

# Application of Grounded Theory in the Study of Land Registration Systems Usage

Lani Roux & Michael Barry

FIG Working Week 2011  
Bridging the Gap between Cultures  
Marrakech, Morocco,  
18-22 May 2011

## Outline

- Rationale / problem statement
- Different levels of theory
- Types of qualitative research
- “People centred” research projects which our group has conducted / is conducting
- Grounded theory
- Lessons from Lani Roux’s PhD project

## Rationale / Problem

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- Most theory relating to land registration and cadastral systems is articulated from the state's perspective.
- If land registration (and individual parcels) do not produce the desired outcomes, we need to know why people who are supposed to benefit from it use it, don't use, or only use it some of the time. We need to do grassroots research and so develop theory. Extensive work in MIS.
- Quantitative methods don't work; qualitative methods are a challenge for some of us!

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



## Theory v Practice

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- John Maynard Keynes & Coetzee *et al* - all development practice is based on theory, including so-called practical approaches which eschew theory. Beware the 'practical' slave of defunct theory. But narrative description valid.
- Theory defined – the distinction between concepts, theories and descriptions and the facts of the matter.
- Describing phenomena in abstract theoretical terms, rather than context laden practical descriptions, is essential for informed critical debate to develop theory, which in turn informs practice. (Keynes 1936)
- Two maxims are relevant: (1) "nothing is as practical as a good theory" (Lewin 1945) and (2) "nothing is as dangerous as bad theory" (Ghoshal 2005)

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



# Taxonomy of Theory

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- World View
  - Paradigm – a framework of basic assumptions
  - Grand theory – generalisations that transcend the border of disciplines
  - Formal – generalised substance - explain an area of inquiry
  - Substantive theory – thesis, antithesis, synthesis; first level
  - Hypothesis / Research question – proposition stated for verification or falsification
  - Proposition – suitable statement of a concept for testing
  - Concept – move from the phenomena itself to data, bound by definitions and symbols.
  - Definition
  - Symbol
- Phenomena

Glazier and Grover 2002

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



# Qualitative Research Methods

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- Ethnography – understand human behaviour in a cultural context (group of type of people)
- Grounded theory – explains social processes. Theoretical foundation in symbolic interactionism
- Phenomenology - reveal the meaning of a lived experience from the perspective of the participant.
- Variety of data types, importantly unstructured and semi structured interviews. Social processes and meanings arising from them too complex for quantitative surveys.

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



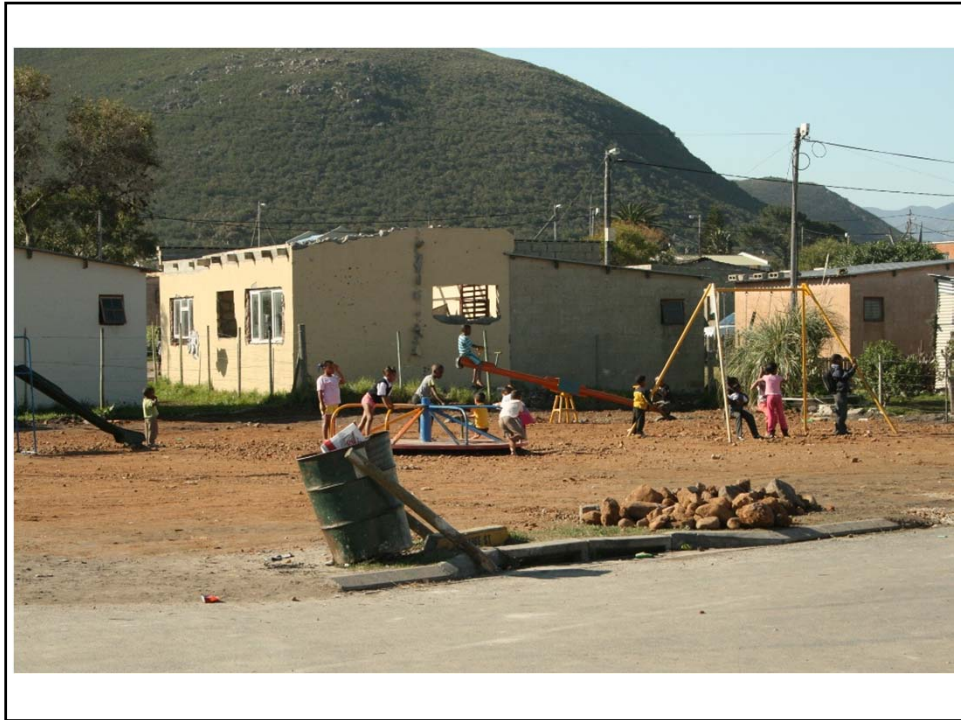
## Post-apartheid Informal Settlements

Position Yourself Ahead of the Crowd

- Life histories / interviews
- In field focus groups
- Literature
- Officials and professionals
- International experts
- NGO's
- Policy makers
- Workshops on registration options
- Develop hypothesis – speculative, persuasive, conclusive
- What's the big picture?
- At what level can we place the emerging theory?









# Grounded Theory

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- First labelled by Glaser and Strauss 1967 – “negotiated order” - but evidence of method appeared in 1930’s.
- What is “true grounded theory” is strongly contested -we focus on Corbin & Strauss
- Inductive methodology - develop theory directly from empirical data;
  - theory grounded in the data. Cyclical, not linear theory development.
- No preconceived theoretical ideas should guide or force the research
- Does not start with a literature review to develop a set of a *priori* hypotheses –literature defines questions
- Hypotheses or theories in grounded theory emerge from the data collected in a particular study – then compare with existing theory

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



# Grounded Theory

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- Initial questions are open ended; non-specific and broad
- Data collection: Note taking, videos and recordings
- Transcribe interviews at end of the day
- Analyse / “open code” interviews right away.
- Abstraction - -develop concepts / constructs and relationships between them – inferred from observable variables
- Revise questions for next day

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)





# Grounded Theory

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- First phase – open coding - focus on action – use gerunds (ending in “...ing”)
- Ideas & themes emerge, grouped in categories.

Segment of data	Code
“Yes and they [sellers] said we trust you, so we’re are Xhosas so, then we can sell it,... ” (Interview 35, 8 August 2009)	Using identity to create trust

The open code indicates that there may be two categories that need to be explored in interviews: “Identifying” and “Trusting”.

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



# Theoretical Sampling

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- Theoretical sampling is guided by the gaps or underdeveloped sections of the categories and the researcher specifically seeks out data that address this.
- Not a strategy to obtain a representative sample, but a strategy to develop concepts and theory.
- Data collection is finished once data saturation is reached.
- Saturation is the point when all the categories are complete - no new theoretical insights

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



## Constant Comparison & Memoing

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- **Constant Comparison: 3 facets**
  - As new data are collected they are compared to existing data
  - Compare different segments of data coded in a similar way
  - As further abstraction occurs, compare categories with categories
- Memo writing is used throughout the coding to assist in exploring the codes and further conceptualisation, and is a record of the evolving theory. Thus memos include ideas about codes, preliminary hypotheses, and so forth.

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



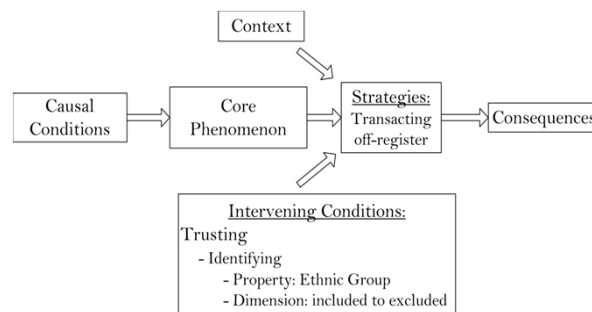
## Axial Coding

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- Axial coding – follows open coding - used to rebuild the relationships between categories



From the model the theory is described. The theory may take the form of a narrative statement, a diagram or a series of hypotheses (Creswell 2007).

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



# Simplistic Hypothesis

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- *Trust created by sharing an ethnic group leads to the decision not to use the land registration system to secure tenure.*
- *Condition 1 ....*
- *Condition 1 ....*
- *Context .... etc*

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



# Lessons

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- Research on land registration usage
- Local authorities → officials → leaders → residents → land professionals
- Documents → council minutes → newspapers → court cases
- Grounded theory is difficult, takes immense amount of time, and skills are acquired over a long time.
- *A priori* exclusion of theory difficult, but focus on data in 6 different studies provided some illuminating insights
- Practicalities of cyclical approach, constant comparison and theoretical sampling are taxing if you're a visitor.
- Focus on action – gerunds – proved useful

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)



## Conclusion

Department of Geomatics Engineering

Schulich School of Engineering  
University of Calgary

Position Yourself Ahead of the Crowd

- If applied correctly, it will generate rich, substantive level theory.
- If similar theories emerge from a number of studies, then we can move the theory further up the hierarchy in the taxonomy
- Encourage collaborative research with social scientists interested in this area and skilled in Grounded Theory.
  - Qualitative research methods courses and then trial runs before field work ... but cases tend to be complex and so ...difficult!
- Aspects of the method can be applied in social research on land administration artifacts – be cautious of labelling it grounded theory

[www.geomatics.ucalgary.ca](http://www.geomatics.ucalgary.ca)

