

Theory Building

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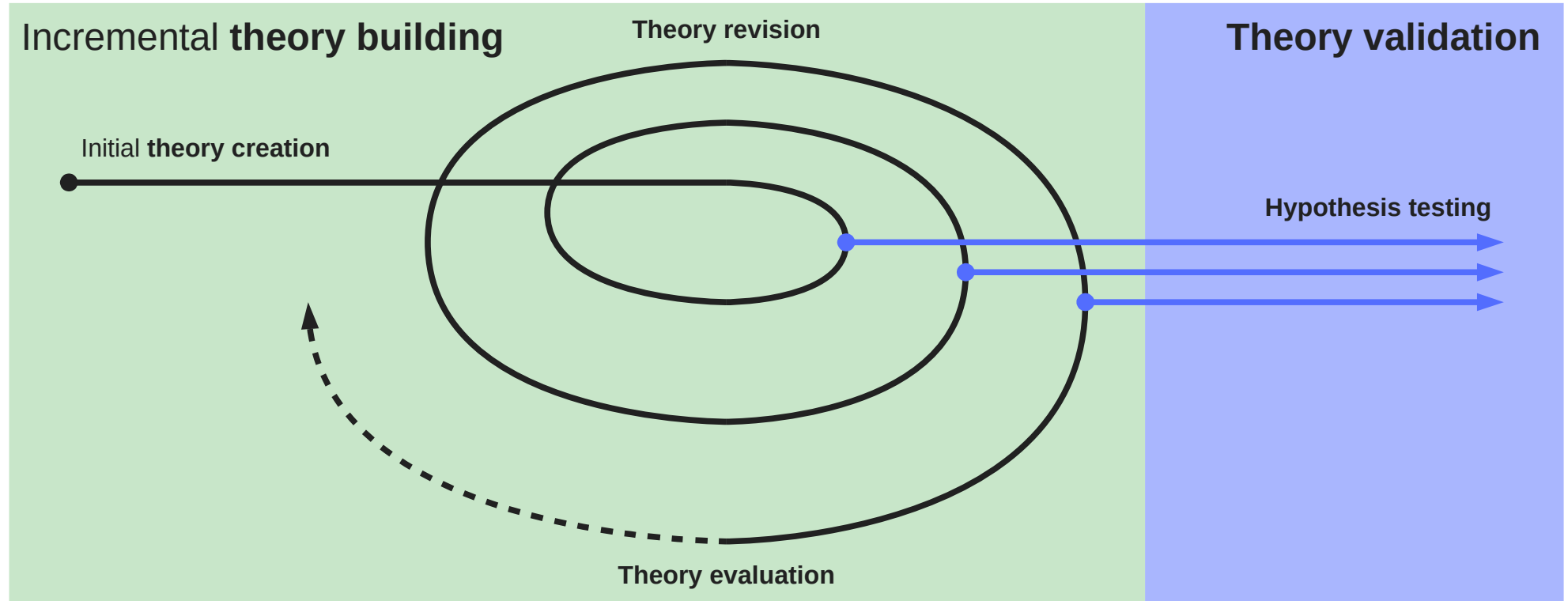
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Agenda

1. The theory building process
2. Qualitative research methods
3. Example research methodologies
4. Combining methodologies
5. Quality evaluation criteria
6. Quality assurance

1. The Theory Building Process

The Scientific Process (Recap)



Not drawn to scale or effort involved

Theory Building Research

- Is iterative
 - A theory is created initially
 - Then research loops through evaluation and revision
- Is incremental
 - A theory revision is supposed to extend the theory
 - A simplification of a theory is also progress
- Mitigates risk
 - Theory building explores ideas and venues
 - Before spending considerable resources on validation
- Prepares validation
 - Theory building makes predictions
 - Which are tested as hypotheses to validate the theory
- Is never finished

The Process of Theory Building

1. Initial theory creation

- As you enter a new field, you have to create an initial theory

2. Theory evaluation

- Evaluation, not validation, nor proof

3. Theory revision

- From the evaluation, you learn, and you revise, to evaluate again

2. Qualitative Research Methods

Research Methodology and Research Method

- A research methodology is
 - A comprehensive structured research process
 - Often drawing on multiple research methods
 - If followed correctly, delivers defined results
- A research method
 - A singularly focused practice to achieve a goal
 - That supports one or more methodologies
 - If followed correctly, delivers defined results
- If you can, avoid inventing your own methodology or methods

Qualitative vs. Quantitative Data

- **Qualitative data**
 - Usually not numeric
 - Requires interpretation
 - Denies statistical generalization
 - Result and part of “naturalistic inquiry”
- **Quantitative data**
 - Usually numeric
 - Has objective definition
 - Serves statistical generalization
 - Result and part of “rationalistic inquiry”

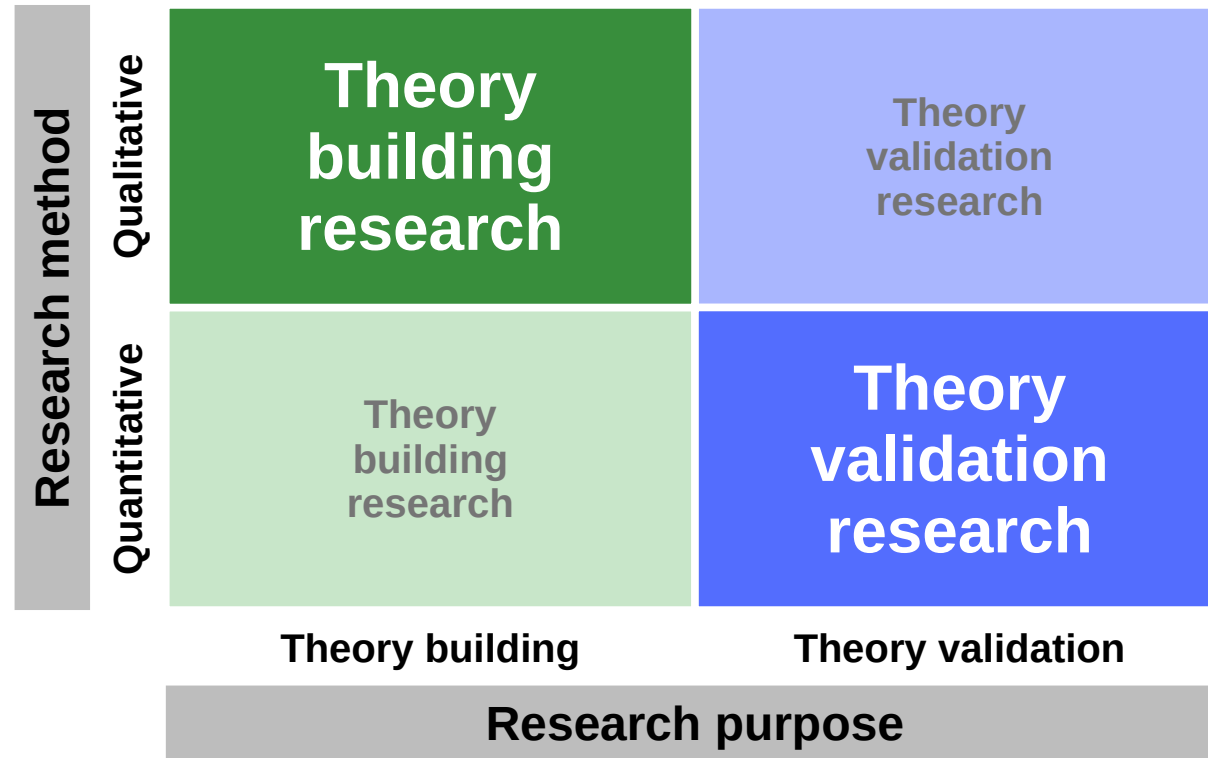
Qualitative Research Methodologies

- A **qualitative** research methodology is a research methodology that
 - Utilizes only **qualitative** research methods
- Examples of qualitative research methodologies
 - Qualitative surveys
 - Case study research
 - Grounded theory
- A quantitative research methodology is a research methodology that
 - Utilizes only quantitative research methods
- Research that combines both is called mixed methods research

Qualitative Research Methods

- A **qualitative** research method is a research method that
 - Creates, gathers, and analyzes **qualitative** data for a purpose
- Examples of qualitative research methods
 - Qualitative data analysis
 - Member checking
 - Investigator triangulation
- A quantitative research method is a research method that
 - Creates, gathers, and analyzes quantitative data for a purpose

Research Purpose and Research Method(ologie)s



Category vs. Description vs. Application

- **Category** of methodology
 - Case study research
- **Description** of specific methodology
 - (According to) Eisenhardt (1989)
 - (According to) Yin (2009)
 - (According to) Runeson et al. (2012)
- **Application** or **instantiation** or **use** of methodology
 - Any research that uses one of the specific methodologies

3. Example Research Methodologies

Common Qualitative Research Methodologies

- Qualitative surveys
- Action research
- Case study research

Not a Research Method

- Introspection is
 - The use of one's self-observation to suggest theories
 - Often used when the phenomenon cannot be directly accessed
 - Highly susceptible to various biases
 - **Not considered scientific**
- However, introspection is often covertly used in scientific practice

Qualitative Survey 1 / 2

- The qualitative survey is a qualitative research methodology that is
 - Minimal
- The process of a qualitative survey
 1. Definition of
 - a. Research question
 - b. Research protocol
 - c. Relevant population
 2. Building of sampling model
 3. Sampling
 4. Data acquisition
 5. Qualitative data analysis
 6. Theory presentation
- The process may iterate over steps 3 to 5

Qualitative Survey 2 / 2

- Specific methodologies (really only one so far)
 - Jansen (2010)
- Most suitable for initial theory creation
 - The simplest qualitative research methodology that could possibly work

Action Research 1 / 2

- Action research is a qualitative research methodology in which the researcher
 - Applies a theory being built to help create a desired outcome
 - Evaluates the theory as to its trustworthiness
- **Participatory** action research is action research in which the researcher
 - Joins a case (organization) to work side-by-side with practitioners
- The process of action research
 1. Diagnosing (problem identification)
 2. Action planning (for intervention)
 3. Action taking (enactment of intervention)
 4. Evaluating (the outcome of intervention)
 5. Specifying learning (generalizing)
- The process iterates over these steps

- Specific action research methodologies
 - Action research (Lewin, 1951)
 - Participatory action research (Kemmis & McTaggart, 2005)
 - Critical participatory action research (Kemmis et al., 2014)
- Suitable for early theory evaluation and revision
 - Where practical problems are too complicated to be evaluated outside its context

Case Study Research 1 / 2

- Case study research is a qualitative research methodology that
 - Empirically investigates a contemporary phenomenon in its original context
 - Where the boundaries between phenomenon and context are blurry
- The process of case study research
 1. Planning
 2. Designing
 3. Preparing
 4. Collection
 5. Analyzing
 6. Reporting
- The process can iterate over steps 2 to 5

Case Study Research 2 / 2

- Specific case study research methodologies
 - Eisenhardt (1989)
 - Yin (2009)
 - Runeson et al. (2012)
- Suitable for theory evaluation and revision
 - In situations with many more variables of interest than data points
- Teaching cases are something entirely different

4. Combining Methodologies

Research Design and Methodologies

- A research design is (recap)
 - A structure and process using scientific methods that answers a specific research question;
 - There is considerable method application flexibility to make it fit your needs
- Simple research designs use only one specific methodology
 - Suitable for a Master thesis
- More complex research designs sometimes combine two or more methodologies
 - Suitable for doctoral research
- If you combine methodologies, they should be epistemologically compatible

Multi-Method Research Designs

- Multi-method research is research that
 - Uses multiple methodologies within either theory building or theory validation research
- A common multi-method research design
 1. **Qualitative survey** (for initial theory creation)
 2. **Action research** (for initial theory evaluation and revision)
 3. **Case study research** (for further evaluation and fine-tuning)

Mixed Methods Research Designs

- Mixed methods research is research that
 - Combines research methodologies for theory building with research methodologies for theory validation

5. Quality Evaluation Criteria

Quality of Qualitative Research

- Evaluating quality requires quality criteria for its assessment
- Theory building researchers rejected theory validation criteria
- Simplified discussion to “naturalistic” vs. “rationalistic inquiry”

Trustworthiness According to Guba & Lincoln (1985)

- **Credibility is**
 - The degree of confidence in the truth of the research findings
- **Transferability is**
 - The degree to which the research findings can be transferred to another context
- **Dependability**
 - The stability of research findings over time
- **Confirmability**
 - The degree to which the research findings can be confirmed by other researchers

Quality Criteria in Comparison

Intuitive Term	Naturalistic Term	Rationalistic Term
Truth value	Credibility	Internal validity
Applicability	Transferability	External validity
Consistency	Dependability	Reliability
Neutrality	Confirmability	Objectivity

6. Quality Assurance

Quality Assurance Using Lincoln & Guba (1985)

- In qualitative research, quality is “established” (not measured or assured)
- Quality is established against quality criteria
 - Credibility
 - Transferability
 - Dependability
 - Confirmability

Practices for Establishing Credibility

- Prolonged Engagement
- Persistent Observation
- Triangulation
- Peer debriefing
- Negative case analysis
- Referential adequacy
- Member-checking

Practices for Establishing Transferability

- Thick description

Practices for Establishing Dependability

- Inquiry audit

Practices for Establishing Confirmability

- Confirmability audit
- Audit trail
- Triangulation
- Reflexivity

7. Summary

Review / Summary of Session

1. The theory building process
2. Qualitative research methods
3. Example research methodologies
4. Combining methodologies
5. Quality evaluation criteria
6. Quality assurance

Thank you! Questions?

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