

Theory Development and The New Rules of Publishing Empirical Social Science

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Seminar

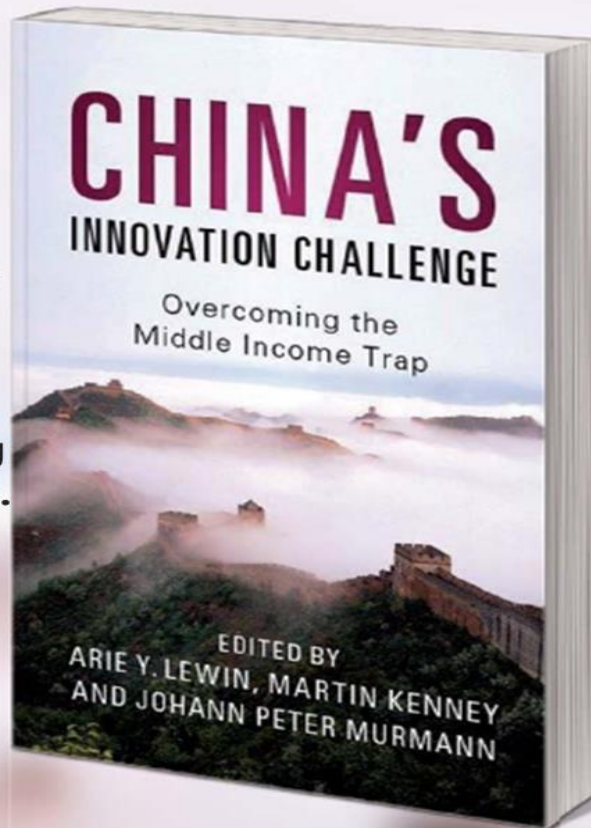
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Resulting from the MOR Inaugural Research Frontiers Conference in December 2014, this book brings together leading Chinese and other international scholars to examine the key areas shaping China's opportunities. It also looks at the challenges if China is to become an innovation-based economy.

Publish **2016**



Visit www.cambridge.org/9781107566293
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Prologue: Compliance with New Publication Rules

- ❑ Chua, R., & Ng, K. (2017). Not Just How Much You Know: Interactional Effect of Cultural Knowledge and Metacognition on Creativity in a Global Context. *Management and Organization Review*, 13(2), 281-300.
- ❑ Chua, R., & Ng, K. (2017). Not Just How Much You Know: Interactional Effect of Cultural Knowledge and Metacognition on Creativity in a Global Context — **ADDENDUM**. *Management and Organization Review*, 13(2), 301-306.
- ❑ Filatotchev, I., Su, Z., & Bruton, G. (2017). Market Orientation, Growth Strategy, and Firm Performance: The Moderating Effects of External Connections. *Management and Organization Review*, 13(3), 575-601.
- ❑ Filatotchev, I., Su, Z., & Bruton, G. (2017). Market Orientation, Growth Strategy, and Firm Performance: The Moderating Effects of External *Management and Organization Review*, 13(3), Connections — **ADDENDUM**. *Management and Organization Review*, 13(3), 603-609
- ❑ Yan, H., He, X., & Cheng, B. (2017). Managerial Ties, Market Orientation, and Export Performance: Chinese Firms Experience. *Management and Organization Review*, 13(3), 611-638.
- ❑ Yan, H., He, X., & Cheng, B. (2017). Managerial Ties, Market Orientation, and Export Performance: Chinese Firms Experience — **ADDENDUM**. *Management and Organization Review*, 13(3), 639-641.

Prologue: Personal Experience at SMJ

- **The Changing Rationale for Governance Choices: Early Vs. Late Adopters of Global Sourcing, Stephan Manning, Silvia Massini, Carine Peeters, Arie Y. Lewin. First Published: 22 March 2018**
 - Using project-based historical Offshoring Research Network data to explain drivers of governance choices in global services sourcing over time
 - Theoretical anchor: Recent work by Jacobides & Winter (2005, 2012) on co-evolution of firm boundaries, vertical scope, firm capabilities and governance choices
 - Question: How do key determinants of firm boundary choices co-evolve over time?

- **Rejected at SMJ, Science (2015), Organization Science, Journal of Management Studies and Journal of International Business Studies**
 - Main critique: too eclectic, questionable empirical test of theory
 - Re-framing: focus on role of experience at firm and population level affecting governance choices
 - Resubmitted to SMJ. But during R&R had to satisfy new publishing rules

Reality of Empirical Social Science

- **Empirical Social Science Research is Being Questioned as Never Before**
 - ▣ **Challenge Of Falsifiability**
 - ▣ **Theoretical Pluralism sham theory development**
 - ▣ **Disconnect Between Empirical Management Social Science Research, Advancing Management Practice and social relevance.**
 - ▣ **Journals Propagate Reviewing Practices Biased Towards Novelty Over Replication**
- **Game Changing Journal Reviewing Policies**
 - **New Reviewing Policies**
 - **Data Transparency and Replication**
 - **Null and Negative Findings**
 - **No Asterisks, exact P values**
 - **Effect Size, Effect Size, Effect Size**

Administrative Science Quarterly Inaugural Essay

- ❑ In **1956**, James D. Thompson seminal inaugural essay “on Building an Administrative Science” gave voice to the aspiration for an empirical social science in the image of the rigor and precision of Physics.
- ❑ Essay was trigger for the “*scientific*” - quantitative race in empirical social science.
- ❑ In **1961** Aston Group of organizational researchers under leadership of Derek S. Pugh initiated the long march towards a science of administration (Loveridge 2013).
- ❑ Aston group was the first to apply survey methodologies and large scale statistical analyses of organization structures which they believed related to a range of organization functions.

But How Scientific Is Management Research?

- ❑ **To what extent has empirical social science created valid and reliable knowledge?**
- ❑ **Can managers, employees or policymakers rely on it to design effective organizations and improves lives?**
- ❑ **Two general types of challenges**
 - **Questionable/unethical research practices**
 - **Research disconnected from practice**

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In reality Management Research falls short of scientific standards of falsifiability, replicability and data transparency

Threat to Integrity of Social Science

Falsifiability is foundational for Advances in science

(Popper 1959)

- But a “replication crisis” has blown hole in credibility of social sciences (Miguel *et al.*, 2014).
 - “questionable research practices” are common (Loewenstein and Prelec, 2012)
 - Two-thirds of respondents admitted failing to report all of the dependent measures in a study.
 - Half confessed to reporting empirical findings selectively, discussing only results that “worked”.
 - A third acknowledged HARKing: Claiming unexpected results as if they were hypothesized in advance (Kerr, 1998).
 - Even more troubling respondents did not realize that selective reporting can masquerade a false proposition as true with supposedly high statistical significance (Simmons, Nelson, and Simonsohn, 2011)

Threat to Integrity of Social Science II

- Of 100 randomly selected studies by Open Science Collaboration (2015), many of them, when published, were regarded as “significant” and “counterintuitive”, only 39% were replicated and effect size was half of originally reported.
- For non-experimental economics research, just 13% to 23% of original results were replicable (Camerer *et al.*, 2016: 1435-1436).
- In strategy, Tsang & Yamanoi (2016) found material errors in a highly cited impactful paper on international expansion by Barkema and Vermeulen, (1998). Paper was not retracted or corrected.

Percentage of management faculty who reported knowledge of faculty engaging in the listed behavior within the previous year (n=384)

Category I – Fabrication, Falsification, and Plagiarism	%
1. Withheld methodological details or results	79.2
2. Selected only those data that support a hypothesis	77.6
3. Used another’s ideas without permission or giving due credit	72.1
4. Dropped observations or data points from analyses	59.6
5. Withheld data that contradicted their previous research	49.5
6. Fabricated results	26.8
Category II – Questionable Research Practices	
7. Developed hypotheses after results were known	91.9
8. Published the same data or results in two or more pubs	86.2
9. Developed “ins” with journal editors	83.3
10. Inappropriately accepted or assigned authorship credit	78.9
11. Circumvented aspects of human-subjects requirements	58.1

What and why of Transparency

Transparency about:

Sampling, measurement, procedures, data cleaning, data transformation, analysis, model fitting, result reporting, and access to data.

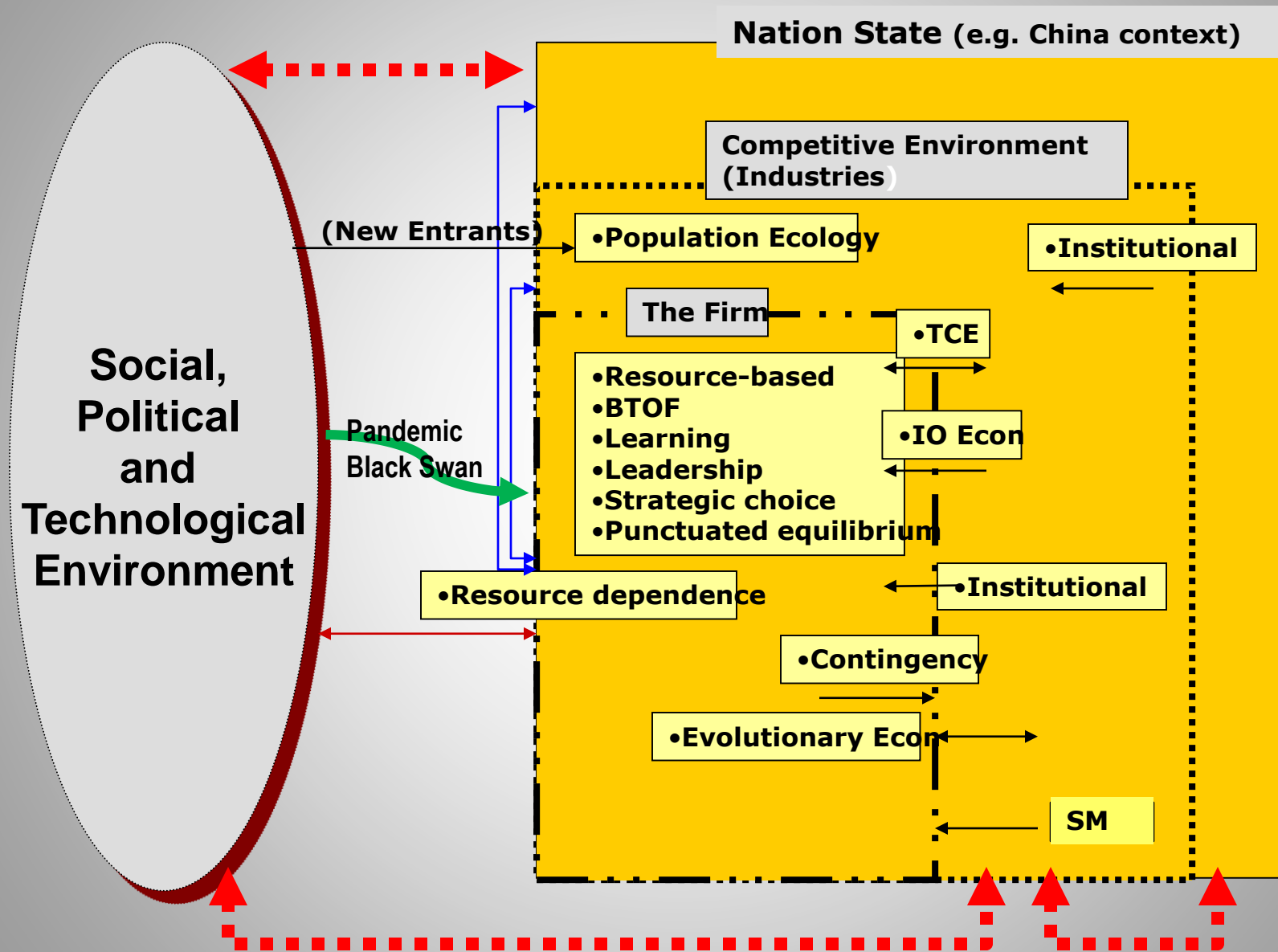
For assessing the credibility of evidence

- ❑ Reproducibility (same hypotheses, same procedure, same study, same data)
- ❑ Replication (same hypotheses, same procedure, different study, different data)
- ❑ Less than 50% of empirical social science is replicable
- ❑ **Scientific advancement requires that empirical social science attract and publish replications because of variation in context, and inherent uncertainty in any single study.**

The Bane of Theoretical Pluralism

- ❑ **Fragmentation and Competing Explanations** (Lewin et. al 2004)
- ❑ **Confirmation bias and fetishism for novelty**
- ❑ **Theories Often Represent Underlying Ideological Beliefs** (Tsui 2013 and 2016)
- ❑ **Lack of attention to consequences of wrongful conclusions from theory or inference from findings**
- ❑ **Low explanatory power**
 - **Most statistical studies report low explained variance $R^2 < .22$**
 - **Fixed effect Variance on average is twice as large**

Theoretical Pluralism: Fragmentation and Competing Theories



Criticality of Normal Science

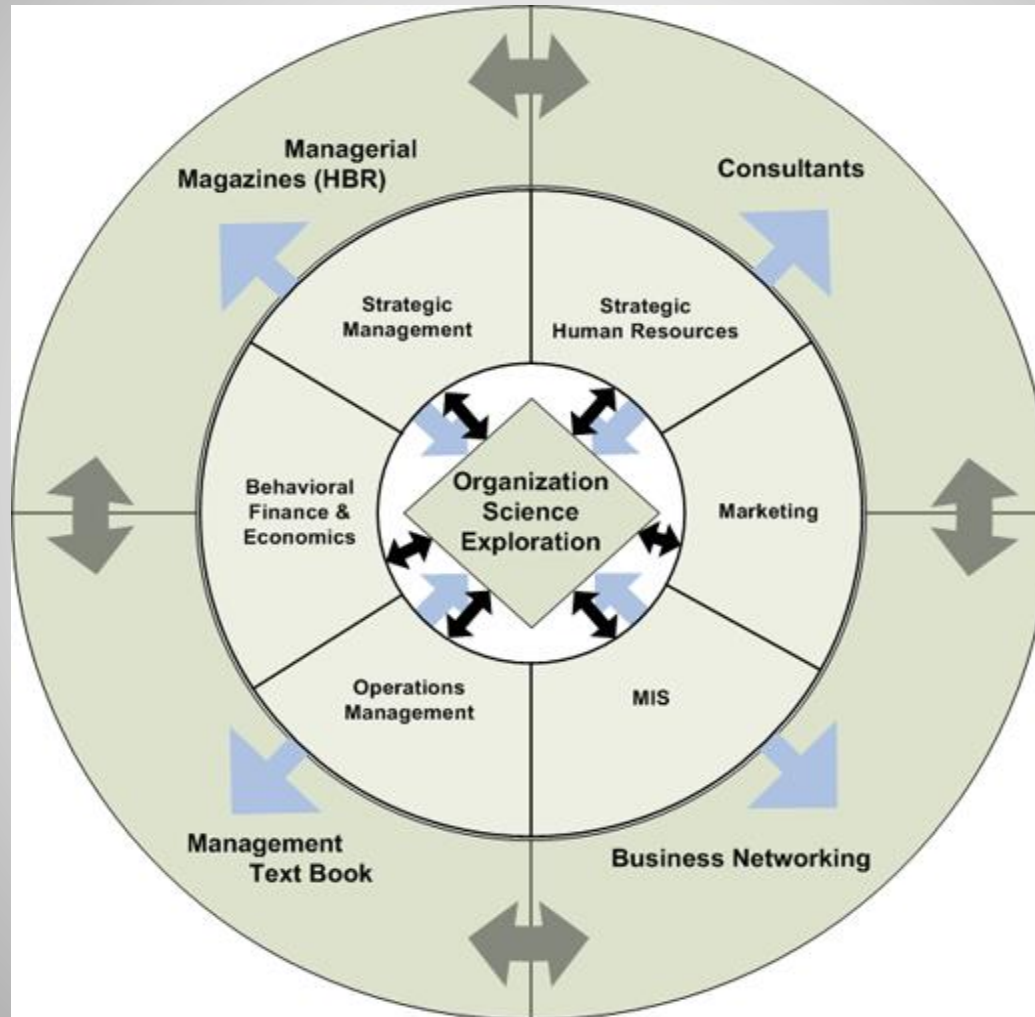
- **Incrementalism:** “A striking feature of normal science is how little it aims to produce major novelties. It aims mostly to improve the scope and precision of the work within the paradigm” (Kuhn, 1996: 35)
- **Parochialism:** A paradigm may even insulate a scientific community from those “socially important problems” that are not reducible to puzzle form – stated in terms of the conceptual and instrumental tools the paradigm supplies. (p 37)

Empirical Social Science does not qualify as “Normal Science” as long as replication is not valued and bias for novelty dominates.

Disconnect Between Empirical Management Research and Advancing Management Practice.

- **Academic Business/Management Research is Not Relevant For World of Business Practitioners** (Hambrick 1994; Daft and Lewin 2008)
 - **Selection Process for Business Relevance Not Observable by Most Academics**
 - **Selection Processes for Business and Academic Relevance are Distinctly Separate**
- **Most Academics Lack Competitive Advantage to Inform Management Practice** (But see Tsui 2015 on socially responsible scholarship)
- **But Replicable Knowledge that Can Inform Practice Would Elevate Academic Relevance** (Pillutla and Thau, 2013; Heath and Heath, 2010; Kahneman, 2011 and Lewin and Minton, 1986)

Ideas Migrate Across Academic/Practitioner Sub-communities



Dark Side of “Management Research” in Business Schools.

1. Pro-management ideology

- Develop theories to improve shareholder return and less attention to outcomes for other stakeholders.

2. Quantity over quality

- Emphasis on number of articles in a defined set of journals and not on ideas or on scientific rigor.

3. Instrumental rationality

- Faculty are treated as means of paper production and performers in classroom to maximize ranking.

Game Changing Journal Reviewing Policies

❖ New Reviewing Policies

❖ Journals Such as SMJ, AER, OBHDP

❖ Data Transparency

- ❖ Make Data Bases Available
- ❖ Disclose all data manipulations
- ❖ Include analyses of outliers

❖ Report and discuss null and negative findings

- ❖ Effect size, confidence intervals
- ❖ No asterisk (e.g. Aguinis et al 2010)

❖ Replication

- ❖ Alternative or competing theories
- ❖ Post hoc analyses (same data or new data)

MOR Challenges Going Forward

□ New Editorial Policies

- Necessary but Not Sufficient
- Change Mind Set of Editors, Reviewers and authors
- Education and Training of Scholars and PhD Students
 - New MOR Theory Development and Preapproval Workshops

□ MOR New Publishing Rules (As of Volume 13)

- Hypothesis testing is not obligatory
 - Discourage exploratory research in guise of hypothesis testing (HARKING).
 - Statistical analysis must discuss positive, negative, or no findings and effect size
- Post hoc analysis is permitted if labeled as such
 - To explore relationships that were not originally hypothesized
- Avoid cutoff points for statistical significance
 - Report coefficient estimates and exact p -values or standard errors
- Access to data during review process may be required

Opportunities for China

- ❑ **Develop China Management research based on Engaged Indigenous Scholarship**
- ❑ **Engaged indigenous scholarship is critically important for development of management knowledge that expresses and celebrates unique social and cultural contexts of different countries instead of homogenizing management research by trying to adapt and apply western theories and methods.**
- ❑ **Bounded rationality is a universal human limitation. But coping with bounded rationality is very culturally dependent. China is no exception.**
- ❑ **But the principles of Falsifiability, transparency and replication are universal.**
- ❑ **MOR seeks to encourage papers that develop indigenous management theories, methods, and institutions that are sensitive to local contexts.**

The Path Forward

- ❑ China has the opportunity to be a first mover and direct attention of social science scholars to publishing empirical social science and management research in journals that have adopted new publishing rules.
- ❑ Focus on, and reward indigenous management research and discourage application of “tried and true” western theories with Chinese data.
- ❑ Redouble efforts to counteract “academic fraud” by undertaking a national initiative similar to Project 211 to upgrade empirical social science in China and to legitimize contribution to management practice and social relevance.

QUESTIONS?

THANK YOU

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Comments are welcome now or
anytime.

➤ To **Contact me**

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