

Theory of Knowledge for Literature Reviews: An Epistemological Model and an Empirical Analysis of IS Literature

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Agenda

- Introduction
- Literature Reviews
- Theory of Knowledge
- An Epistemological Model for Contributions of Literature Reviews
- Empirical Study
- Conclusion

Introduction

- Increasing interest in literature reviews in IS
 - Special departments and senior editors at MISQ and JAIS
 - LR published in an increasing number of IS journals
 - Plenty of guidelines
 - Special issues published in CAIS and JIT
- Many other disciplines have an even stronger focus on literature reviews
 - Journals dedicated to literature reviews
 - e.g., ACM Computing Surveys, International Journal of Management Reviews, Cochrane Database of Systematic Reviews
 - Institutions dedicated to supporting literature reviews
 - e.g., The Cochrane Collaboration, The Campbell Collaboration, the EPPI Center

Introduction

- Literature reviews are essential for knowledge development and scientific progress
- The epistemological foundation of literature reviews has not been conceptualized
 1. *How can the theory of knowledge be used to develop an epistemological model of knowledge creation through literature reviews?*
 2. *How have literature reviews actually contributed to knowledge creation in IS?*

Literature Reviews

Definition

*A literature review provides a **synthesis** of the body of **knowledge of a specified domain**.*

Contributions

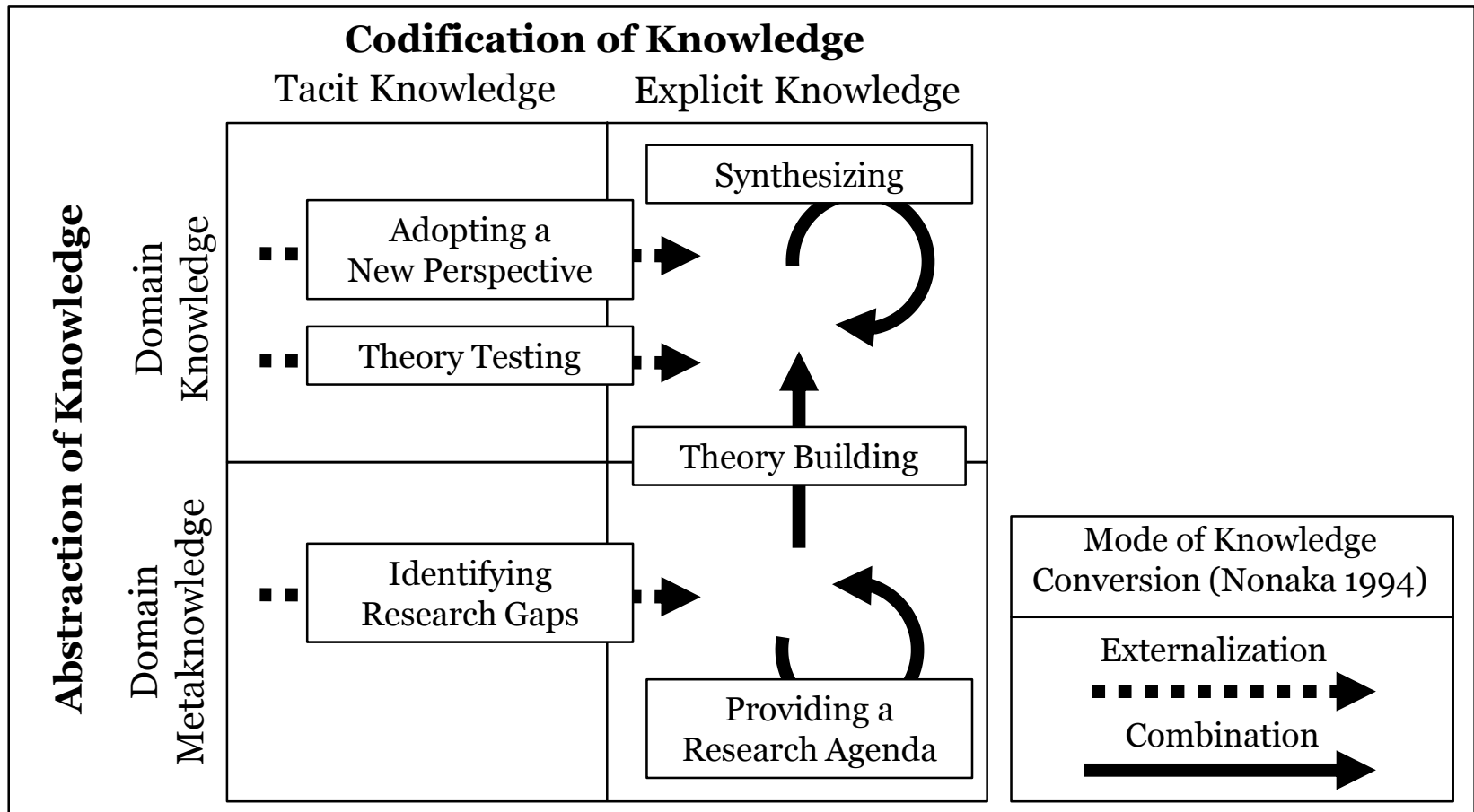
1. Synthesizing
2. Adopting a new perspective
3. Theory building
4. Theory testing
5. Identifying research gaps
6. Providing a research agenda

A word cloud containing the following terms: systematic review, literature review, aggregative review, narrative review, integrative review, meta-analysis, meta-review, scoping study, literature survey, and research synthesis. The words are arranged in a circular pattern, with 'systematic review' at the top and 'research synthesis' at the bottom.

Theory of Knowledge

- **Knowledge is “justified true belief” (Socrates)**
 - Includes positivist, interpretivist, and pragmatist research, for example
- **Codification of knowledge (Nonaka 1994; Polanyi 1967)**
 - Knowledge is created by converting tacit and explicit knowledge
- **Abstraction of knowledge (Evans and Foster 2011)**
 - Knowledge creation is guided by metaknowledge

An Epistemological Model for Contributions of Literature Reviews



Empirical Study

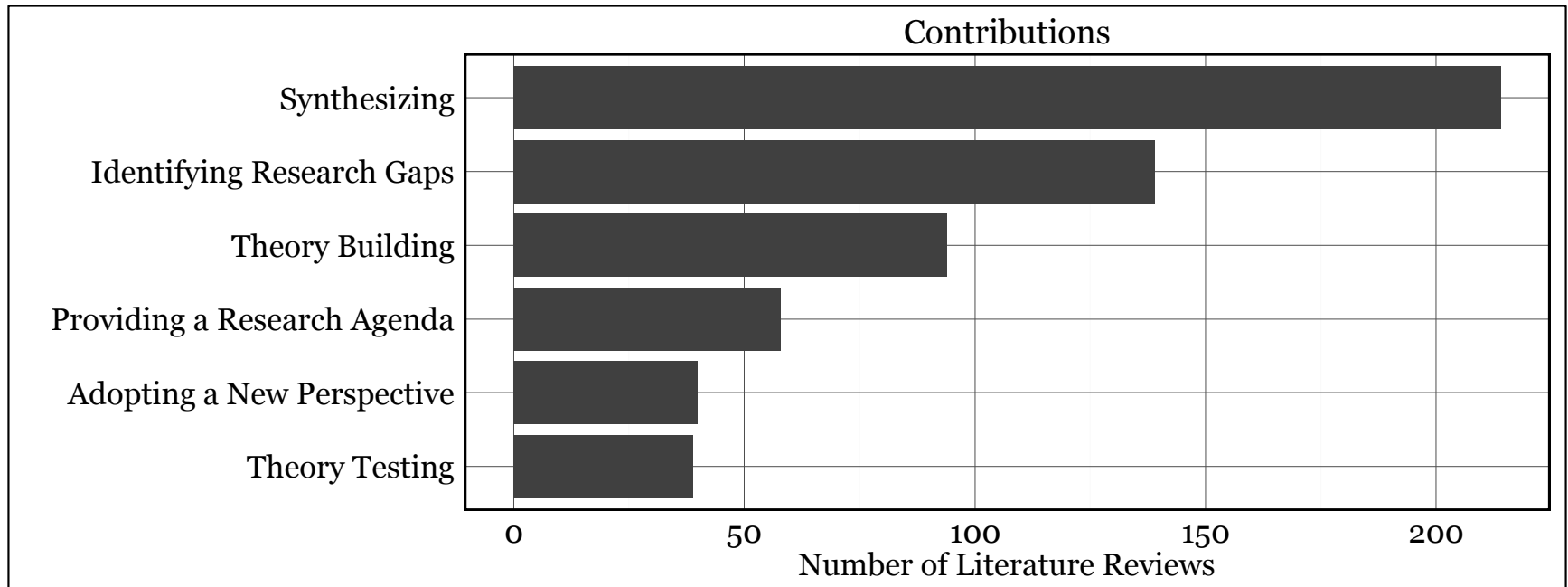
- **Scope: literature reviews which were published**
 - in 40 IS journals (Lowry et al. 2013), in English, between 2000 and 2014.
- **Identification of literature reviews**

Set	Number
Candidates (table of content scan)	455
- Candidates which do not provide a synthesis	59
- Candidates which do not focus on domain knowledge	88
- Candidates which are short research commentaries/notes	23
- Candidates which collect primary data	26
- Candidates which do not primarily focus on the academic literature	8
- Candidates which focus on the history of a single journal	8
Literature reviews	214

Empirical Study

Literature Review	Citations
Alavi, M., and Leidner, D. E. 2001. “Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues,” MIS Quarterly (25:1), pp. 107–136.	8,038
DeLone, W. H., and McLean, E. R. 2003. “The DeLone and McLean Model of Information Systems Success: A Ten-Year Update,” Journal of Management Information Systems (19:4), pp. 9–30.	6,026
Legrís, P., Ingham, J., and Colletette, P. 2003. “Why Do People Use Information Technology? A Critical Review of the Technology Acceptance Model,” Information & Management (40:3), pp. 191–204.	2,449
Melville, N., Kraemer, K., and Gurbaxani, V. 2004. “Review: Information Technology and Organizational Performance: An Integrative Model of IT Business Value,” MIS Quarterly (28:2), pp. 283–322.	2,216
Dibbern, J., Goles, T., Hirschheim, R., and Jayatilaka, B. 2004. “Information Systems Outsourcing: A Survey and Analysis of the Literature,” ACM SIGMIS Database (35:4), pp. 6–102.	1,257

Empirical Study



Empirical Study

Bundle of Contributions	Literature Reviews	% (Σ)
SYN	6	32% (69)
SYN + RG	39	
SYN + RG + RA	24	
SYN + TB	23	31% (66)
SYN + TB + RG	22	
SYN + TB + RG + RA	21	
SYN + NP	17	14% (29)
SYN + NP + RG	6	
SYN + NP + RG + RA	6	
SYN + TT	18	10% (22)
SYN + TT + RG	4	

SYN – Synthesizing

TB – Theory building

RG – Identifying research gaps

NP - Adopting a new perspective

TT – Theory testing

RA –Developing a research agenda

Conclusion

Contributions

- A novel epistemological model for contributions of literature reviews
- An extensive empirical study of 214 literature reviews in IS

Further research

- Literature reviews provide a foundation for subsequent research – how are their contributions used?

References

Evans, J. A., and Foster, J. G. 2011. “Metaknowledge,” *Science* (331:11), pp. 721–725.

Lowry, P. B., Moody, G. D., Gaskin, J., Galletta, D. F., Humpherys, S. L., Barlow, J. B., and Wilson, D. W. 2013. “Evaluating Journal Quality and the Association for Information Systems Senior Scholars’ Journal Basket via Bibliometric Measures: Do Expert Journal Assessments add Value?,” *MIS Quarterly* (37:4), pp. 993–1012.

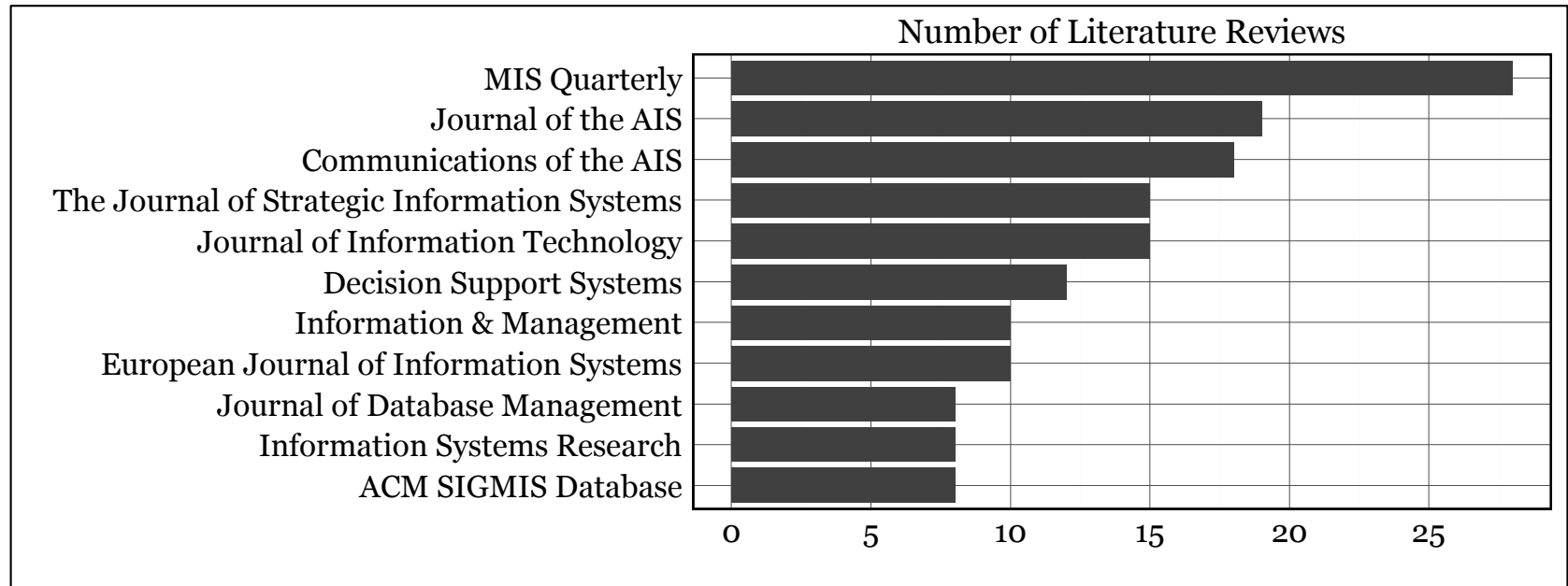
Nonaka, I. 1994. “A Dynamic Theory of Organizational Knowledge Creation,” *Organization Science* (5:1), pp. 14–37.

Polanyi, M. 1967. *The Tacit Dimension*, University of Chicago Press.

Top-40 IS journals (Lowry et al. 2013)

ACM SIGMIS Database	International Journal of Electronic Commerce
ACM Transactions on Management Information Systems	Journal of Computer Information Systems
AIS Transactions on Human-Computer Interaction	Journal of Database Management
Australasian Journal of Information Systems	Journal of Global Information Management
Business & Information Systems Engineering	Journal of Global Information Technology Management
Communications of the Association for Information Systems	Journal of Information Systems Education
Decision Support Systems	Journal of Information Technology
Electronic Commerce Research and Applications	Journal of Information Technology Case and Application Research
Electronic Markets	Journal of Information Technology Management
e-Service Journal	Journal of Information Technology Theory and Application
European Journal of Information Systems	Journal of International Technology & Information Management
Information & Management	Journal of Management Information Systems
Information and Organization	Journal of Organizational and End User Computing
Information Resources Management Journal	Journal of Organizational Computing and Electronic Commerce
Information Systems Frontiers	Journal of the Association for Information Systems
Information Systems Journal	MIS Quarterly
Information Systems Management	MIS Quarterly Executive
Information Systems Research	Scandinavian Journal of Information Systems
Information Technology & People	The Journal of Strategic Information Systems
Information Technology and Management	

Empirical Study



Empirical Study

