Theory of Knowledge for Literature Reviews

An Epistemological Model, Taxonomy and 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 and Taxonomic Classification

- Conclusion

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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 IS literature reviews contributed to knowledge creation and how can we foster it in future IS literature reviews?*

3. *How can the empirical analysis of knowledge creation through IS literature reviews be used to develop an epistemological taxonomy of literature reviews?*

Literature Reviews

Definition

*A literature review provides both a **comprehensive synthesis and an interpretation** of the body of **knowledge of a specified domain**.*
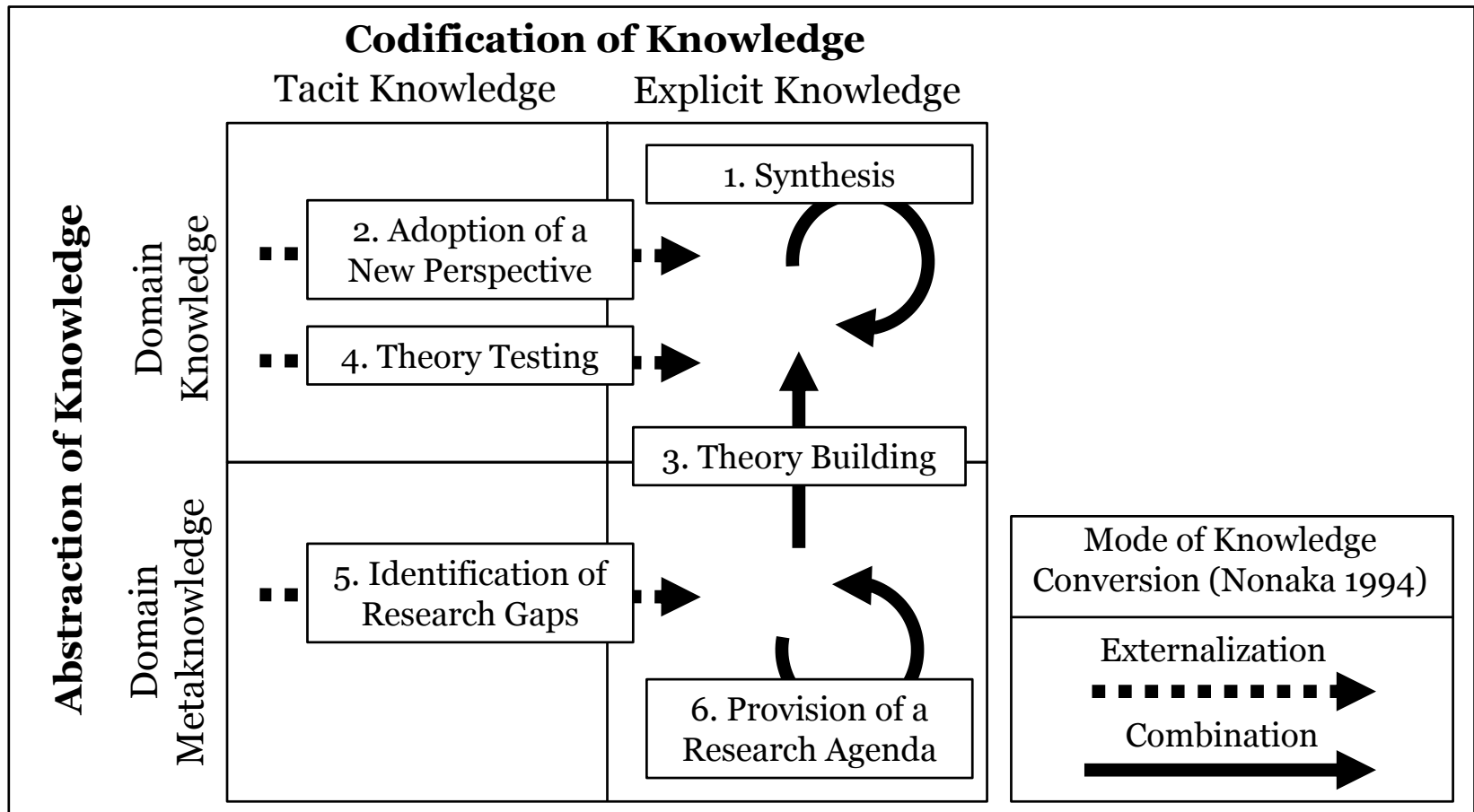
Contributions

1. Synthesis
2. Adopting a new perspective
3. Theory building
4. Theory testing
5. Identification of research gaps
6. Provision of a research agenda

systematic review
literature review
aggregative review
narrative review
meta-analysis
integrative review
meta-review
scoping study
literature survey
research synthesis

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

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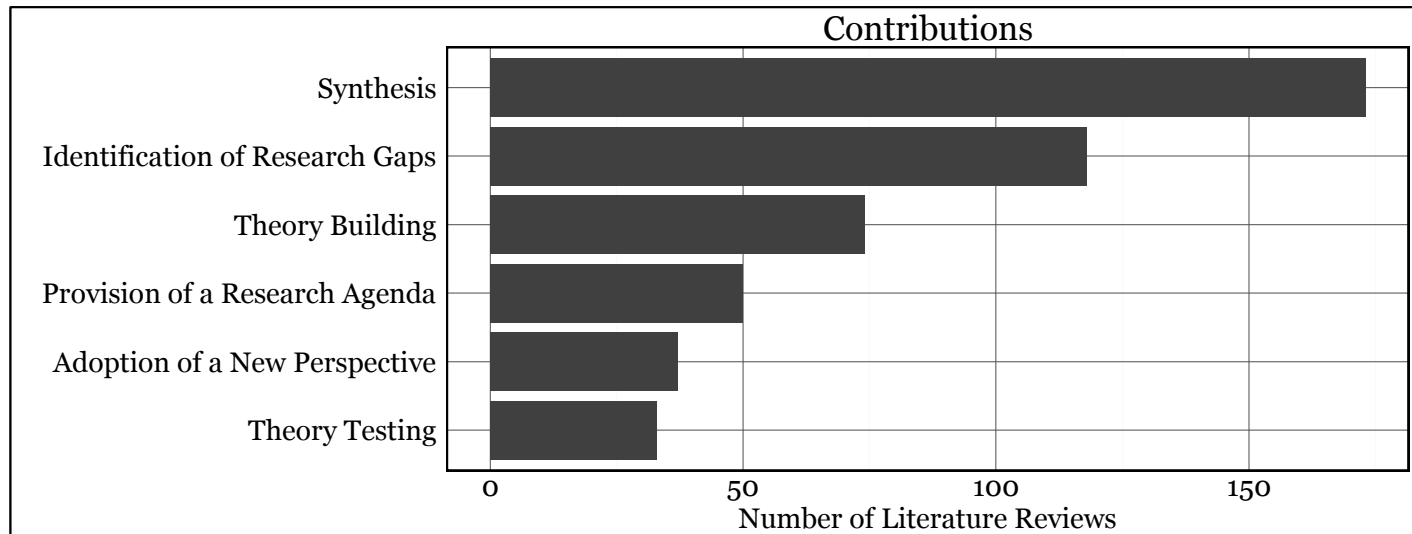# An Epistemological Model for Contributions of Literature Reviews

Empirical Study

- **Scope: literature reviews which were published**

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

  - in English, and

  - between 2000 and 2014.

- **Identification of literature reviews**

  - table of content scan $\Rightarrow$ 403 candidates

  - manual classification $\Rightarrow$ 173 literature reviews

- **Coding of contributions**

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
Legris, P., Ingham, J., and Collerette, 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

Taxonomic Classification of Literature Reviews

Epistemological Review Type (Predominant Knowledge Conversion)	Sub-type	Contributions						Number of Reviews
		Synthesis	Adoption of a New Perspective	Theory Building	Theory Testing	Identification of Research Gaps	Provision of a Research Agenda	
I. Gap Spotting Review (Externalization of Domain Metaknowledge)	a)	included				dominant		34
	b)	included				dominant	included	21
II. Perspectival Review (Externalization of Domain Knowledge)	a)	included	dominant					14
	b)	included	dominant			included		6
	c)	included	dominant			included	included	6
III. Theory Building Review (Combination of Domain Metaknowledge)	a)	included		dominant				17
	b)	included		dominant		included		12
	c)	included		dominant		included	included	17
IV. Theory Testing Review (Externalization of Domain Knowledge)	a)	included			dominant			14
	b)	included			dominant	included		4
V. Theory Building and Testing Review (Externalization of Domain Knowledge and Combination of Domain Metaknowledge)	a)	included		dominant	dominant			6
	b)	included		dominant	dominant	included		6
	c)	included		dominant	dominant	included	included	3

Conclusion

Contributions

- A novel epistemological model for contributions literature reviews

- An extensive empirical study of 173 literature reviews in information systems

- The first epistemological taxonomy of literature reviews

Further research

- In which ways do literature reviews contribute to the development of design-oriented knowledge?

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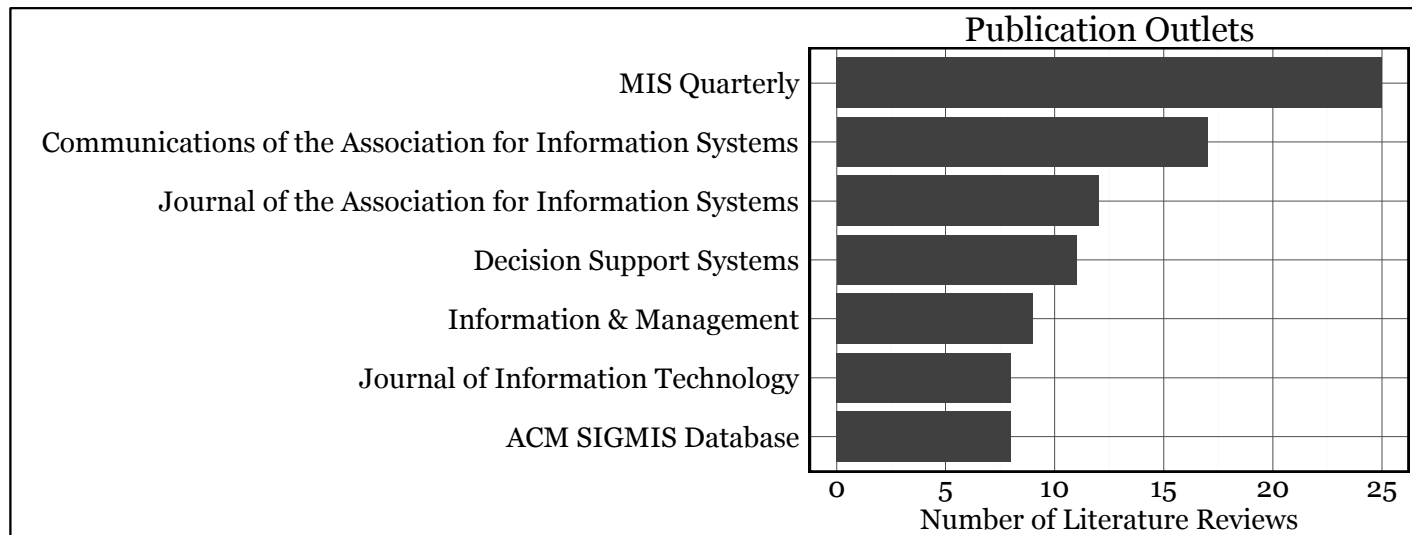
Nonaka, I. 1994. "A Dynamic Theory of Organizational Knowledge Creation," *Organization Science* (5:1), pp. 14–37.

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

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Empirical Study

Methodology:
- Identification of literature reviews (table of content scan):
  - Top-40 IS journals (Lowry et al. 2013),
    published between 2000 and 2014
- Coding of contributions and methodological attributes