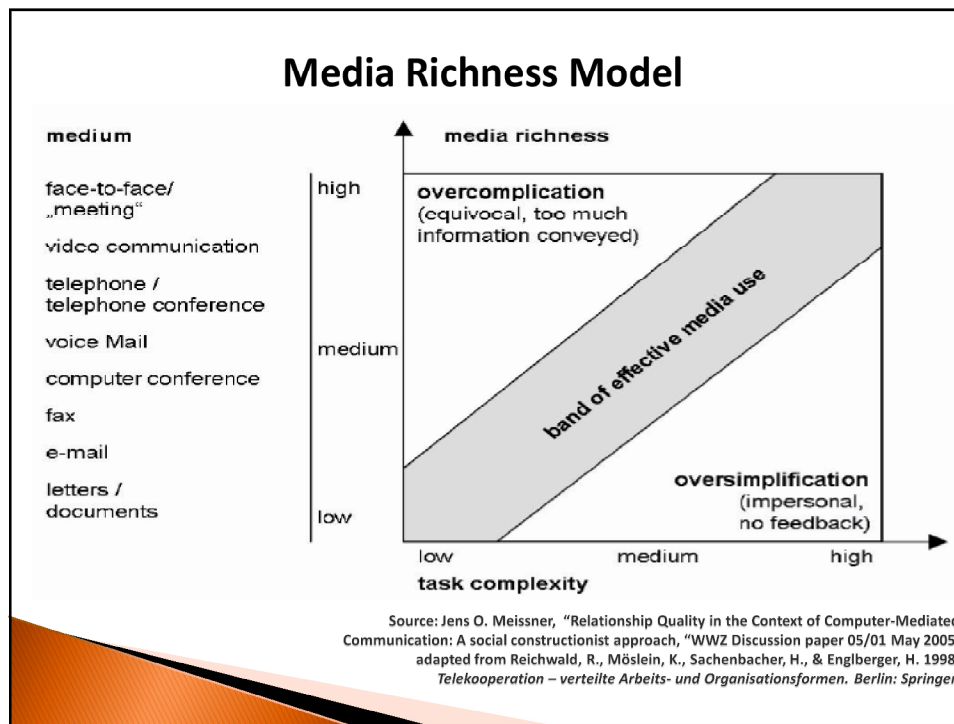
FACE TO FACE

Transportation Disruption =
Rise in Cost of FTF Mode

▸ Both money & travel time

▸ Commonly-experienced:
  - Geographic distance
  - Traffic congestion
  - Price of fuel

▸ Costs from transient travel impedance:
  - Weather
  - Accidents
  - Disasters
  - Construction
  - Epidemics
  - Attacks

Simple Video Replacement for FTF:
No Go

▸ Not enough additional media richness.

▸ Not enough social presence.

▸ "If I don't know you, adding video doesn't help me to learn more."

▸ "If I already know you, I don't need to see your (ugly) face to have good communication!"

Media Richness Model

Source: Jens O. Meissner, "Relationship Quality in the Context of Computer-Mediated Communication: A social constructionist approach, "WWZ Discussion paper 05/01 May 2005, adapted from Reichwald, R., Möslein, K., Sachenbacher, H., & Englberger, H. 1998. *Telekooperation – verteilte Arbeits- und Organisationsformen. Berlin: Springer.*

Media Characteristics List Growing!

‣ Interactivity
‣ Adaptiveness; ability to personalize
‣ Channel versatility: bandwidth and variety
‣ Multi-channel parallelism
‣ Participant identifiability
‣ Anthropomorphism
‣ Technology mediation
‣ Sender editability before transmission
‣ Machine storage/retrieval/reprocessing

Media Choice Theory Complexifying

▸ Work settings & arrangements increasingly varied

▸ Co-located & distributed team members combined

▸ Ever more complicated, hybrid media use

▸ Various media substituting for face-to-face

▸ Preference for multiple simultaneous dialogs

▸ New discoveries, e.g., paradox of richness

New Communications Mixtures:
"Better than being there."

▸ New electronic alternatives gaining on FTF.

▸ Rethinking what presence means.

▸ Telework becoming E-work & happening everywhere.

▸ Best media choices may not have been in place before the disruption.

Best plan for disruption:

**Innovate with new, more robust,
adaptable communications media
& e-work before disruption occurs!**

**"On the integrated network,
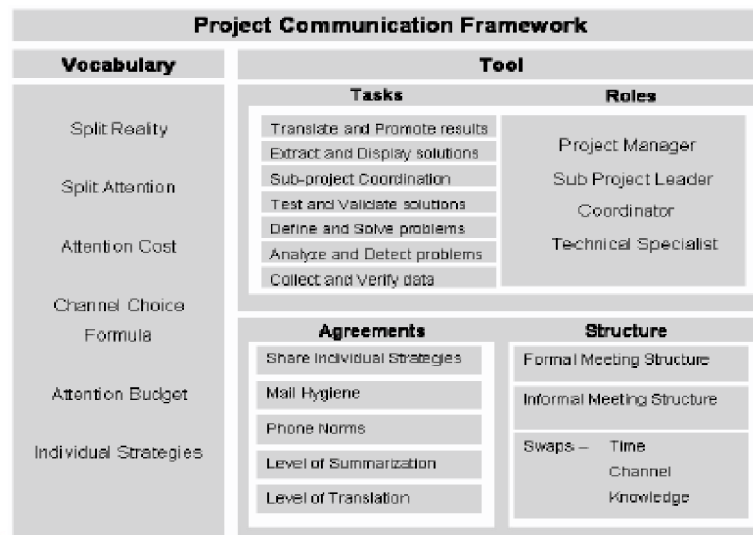work is not a place, it's an activity"**

Advertisement from: CISCO

Two Concluding Observations

▸ Most telecommuting advocates treat organizational processes, including communications, with staggering simplicity.

▸ Communications researchers describe organizational processes as staggeringly complex

Research-Based Communications Complexity

Project Communication Framework

Vocabulary	Tool	
	Tasks	**Roles**
Split Reality	Translate and Promote results	Project Manager
	Extract and Display solutions	
Split Attention	Sub-project Coordination	Sub Project Leader
	Test and Validate solutions	Coordinator
Attention Cost	Define and Solve problems	Technical Specialist
	Analyze and Detect problems	
	Collect and Verify data	
Channel Choice Formula	**Agreements**	**Structure**
	Share Individual Strategies	Formal Meeting Structure
Attention Budget	Mail Hygiene	Informal Meeting Structure
	Phone Norms	Swaps – Time
Individual Strategies	Level of Summarization	Channel
	Level of Translation	Knowledge

Source: Frida Börjesson & Jens Nilsson, "Managing Attention Budgets in a Project-Based Organisation: A Project Communication Framework," Magisteruppsats, Ekonomprogrammet, LIU-EKI/EP-D-- 06/034--SE

Google these terms
to bridge the gap.

‣ Media richness
‣ Social presence
‣ Telepresence
‣ Virtual teams
‣ Media ecology
‣ Paradox of richness
‣ Media toolbox
‣ Electronic proximity

Thank You !

More on media choice from John Niles:

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