Q-Methodology: An Overview

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- Purpose of Q
- History & Philosophy of Science
- Mechanics
- Critique
- Applications

Purpose of Q-Methodology

- Method for examining human subjectivity

- How do people understand a particular situation or topic from their own frame of reference?

- “Communicative subjectivity” - the different narratives or discourses people express for a situation or topic

History & Philosophy of Science (1)

- William Stephenson *Nature* article (1935) and *Study of Behavior* (1953)

- "Q" → quantum physics theory

- A phenomenon is only understood from subjective frame of reference

- *Operant Subjectivity journal* (1977), Intl. Society for the Study of Subjectivity (1989), PQMethod software and Internet resources (http://www.qmethod.org/)

History & Philosophy of Science (2)

- Q compared to R – subjective vs. objective measures

  - **Frame of reference**: Researcher (R) vs. Subject (Q)
  - **Source & type of measure**: Single ranking defined by researcher (R) vs. multiple rankings defined by subjects (Q)
  - **"Operant subjectivity"**: response that is not under the immediate control of the measurement device

History & Philosophy of Science (3)

- R: Researcher defines objective measures of individual <u>attributes in isolation</u> from one another

- Q: Subject defines importance of <u>attributes relative to one another</u> based on own self-reference

- Q enables the respondent to represent his or her vantage point in its entirety throughout analysis

Mechanics (1)

- Small numbers of respondents, in-depth study of a specific situation/topic

- Statements pertaining to a situation/topic are analyzed relative to one another, not as separate items, i.e., survey

- Correlate respondents with discrete combinations of statements – discourses – via factor analysis

- Which people share common discourses (communicative subjectivity)

Mechanics (2)

1) **Concourse**: Population of statements – primary (ideal) or secondary sources

2) **Q-sample**: Sample of statements using experimental design

3) **Person-sample**: Non-random, selective sample based on theoretical relevance – i.e., people who have well-formed, clear, and distinctive viewpoints

4) **Q-sort**: Card sorting of statements in normal distribution based on “most agree” to “most disagree”

Mechanics (3)

Strongly Disagree	-5	-4	-3	-2	-1	0	1	2	3	4	5	Strongly Agree

Mechanics (4)

5) Analysis and interpretation:

- Correlation matrix of all Q-sorts
- Factor analysis of matrix
- Factor rotation – orthogonal, statistic rule (varimax) or judgmental → factor loadings correlating respondents w/ factors
- Factor scores – normalized weighted average score for each statement for each factor

Mechanics (5)

5) Analysis and interpretation:

- Difference scores – magnitude of difference of a statement between any two factors – generates distinguishing statements
- Consensus statements – non-distinguishing statements
- Correlation among factors

Critique

- **Reliability**: Subjectivity inherently yields unreliable results
  - Brown (1980) and Thomas and Baas (1992) conclude it's not an issue

- **Generalizability**: Non-random person-sample
  - Purpose is to measure and understand the discourses surrounding a situation/topic and who "loads" on to a discourse

Applications (1)

- One tool in the toolbox – multiple methods

- According to McKeown and Thomas (1988) over 1600 Q-method studies

  Marketing, pharmacy, political science, nursing and medicine, religion, public administration, communications

- Environmental issues (Addams and Proops 2000)

Applications (2)

- Ecological restoration (Woolley and McGinnis 2000)

- Defining “good” public participation in NR planning (Webler and Tuler 1999)

- National forest management (Clement, forthcoming; Steelman and Maguire 1999)

- Framing the need for forest management (Burns and Cheng 2007, forthcoming)

- Perspectives on the value of collaboration (Cheng and Mattor 2006)