



How Common Knowledge Impacts the Effectiveness of Knowledge Management Processes: Insights from Empirical Studies

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Knowledge Management

(source: Wikipedia)



- “Knowledge Management (KM) comprises a range of practices used in an organisation to identify, create, represent, distribute and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organisational processes or practice.”
- Since Plato, knowledge has commonly been viewed as “justified true belief.”

KM Processes



Knowledge
Transfer

Knowledge
Substitution

Conner & Prahalad, 1996 Org Sci;
Grant, 1996 SMJ

Social
Knowledge Transfer

IT-Based
Knowledge Transfer

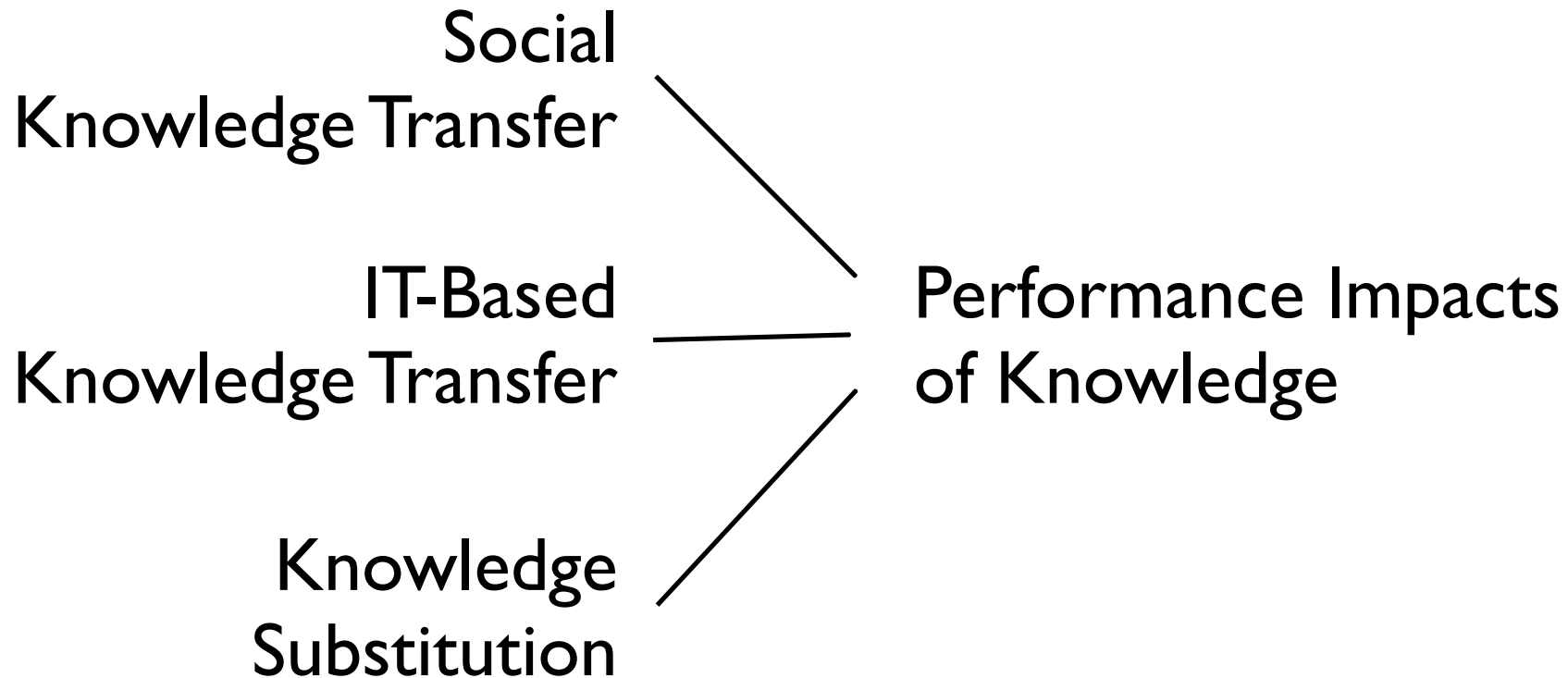
Hansen, Nohria, Tierney, HBR 1999
Personalization

Codification

KM and Performance



Common Knowledge



Common Knowledge



- “At its most simple, common knowledge comprises those elements of knowledge common to all organizational members: the intersection of their individual knowledge sets. The importance of common knowledge is that it permits individuals to share and integrate the aspects of knowledge which are not common between them.” (Grant 1996)

Elements of Common Knowledge



- Shared language
- Familiarity with same forms of symbolic communication
- Commonality of specialized knowledge
- Common cognitive schema
- Recognition of individual knowledge domains
- Shared coding schemes

Based on Kogut and Zander 1992 OS, Grant 1996 SMJ.

Why Does Common Knowledge Matter?



- Common knowledge facilitates knowledge transfer and substitution
- But the level of needed common knowledge varies across different knowledge management processes

Need for Common Knowledge ... Simple Examples

My Prior Related Work

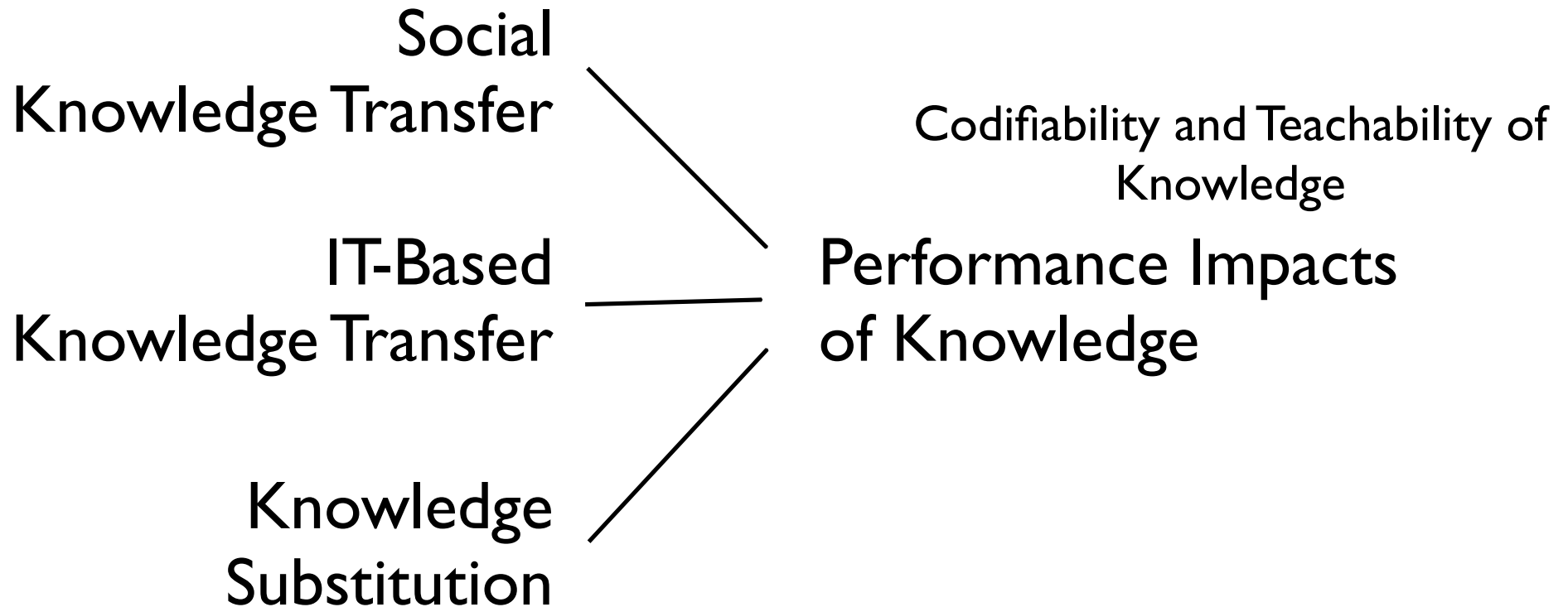


- Study at NASA-KSC, based on questionnaire survey and interviews (S & Becerra-Fernandez, IEEE-TEM, 2005)
- Argued:
 - Type (specificity) of knowledge -> Availability for related common knowledge
 - Type of KM process -> Need for common knowledge
 - Therefore, different KM processes appropriate for different types of knowledge. (Only) this was empirically tested and supported.

Current Research



Common Knowledge



Expectations



- The level of needed common knowledge varies across KI processes.
- Therefore, knowledge substitution and IT-based knowledge transfer would benefit from high level of common knowledge.
- Social knowledge transfer would not depend on the level of common knowledge.

Current Research



- Two empirical studies
 - One based on focus-group interviews and questionnaire surveys ($n = 183$) across **NASA**
 - One based on a survey of **companies** worldwide ($n = 98$)

Measures



- Teachability of knowledge: 4 items, std alpha = 0.80 (NASA), 0.88 (Companies)
- Codifiability of knowledge: 3, 0.72, 0.81
- Common knowledge: 6, 0.85, 0.88
- Performance impacts of knowledge: 6, 0.82, 0.90

Measures



- Social knowledge transfer: 6 items, std alpha = 0.78 (NASA), 0.86 (Companies)
- IT-based knowledge transfer: 4, 0.82, 0.85
- Knowledge substitution: 4, 0.81, 0.88
- EFA results were satisfactory in both samples for KM processes as well as knowledge attributes

Emergent Results



- NASA: Neither codifiability nor teachability affect common knowledge
- Companies: Teachability facilitates common knowledge

Emergent Results



- Both Samples
 - Including common knowledge helps in recognizing the effects of KM processes
 - NASA: Social transfer significant w/o CK, not so with CK
 - Companies: Social transfer and IT-based transfer significant w/o CK, only Social transfer significant with CK

Emergent Results



- Combined Samples
 - Common knowledge moderates the effects of KM processes on knowledge impact
 - Low CK: Social KT facilitates impact, IT-based KT does not affect impact, and K-sub inhibits impact
 - High CK: Social KT facilitates impact, IT-based KT does not affect impact, and K-sub does not affect impact
 - Chow test produces F-statistic significant at $p < 0.001$

Conclusions



- Social Knowledge Transfer seems to matter the most. But caveat: we are examining the performance impacts of knowledge as DV.
- Common Knowledge moderates the effects of KM processes.
- Excluding CK from the analyses could lead to erroneous conclusions.

Further Work



- Additional dependent variables: Knowledge loss (both samples), Effectiveness of KM (companies only)
- Structural equation modeling or PLS
- Control variables (especially in companies)