Reconstructing Theory

Fundamentals of Human-Centered Computing

Reconstructing Theory

Final step in the process!

>apart from writing it all up

Today I will cover:

– What is theory?

– What is grounded theory?

– How to construct grounded theory?

Theory

Theory from multiple perspectives

Theory

A theory states **relationships** between **abstract concepts** and may aim for either **explanation** or **understanding**

Grounded theory is one of the few qualitative methods that can generate theory, because it covers not just what and how, but also **why**

Types of theory

Positivist theory: a proposition (or series of propositions) that establishes a (causal) relationship between two or more variables

Interpretive theory: a theoretically useful description or explanation (a "lens") of what people assume is real, and how they act on this view

Main distinction:

Is there a single reality, or multiple constructed realities?

Types of theory

Positivist theory:

- Concepts are **variables**

- Any explanation presupposes **prediction** (this makes studies replicable)

- Focus on **observable** (replicable) **fact** (little room for subjectivity)

- **Systematizes** knowledge (the goal is parsimony and generality)

- **Generate hypotheses** for research

Types of theory

Interpretive theory:

– Studies people's actions to solve problems, in order to **understand** these **actions in abstract terms**

– **Processes** rather than static relations

– Allow for **indeterminacy** and **standpoints**

– Bring in **subjectivity** of the actor (and even the researcher)

– Offer **one interpretation** that makes sense of what is happening

– Acknowledgement of **individual** (or situational)

Types of theory

Pure positivist theory does not work well for Grounded Theory

> The theoretically defined relationships will sound more universal than they really are

> Focuses too much on the observable

Interpretive theory has some advantages

> Focus on process, subjectivity

See this as a continuum, though…

Grounded Theory

Grounded theory from multiple perspectives

Grounded Theory

What is grounded theory?

- An empirical generalization?

- A core category or variable?

- A predisposition?

- An explication of a process?

- A relationship between variables?

- An explanation?

- An abstract understanding?

- A description?

Grounded Theory

A grounded theory is a **generalized analysis** of **contextual relationships**

A theory is not just a description! What, how and **why**

A grounded theory may by decontextualized, but **abduction** roots it in contextual observation

Types of GT

Objectivist Grounded Theory takes a positivist approach

Constructivist Grounded Theory takes an interpretivist approach (with some positivist aspects)

Main distinctions:

– View on reality (single versus multiple)

– Ultimate goal (universality and fit versus credibility and usefulness)

– Structure of analysis (strict versus free)

View on reality

Objectivist GT:

– assumes an external reality

– Discovery of data (truth)

– Concepts emerge from analysis

– Representations are singular and universal

– Assumes neutrality

Constructivist GT:

– assumes multiple realities

– Construct data / analysis through interaction

– Concepts emerge from description (categories)

– Representations are situational, conditional

– acknowledges subjectivity of observer

Ultimate goal

Objectivist GT aims for:

- Context-free generalization

- Parsimony and universality

- Max fit

Constructivist GT aims for:

- partial/conditional/situated generalizations

- An understanding of the range of variation

- Credibility and usefulness

Analysis

Objectivist:

– Analysis is objective

– Priority for the voice and interpretation of the researcher

Constructivist:

– Acknowledges subjectivity

– Reflection is a critical part of analysis

– Priority is for the views and voice of the participants

Notes

Your theory will fit somewhere in between!

But note that Grounded Theory is often much more amenable to constructivist reasoning

Regardless of your method, you can construct macro analyses as well

e.g. through theoretical codes, and linking to HCI Theories

Constructing theory

How to construct theory in your study

Constructing theory

View your data from **multiple vantage points**, pick the one that is most useful and fits best

Go **back to the actions**: use gerunds as your building blocks

Scale up by asking analytic questions and making comparisons at an increasingly higher level

This helps you get to a high enough level of abstraction

Connect down to keep it grounded to real data

Don't cleanse your writing from the specifics of examples

Constructing theory

See your theory as a **process**, and define the major phases of it

    Include antecedents and consequences

Qualify your process through theoretical comparisons

    This creates "branches"

Really **analyze** each step!

    Ask: what is this step about? Why does it happen the way it does?

Mechanisms

A good approach to answering "what is this step about" is to define the **mechanisms** that may underlie the step:

- Embodiment and consciousness

- Individual or collective action

- Cooperation or conflict

- Choice or constraint

- Constructed meanings

- Standpoints and differences

Mechanisms

A good approach to answering "what is this step about" is to define the **mechanisms** that may underlie the step:

- Positions and networks

- Power and prestige

- Structure and process

- Opportunities and inequalities

- Rights and resources

- Morality

Process example

Getting the news

Finding out

Facing realities

Becoming engulfed with suffering

Emerging from the suffering

Getting on with life

Experiencing personal growth

Higher level

"If marginalized groups retain their beliefs in the legitimacy of dominant ideas, then they are not apt to use these ideas as building blocks in their attempts to revise oppressive ideologies. Doing so might remodel outer appearance, but the fundamental dominant structure remains intact. Using the master's tools to facilitate social change is thus likely to result in the building not of a new house but of more comfortable servants' quarters, albeit with perhaps better amenities than previous structures."