Social Science Research Methodology Workshop

Concept formation

Jørgen Møller & Svend-Erik Skaaning

Figure 1. A General Framework for Assessing Social Scientific Knowledge II: The Logical Ordering of the Dimensions of Social Scientific Knowledge

Conceptualizing

Concepts and conceptual systems

Theorizing

Theories and theoretical systems

Measuring

Descriptions

Assessing causality

Explanations

Note: Terms in italic denote a research process, while terms of boxes denote research products. For a further explanation, see Table 1. Arrows start at a logically prior product or process and end at a logically posterior product or process.

Munck (2010)
Outline

1. Concept formation
2. Operationalization
3. Measurement

1. Conceptualization

“Concept formation stands prior to quantification” (Sartori)

“Writers have an obligation to state explicitly why (on the basis of which criteria) certain properties and terms were chosen, or excluded” (Gerring)

Tradeoff between maximalist and minimalist definitions. Important for assessing developments, causes, and consequences of (e.g.) democracy. But ultimately depends on the research question!
Ladder of abstraction

“[W]e have a concept of A (or of A-ness) when we are able to distinguish A from whatever is not-A” (Sartori 1984: 74)

“The rules for climbing and descending along a ladder of abstraction are thus very simple rules – in principle. We make a concept more abstract and more general by lessening its properties or attributes. Conversely, a concept is specified by the addition (or unfolding) of qualifications, i.e., by augmenting its attributes or properties.” (Sartori 1970: 1041)

Definitions of democracy and the ladder of abstraction
The ladder of abstraction and definitions of peasants

### Table 3.1

<table>
<thead>
<tr>
<th>Intention</th>
<th>Minimaist</th>
<th>Anthropological</th>
<th>Ideal Economy</th>
<th>Marxism</th>
<th>Weberian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural cultivators</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Peasant villages</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>characterized by distinct cultural practices</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High levels of rural</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>social subordination</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peasants control own land</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Kott (2000)

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Criteria for good concepts

1. Familiarity: How familiar is the concept?
2. Resonance: Does the chosen term ring?
3. Clarity: Are the defining attributes explicit?
4. Coherence: How internally consistent (logically related) are the instances and attributes?
5. Differentiation: How differentiated are the instances and attributes (from other most-similar concepts)?
6. Utility: How useful is the concept for a particular research question and in a broader perspective?
7. Measurement: How operationalizable is the concept?
Measurement

The Ogden-Richards Triangle

Term

Ambiguity
(Verbal definition)
(Conceptual treatment)
Inverse relationship

(Vagueness
(Operational definition)
Denotation

Connotation

Measurement validity

Level 1. Background concept

Conceptualisation

Level 2. Systematized concept

Operationalisation

Level 3. Indicators

Scoring cases

Level 4. Scores for cases

Adcock & Collier (2001)
Classification as the basis of science

(example: Aristotle’s regime typology)

<table>
<thead>
<tr>
<th>True constitution (aim for the common good)</th>
<th>Rule by one</th>
<th>Rule by a few</th>
<th>Rule by many</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monarchy</td>
<td>Aristocracy</td>
<td>Constitutional government (politeia)</td>
<td></td>
</tr>
<tr>
<td>Tyranni</td>
<td>Oligarchy</td>
<td>Democracy (Mob rule)</td>
<td></td>
</tr>
</tbody>
</table>

Perverted constitution (aim for one part’s interests)

From concepts to classes

- Concepts
- Operationalization
- Variables
  - $X_1, X_2 = \text{same value status} \Rightarrow \text{intrinsic logic of parametrization}$
  - Class 1
  - Class 2
  - Class 3
Typologies as multi-dimensional classifications

(example: two-dimensional political regime typology)

<table>
<thead>
<tr>
<th>+ Freedom rights &amp; rule of law</th>
<th>- Freedom rights &amp; rule of law</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Free &amp; fair elections</td>
<td>- Free &amp; fair elections</td>
</tr>
<tr>
<td>Liberal Democracy</td>
<td>Liberal Autocracy</td>
</tr>
<tr>
<td>Electoral Democracy</td>
<td>Illiberal Autocracy</td>
</tr>
</tbody>
</table>

Exercise 1

- Discuss (in four groups) the strengths and weaknesses of Muriaas' typology
Measurement of complex concepts

(The logical structure of concepts: the tree-and-leafs model)

"First, the analyst must make explicit the theory concerning the relationship between attributes. Second, the analyst must ensure that there is a correspondence between this theory and the selected aggregation rule, that is, that the aggregation rule is actually the equivalent formal expression of the posited relationship." (Munck & Verkuilen 2002: 24)
Data quality

• Different actors (respondents, governments, IOs, NGOs, researchers)

• Different incentives/interests

• Different capabilities/resources

• Different problems (coverage, reliability, validity)

Exercise 2

• Consider strengths and weaknesses of your own conceptualization and measurement