

Qualitative and Quantitative Research: How do we validate these forms of knowing?

OR

Why Should I believe Your Research Data?

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Questions for the Workshop from Participants:

- How do I talk/communicate with quantitative researchers?
- What are the “standards” of qualitative research (e.g. What is considered evidence?)
- When does qualitative evidence become definitive?
- How do I know if I’ve reached ‘saturation’ point?
- Statistics related to the field?
- The balance between the two?
- Methods and rhetoric for transferability of results? (qualitative external validity?)

(from quantitative participants) What are the hallmarks of good quantitative research?

- Being able to validate results
- Defined and measurable results and variables
- Defining/selecting samples in an appropriate way and justified selection
- Replicable results
- Quantified uncertainty
- Appropriate use of analytical and statistical tools (methods)
- Triangulated methods
- Testable hypotheses
- Isolated variables
- Multiple iterations of measurement, possibly with different instruments
- Explicit tracking of objectives, goals, hypotheses, methods and instruments
- Explicit theories of nature of world and ways of knowing
- Whole process is objective
- Open data
- Anonymity of subjects
- Responsible, ethical, meaningful, relevant

(from qualitative participants) What are the hallmarks of good qualitative research?

- Using the right research question (clearly defined)
- Appropriate methods to answer the question
- Sample selection is rigorous/appropriate i.e. representative, or random/purposeful “it depends” → Justified
- Thick descriptions
- Exploratory – leading to further study → next steps ? Quantitative? other qualitative?
- Includes actual data i.e. quotes/citation from interview/word for word, not just paraphrased
- Careful and well-defined scope
- Peer reviewed data
- Good references

Hallmark cards of qualitative research = “we are the housewives of research”

What the qualitative group “heard” is important for quantitative research

- Isolate
- Clarify
- Replicating
- Objectivity
- Anonymity
- Concrete
- Different methods

What the quantitative group “heard” is important for qualitative research

- Sample selection
- Selection of methods
- Choosing methods according to question
- Data is descriptive
- Interpretive
- Interpret description
- Selective
- Justify

Tracing the beginnings: Science Timeline

- Scientific Revolution – 16th and 17th centuries (Europe)
 - Copernicus
 - Galileo, Kepler, Newton
 - Bacon (1620) method for understanding: objective, logical, and empirical

Linking approaches:

- Positivism: science seen as how to find the truth (Comte, LaPlace 1800s) and to understand enough to be able to predict outcomes and control them.
- Positivists believed in empiricism – the idea that observation and measurement was the core of scientific work.

<http://www.socialresearchmethods.net/kb/positvsm.php> ResearchMethods:
Knowledge Base

The Philosophic Roots

Empiricist traditions

→ **Comte, Newton, Locke**

Durkheim

- Subject is independent and object like
- 2 elements: the knower and that which is or can be known
- Social investigation is neutral

Idealist traditions

→ **Kantian tradition; Dilthey, Rickert**

Weber

- Researchers both the subject and object of their study.
- The knower is merged with what which is or can be known
- Social investigation is not neutral

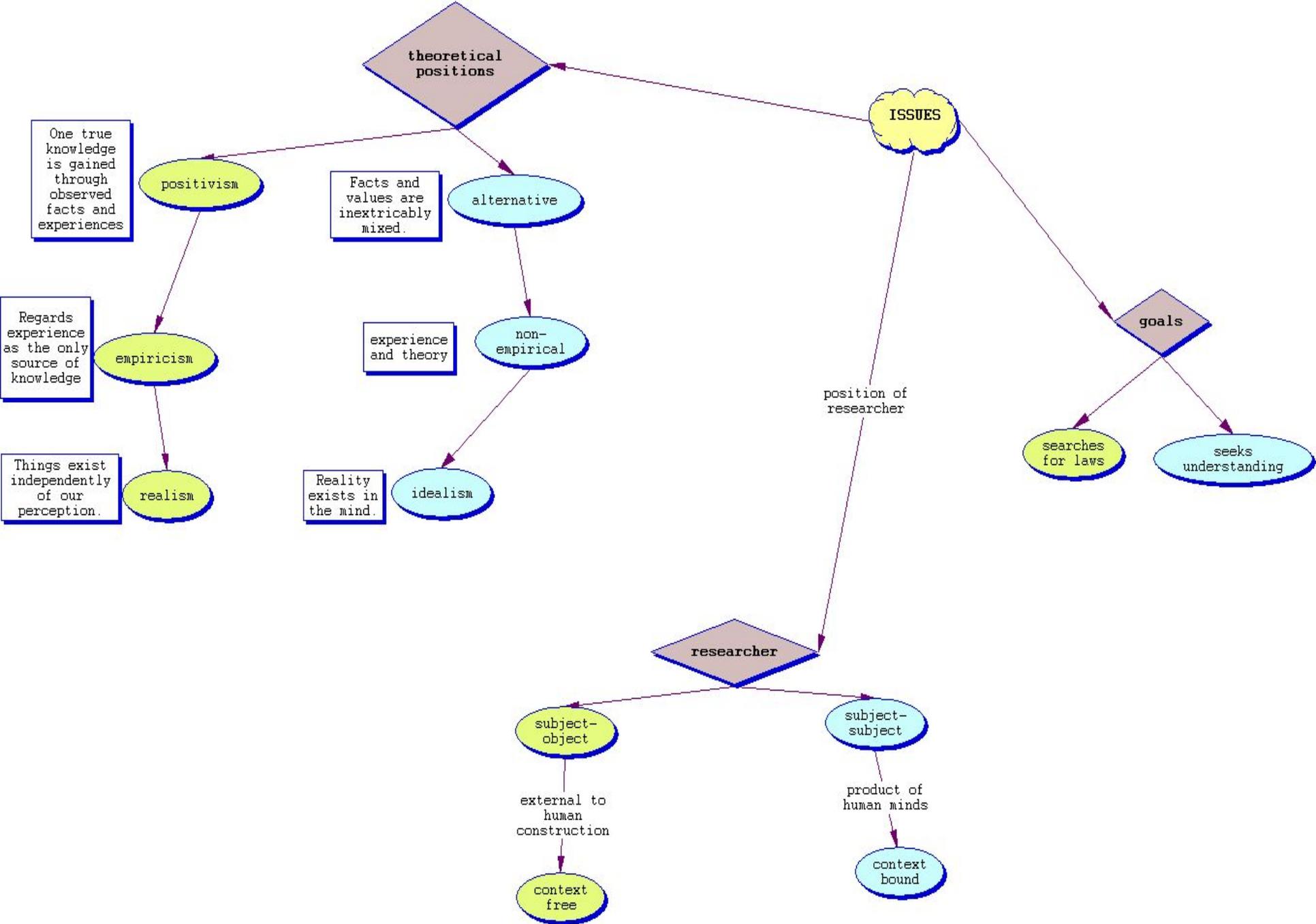
Shaping the research approaches....

Realist (Positivist)

- subject-object position on the relationship of subject matter
- separation of facts and values
- searches for laws

Idealist (Alternative)

- subject-subject position
- perception of facts and values as being inextricably mixed
- seeks understanding



New Relationships and understanding.... objectivism to intersubjectivity (qualitative)

- This change means that who and how a particular culture/subculture is represented refers back to **how one conceives of relationships between/among subjects.**
- *The new representation of actors and their interactions **does not reside only within a particular defined moment, rather the action/interaction process is also causally situated within historic positions.***
- This means that who represents whom and how this is controlled gains special relevance against the history of previous power relationships. (post-modernism)

The Nature of Science



http://web.visionlearning.com/custom/ProcessofScience/custom/POS_diagram.pdf

Scientific Research Methods:

- Experimentation
- Description
- Comparison
- Modeling

Who is looking for what?

Michael Gibbons

- What aspects do we permit ourselves to see as valid for research?
- What do we deem to be knowledge in a particular circumstance?
- What do we acknowledge as appropriate research data?

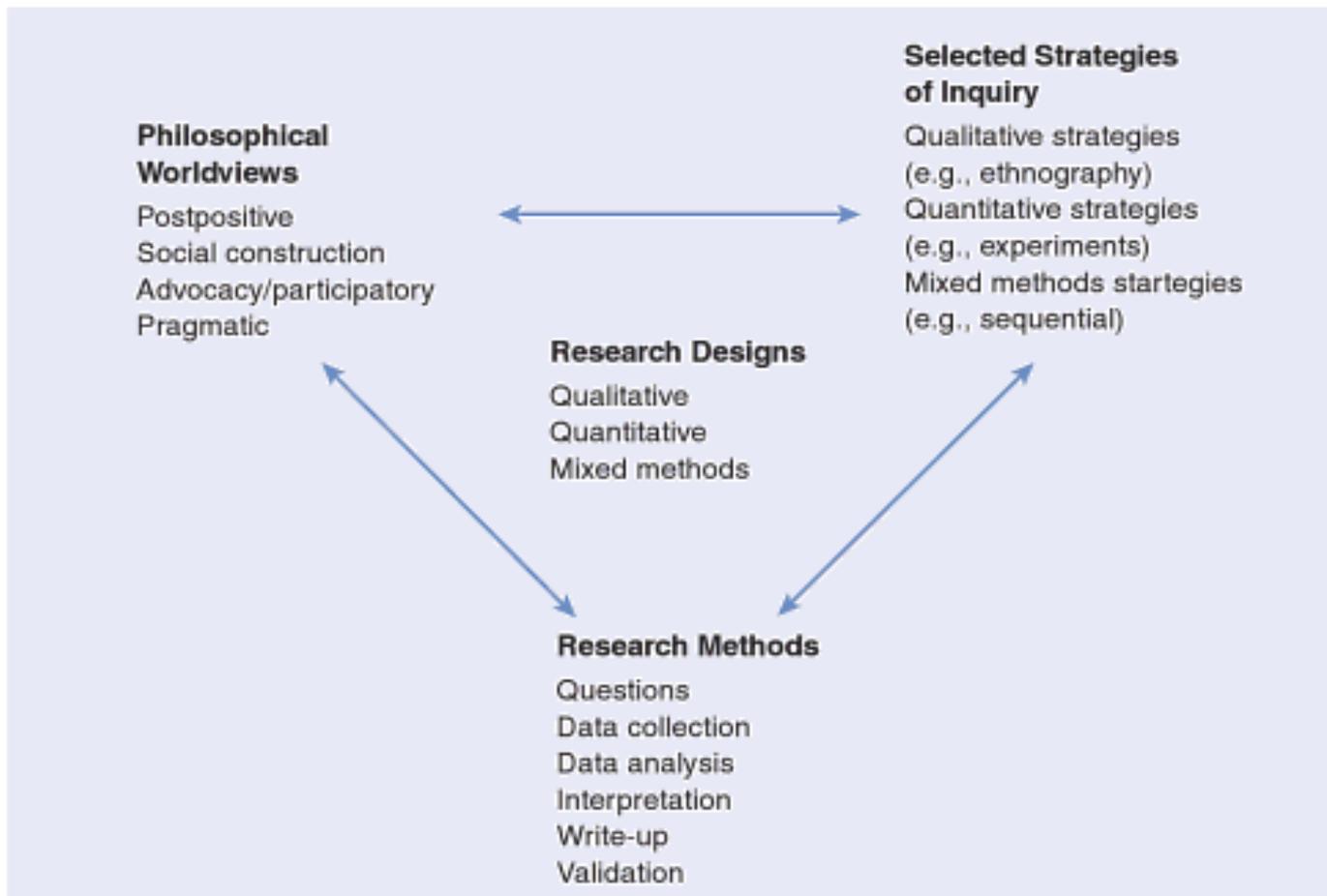


What is privileged in terms of knowledge

Impact of Knowledge

- What constitutes knowledge?
- It's hard → how to define the knowledge : different kinds of knowledge;
- Who decides?? Who has authority? Generic knowledge vs disciplinary knowledge; possible social construction/ personal vs public
- What knowledge is presented?
- How is the knowledge presented?

Defining a process



Worldviews

Table 1.1 Four Worldviews	
Postpositivism	Constructivism
<ul style="list-style-type: none">• Determination• Reductionism• Empirical observation and measurement• Theory verification	<ul style="list-style-type: none">• Understanding• Multiple participant meanings• Social and historical construction• Theory generation
Advocacy/Participatory	Pragmatism
<ul style="list-style-type: none">• Political• Empowerment Issue-oriented• Collaborative• Change-oriented	<ul style="list-style-type: none">• Consequences of actions• Problem-centered• Pluralistic• Real-world practice oriented

Creswell, J. (2009): 6.

Methods and choices...

Table 1.3 Quantitative, Mixed, and Qualitative Methods		
Quantitative Methods	→ Mixed Methods ←	Qualitative Methods
<ul style="list-style-type: none"> • Pre-determined • Instrument based questions • Performance data, attitude data, observational data, and census data • Statistical analysis • Statistical interpretation 	<ul style="list-style-type: none"> • Both pre-determined and emerging methods • Both open- and closed-ended questions • Multiple forms of data drawing on all possibilities • Statistical and text analysis • Across databases interpretation 	<ul style="list-style-type: none"> • Emerging methods • Open-ended questions • Interview data, observation data, document data, and audio-visual data • Text and image analysis • Themes, patterns interpretation

When quantitative researchers are talking to qualitative researchers they want to know:

- Tell us how you “bin” your data i.e. explain method
- Include explanations
- Be succinct without loss of context/data
- Triangulated: use other method to test results – explain how
- Consider alternatives when describing outcomes
- Tell us when could you have confidence in your results? i.e. sample size
- How do you ‘control’ in your research design for people’s “bias”?

When qualitative researchers are talking to quantitative researchers they want to know:

- Is the question worth asking/is it interesting/new information?
- Is the sample representative?
- How do you select the statistical /analytical methods and are they appropriate?
- How to maintain objectivity and neutrality?
- Do you include results that don't support the hypothesis, or experiments that "fail"?

Interdisciplinarity = intersection points

Peter Galison

- Talks about subcultures in science and how there are **trading zones** between disciplinary cultures.
- Idea of **interlanguages** that work between the disciplines. These interlanguages are important as they:
 - make communication possible
 - shape the process of thinking about a topic/question/problem.
- As researchers, we need to co-ordinate exchanges and to realize that one does not have to agree on everything - just at the point of intersection.

Summary from Participants:

- Qualitative – very explicit about where they are coming from → biases etc.
- Explore use of mixed methods for research
- Two world views – cross-cultural communication – explore each other's world
- Both have their place - When is one more appropriate? What are you studying?
- Distilled affirmation – qualitative research good for developing hypotheses
- Where is the question developed?
- What are the different methodologies used at UBC?
- Community → researchers need to look outside and communicate what you are doing → validation for those in power

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