

Mixed Methods in Strategy and Organizations Research

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My Background

Research Interests

- Innovation, Organizational Routines, and Organizational Change

Training

- Strategic Management, Organizational Theory

My Background

Methodological Approaches

- Archival data, Case studies, Computational simulation, Field experiments

Interests in Mixed Methods

- Drawn to mixed methods based on particular issues being faced in my research projects, with the belief that combining methods could help me to solve a problem and/or extend my understanding

Overview of Presentation

- What is Mixed Methods Research?
 - Why use a Mixed Methods Approach?
 - How do Researchers carry out Mixed Methods Research?
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- Considering a Triangulation-Based Framework for Mixed Methods Research
 - Thinking about Divergence and Commonality across the Mix of Methods
 - Navigating the Challenges of Mixed Methods Work

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What is Mixed Methods Research?

- An approach for gaining greater knowledge for a research question by combining multiple methodologies, most commonly involving both qualitative and quantitative approaches (i.e., combining stories and numbers)
- Focusing on mixed methods that takes place within a single research study

Foundations for Mixed Methods Research

- While positivist and postpositivist paradigms typically underlie quantitative approaches, and a constructivist paradigm typically underlies qualitative approaches, Tashakkori and Teddlie (1998) argue that mixed methods research is justified on the basis of a pragmatic paradigm
- From this view, they emphasize that "pragmatists consider the research question to be more important than either the method they use or the worldview that is supposed to underlie the method"

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Why use a Mixed Methods Approach?

- Core Assumption: Combining multiple methodologies provides a more complete understanding for a research problem than could be obtained through the individual methods alone
- The value of mixed methods research is based on the idea that "all research strategies and methods are seriously flawed" (McGrath 1982) but in combination, the use of multiple methods that do not share the same failings can enhance what is known about a research question

Why use a Mixed Methods Approach?

- Provides more comprehensive evidence for a research problem
- Opportunity to answer questions that cannot be answered by qualitative or quantitative approaches alone
- Evidence in strategy research that mixed methods research has more impact in terms of citations (Molina-Azorin 2012)

Why use a Mixed Methods Approach?

- Mixed methods provides a blend of techniques that are needed to match the complexity that organizational scholars currently find in the phenomena that they are studying
- Mixed methods may be particularly well-suited for studying research domains that are at intermediate stages of maturity, although mixed methods can also contribute to mature areas by enabling extension in novel directions

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Basic Approaches to Mixed Methods Research Design

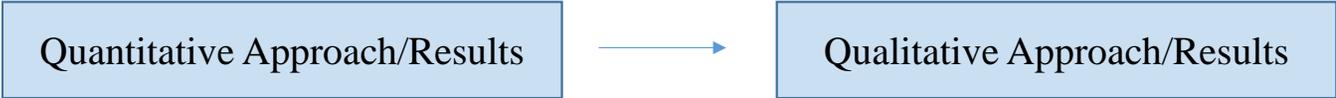
Convergent Design



Exploratory Sequential Design



Explanatory Sequential Design



Order of Implementation among the Approaches

- As a researcher uses the different approaches, their order may be important for the study purpose (e.g., in an exploratory study, a qualitative approach may precede a quantitative approach), or their order may be largely irrelevant (e.g., "simultaneous" use of methods)

Prioritization among the Approaches

- A researcher can give equal priority to quantitative and qualitative approaches (QUAN, QUAL), emphasize quantitative more (QUAN, qual), or emphasize qualitative more (quan, QUAL)

Key Design Elements: Order and Priority

ORDER OF IMPLEMENTATION AMONG APPROACHES

		Simultaneous	Sequential
PRIORITY AMONG APPROACHES	Equal	QUAL + QUAN	QUAL -> QUAN QUAN -> QUAL
	Different	QUAL + quan QUAN + qual	qual -> QUAN QUAL -> quan quan -> QUAL QUAN -> qual

Johnson and Onwuegbuzie (2004), Molina-Azorin (2012)

Key Design Elements: Order and Priority

Order and Priority in Strategy Research	n (%)
Order of Implementation among the Approaches	
Sequential	150 (91%)
Simultaneous	15 (9%)
Priority among the Approaches	
Different Status	134 (81%)
Equal Status	31 (19%)

Key Design Element: Specific Purpose

Triangulation

- Seeking convergence and corroboration of results from the different methods

Complementarity

- Opportunity to interpret, clarify, elaborate or illustrate the results from one method using the results from the other method

Development

- Using the results from one method to help develop or inform the other method

Expansion

- Expands the breadth of inquiry by using different methods to assess different aspects of the phenomenon

Key Design Element: Specific Purpose

Specific Purpose in Strategy Research	n (%)
Development	121 (73%)
Complementarity	21 (13%)
Expansion	15 (9%)
Triangulation	8 (5%)

Key Design Element: Specific Purpose

Specific Purpose in the Research	Rationale (%)	Practice (%)
Development	10.3%	8.6%
Complementarity	28.9%	44.8%
Expansion	25.4%	31.5%
Triangulation	7.8%	12.5%
Initiation	0.4%	1.3%

Some Overall Take-Aways...

- In the guidance for scholars interested in conducting mixed methods research, considerable attention is given to the methodology-based rationale for combining the methods
- While triangulation is at the foundation of what it means to do mixed methods research, there is a surprising lack of clarity in terms of what it means to do triangulation-based mixed methods research

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Different Types of Triangulation for Mixed Methods Research

- In strategy and organizations research, much attention has been given to convergent triangulation, which is based on the idea that knowledge develops by obtaining convergence in substantive findings across a diverse set of methods
- By contrast, less attention has been directed to holistic triangulation, which offers the promise of capturing “more complete, holistic, and contextual portrayal of the unit(s) under study” (Jick 1979)

Mixed Methods: Still Rare in the Organizational Sciences...

- Reviews suggest that in the empirical studies in top strategy and organizations journals, mixed methods designs represent 1% to 15%

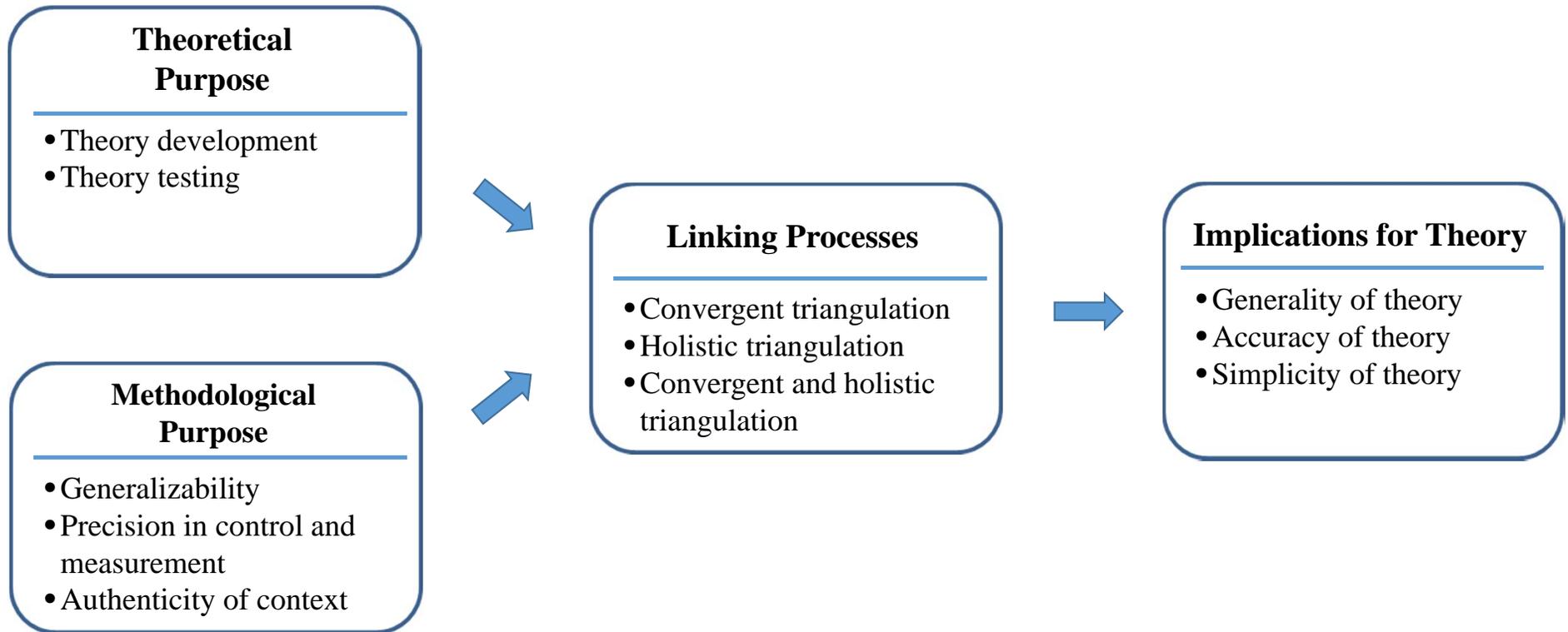
Journal	Mixed Methods (%)	Time Frame for Review	Source
Strategic Management Journal	15%	1980-2006	Molina-Azorin (2012)
Academy of Management Journal	4%	2009-2014	Gibson (2016)
Administrative Science Quarterly	13%	2009-2014	Gibson (2016)
Journal of Applied Psychology	1%	2009-2014	Gibson (2016)
Organization Science	6%	2009-2014	Gibson (2016)

A Triangulation-Based Framework and Roadmap

In a recent paper, Laura Cardinal, Rich Burton, and I try to contribute to the literature in two ways:

- (1) Develop a research design framework for mixed methods work that is based on the principles of triangulation
- (2) Provide a roadmap to guide strategy and organizational scholars interested in conducting mixed methods research studies

Building Blocks for Triangulation-Based Mixed Methods Research



Theoretical Purpose

- Theoretical purpose refers to what the researchers aim to accomplish in the study as it pertains to theory
- Such aims can include theory generation, theory elaboration, and theory testing

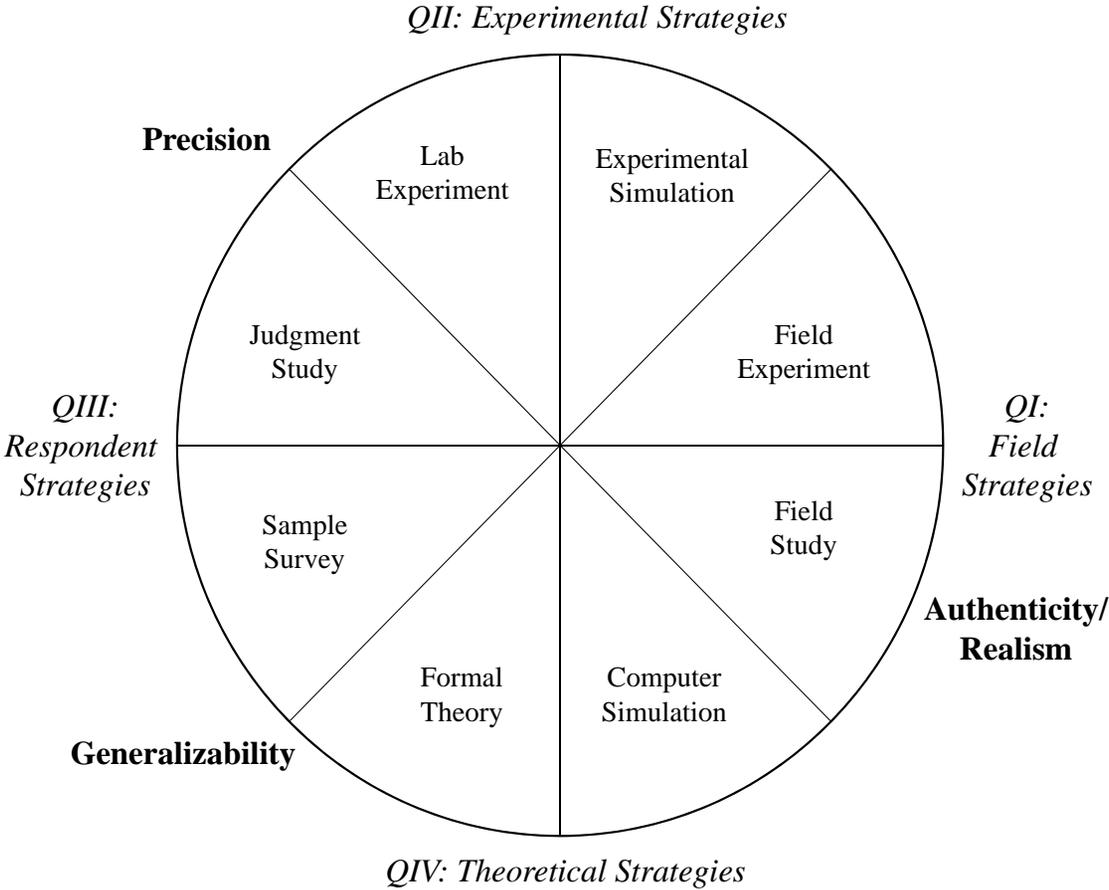
Methodological Purpose

- Methodological purpose refers to the purposes for which researchers are using a particular method in their study
- McGrath (1982) highlights that methods are often selected based on the extent to which they can accomplish several objectives:
 - (1) Maximize generalizability with respect to populations
 - (2) Offer precision in control and measurement of variables
 - (3) Provide authenticity of context for the observed behaviors

Examples of Methodological Purposes Fulfilled by Particular Methods

- Lab Experiment – Well-suited for precision in control and measurement of variables
- Case Study – Well-suited for capturing behaviors in an authentic context, but typically limited in terms of generalizability
- Archival – Can be effective in maximizing generalizability for populations, enhancing control/measurement of variables, and capturing behaviors that have taken place in an authentic context

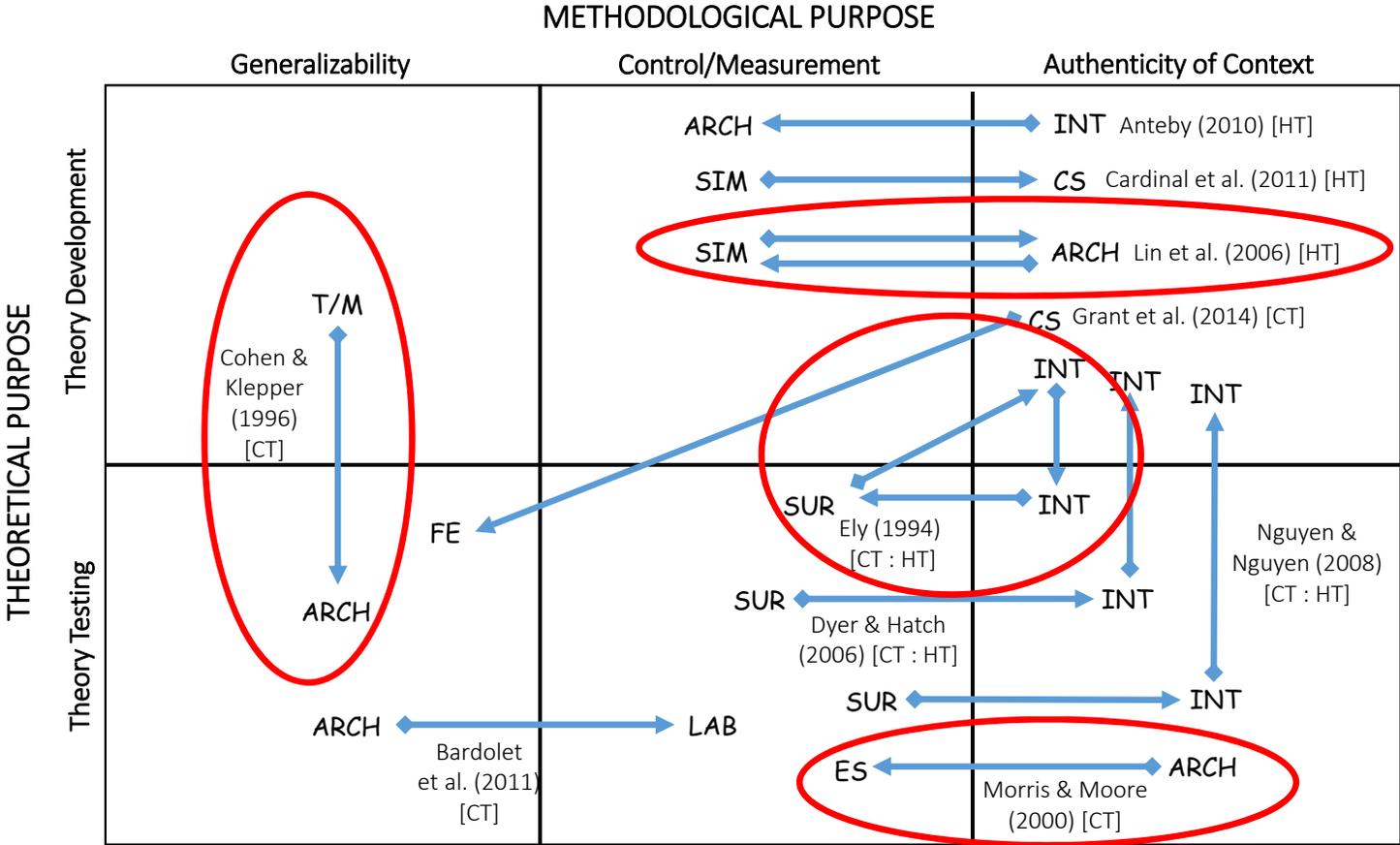
Methodological Purpose: A Broader Look



Linking Processes

- The processes by which multiple research methods are brought together within a study to realize the theoretical purpose for that work
- Convergent Triangulation (CT): Either (a) Multiple methods are brought together for purpose of testing the same theory, or (b) One method focuses on developing theory, and the other on theory testing
- Holistic Triangulation (HT): Purpose is theory development, and spans at least two categories of methodological purpose
- Convergent and Holistic (CT:HT): Spans both categories of theoretical purpose and at least two categories of methodological purpose

Linking Processes for Triangulation-Based Mixed Methods Research



KEY₁: ARCH = Archival Data; CS = Case Study; ES = Experimental Simulation; FE = Field Experiment; INT = Interviews; LAB = Lab Experiment; SIM = Simulation; SUR = Survey; T/M = Formal Theory Mathematical
KEY₂: [CT] = Convergent Triangulation; [HT] = Holistic Triangulation; [CT : HT] = Convergent and Holistic Triangulation

Convergent Triangulation – Bardolet, Fox and Lovallo (2011)

- **Objective** – Researchers were interested in why there is subsidization across businesses in multi-business firms
- **Argument** – While prior research emphasizes agency theory, the researchers argued that executives have cognitive biases in favor of even allocations
- **Empirically**
 - Method (1): Started with archival data (but the method/data lacked sufficient controls to rule out agency theory-based explanations)
 - Method (2): Conducted a series of lab experiments (a method providing more capacity for control/measurement)

Holistic Triangulation – Cardinal, Turner, Fern, and Burton (2011)

- **Objective** – Researchers were interested in establishing a more comprehensive understanding of organizing for product innovation
- **Argument** – Argued that different technological environments have different information-processing requirements, such that performance depends on fit between project design and environment
- **Empirically**
 - Method (1): Started with computer simulation given its precision and capacity for manipulation of design and environment conditions
 - Method (2): Multiple case studies (providing authenticity of context)

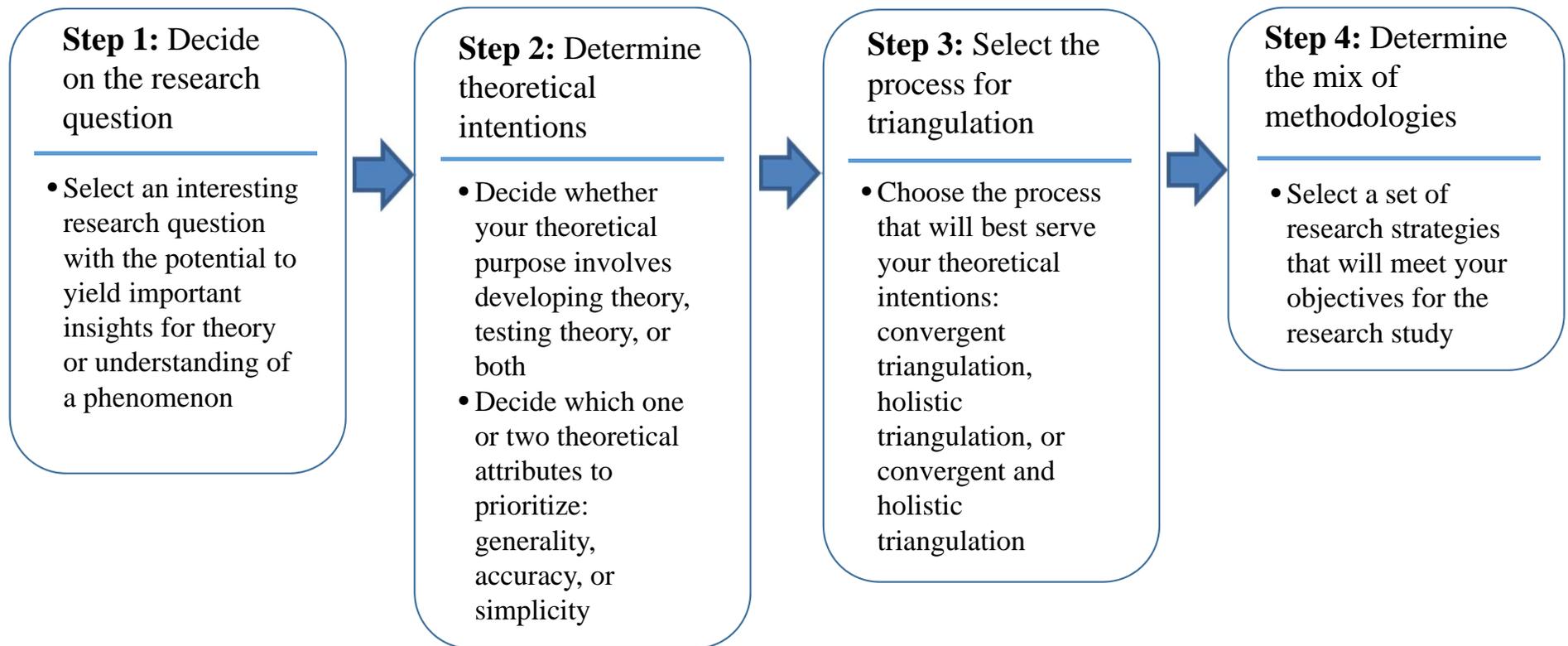
Convergent and Holistic Triangulation – Dyer and Hatch (2011)

- **Objective** – Researchers were interested in how firms can generate and sustain competitive advantage through work with their suppliers
- **Argument** – Argued that buyers can generate competitive advantage by sharing knowledge with their suppliers
- **Empirically**
 - Method (1): Used a survey to test their theory that buyers develop the capabilities of their suppliers by transferring more knowledge to them, which improves the performance of the buyer-supplier relationship
 - Method (2): Used interviews data for purpose of theory development to understand why the created advantage could be sustained

Implications for Theory

- The linking processes (convergent, holistic, and convergent/holistic) then have implications for the theory at hand
- Thorngate (1976) and Weick (1979) emphasize the following attributes for theoretical explanations: (a) generality versus specificity in domain scope, (b) simplicity versus complexity in parameters, and (c) accuracy versus inaccuracy in prediction
- The key point that Thorngate and Weick make is that – While it is desirable to maximize all three attributes, researchers face a trade-off, such that they need to focus at most on one or two attributes

Roadmap for Designing Triangulation-Based Mixed Methods Research



As a Caveat: More than One Way...

- While we see clear value in this question/purpose-driven approach to designing mixed methods research studies, it is clearly not the only way
- As highlighted in Molina-Azorin et al. (2017), it is important to not overlook the potential for a reciprocal relationship between the question and methods (i.e., research questions shape and are shaped by methods)

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Thinking about Divergence and Commonality across the Mix

- From a triangulation perspective, scholars have stressed the importance of selecting research strategies with maximum divergence in terms of prioritizing generalizability, precision in control and measurement, and authenticity of context
- While such guidance has emphasized maximum divergence for good reasons, one can also argue that mixed methods work needs to strike a productive balance between divergence and commonality across the methods

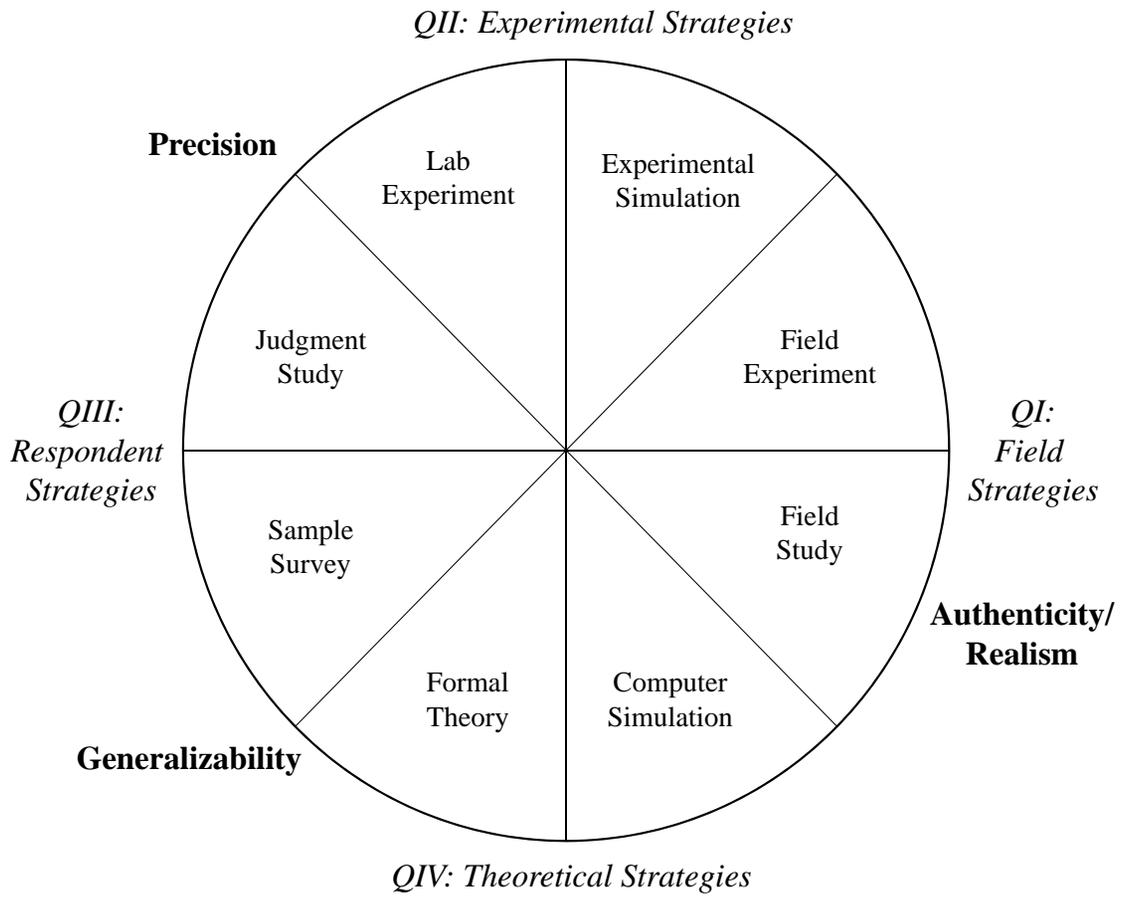
The Value of Divergence

- Consistent with the core idea of triangulation, mixed methods research needs diversity across the methods to offset the vulnerabilities that are inherent to the individual strategies (i.e., a method that is subject to a particular validity threat is offset by another that is strong in that respect)

The Value of Commonality

- While there is clear value in divergence, it is also important to recognize the challenges that this may pose for interpreting the set of results. For example, if a researcher is pursuing convergent triangulation and finds support using a particular method/setting/sample but finds no support using a very different method/setting/sample, it may be hard to understand why, and with what implications for theory

Thinking about Divergence and Commonality across the Mix



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Navigating the Challenges of Mixed Methods Research

- Challenge: Mixed methods research can be very time-consuming
 - Suggestion: Seek sources of common ground (e.g., similar setting, sample)
- Challenge: Hard to assemble the necessary expertise in research team
 - Suggestion: Seek sources of common ground (e.g., overlapping expertise), which can help facilitate the needed integration of methods and insights
- Challenge: Can be hard to get access to the needed data
 - Suggestion: Be opportunistic and strategic in data collection

Navigating the Challenges of Mixed Methods Research

- Challenge: Notable hurdles in the process of publishing the work
 - Suggestion: Whether by prioritization or order of implementation, consider emphasizing the method that is more accepted according to the standards of your target audience/field as the dominant method, and the less accepted method as the less dominant one
 - Suggestion: Be sure that you have clearly articulated how combining the two methods improves understanding, and strengthens the contribution
 - Suggestion: Look for exemplar articles that have been published successfully in your area

Navigating the Challenges of Mixed Methods Research

Related Issue

- Whether to combine methods within a study or across multiple studies

Some Factors

- What is the research question and purpose of the methods?
- How much space do you have to work with?
- How important is it that triangulation happens for research question?
- What are you hearing from your editor and reviewers?

Upcoming Feature Topic on Mixed Methods (ORM)

- Molina-Azorin JF, DD Bergh, KG Corley, and DJ Ketchen. Mixed methods in the organizational sciences: Taking stock and moving forward.
- Gibson, CB. Elaboration, generalization, triangulation, and interpretation: On enhancing the value of mixed methods research.
- Tunarosa A, and MA Glynn. Strategies of integration in mixed methods research: Insights using relational algorithms.
- Turner SF, LB Cardinal, and RM Burton. Research design for mixed methods: A triangulation-based framework and roadmap.
- Williams TA, and DA Shepherd. Mixed methods social network analysis: Combining inductive concept development, content analysis, and secondary data for quantitative analysis.
- Berthod O, M Grother-Hammer, and J Sydow. A mixed-method approach for the study of practices in interorganizational settings.
- Meuer J, and C. Rupietta. Integrating QCA and HLM for multilevel research on organizational configurations.

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Thank you very much!