XIX Organization Science Winter Conference

Multilevel approaches to knowledge creation, transfer & learning

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Knowledge, Networks, and Knowledge Networks: A Review and Research Agenda

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A large and growing body of empirical research shows that social relationships and the networks these relationships constitute are influential in explaining the processes of knowledge creation, diffusion, absorption, and use. The authors refer to such networks as “knowledge networks.” They advance an understanding of knowledge networks at multiple levels by conducting a systematic review and analysis of empirical research published on this topic in leading management, psychology, sociology, and economics journals. The authors develop a comprehensive framework that organizes the knowledge networks literature, which they use to review extant empirical research within and across multiple disciplines and levels of analysis. They identify points of coherence and conflict in theoretical arguments and empirical results within and across levels and identify emerging themes and promising areas for future research.

**Keywords:** knowledge networks; social networks; knowledge; learning; creativity; innovation
Organizing Framework

Knowledge Network Element
- Structural properties (33%)
  - Position
  - Ego network
  - Whole network
- Relational properties (27%)
- Nodal properties (26%)
- Knowledge properties (12%)

Knowledge Outcome
- Creation (38%)
- Transfer/learning (44%)
- Adoption (17%)

Level of Analysis
- Interpersonal (31%)
- Intra-organizational (27%)
- Inter-organizational (42%)
Causality: Mechanisms & micro-foundations

• Research assumes:
  – Theoretical isomorphism across levels
  – Homologous relationships across levels
  – Collectives as unitary actors (individuals)
  – …all are dubious

• Little insight into cross-level effects
  – Top-down and bottom-up

• Future research
  – Examine extent to which causal explanations and results of interpersonal research are homologous to higher levels
  – Understand micro-foundations of higher level relationships
  – Follow Coleman’s (1990) boat approach
    • Macro-macro relationships explained by micro mechanisms
    • Cross-level effects: macro-micro and then micro-macro
    • Nodes as nested systems
Interorganiz. C

Firm A  D

Firm B

Intraorganiz.

Interpersonal
Coleman’s Bathtub

Firm-level

Alliance formation

Intra- & inter-firm personal ties

Micro-Micro

Firm innovation

Intra-organizational knowledge diffusion & recombination

Micro-Macro

Individual-level

Macro-Micro
Up next…

• From macro to micro…
• Andreas Schwab (Iowa State)
  – Multilevel research and the discovery of key dialectic tensions and co-evolutionary interdependencies that drive long-term learning in organizational fields
• Lori Yue (USC)
  – Information spillovers from protests against corporations
• Martine Haas (Wharton)
  – An evolutionary perspective on collaborative knowledge work
• Jason Greenberg (NYU Stern)
  – A matter of (relational) style: Loan officer coherence and consistency in contract enforcement in microfinance