Lecture 3 Notes: Sociological Approaches

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1 Theory and Research

1.1 Necessity of Theory and Research

- **Conceptualization**: defining abstract concepts.
- **Operationalization**: translating concepts into measurable variables.
- **Instrumentation**: choosing or designing instruments for data collection.
- **Measurement**: observing and recording data.

1.2 Research Design and Methods

Scientific investigation merges abstract conceptualization (theory) with empirical evidence. Research methods establish standardized rules for:

- Generating knowledge (templates for data collection).
- Ensuring transparency and reproducibility.
- Selecting methods appropriate to research questions.

Everyday Philosophizing:

- is based on common knowledge and personal opinions.
- Conflates tastes with theory—can lead to misinformation and echo chambers.
- "Do your own research" may (will probably) reinforce conspiratorial thinking.

1.3 Errors in Human Inquiry

Values and biases can produce:

- **Inaccurate observations** (solve with precise measurement).
- **Overgeneralization** (solve with adequate sampling, replicability).
- **Selective observation** (solve with systematic sampling).
- **Illogical reasoning** (solve with clear causal and probabilistic logic).

2 The Research Cycle

1. Formulate research question.
2. Conduct literature review.
3. Select appropriate method.
4. Collect data.
5. Analyse data.
6. Report results.
7. Go back to step 1 and repeat as needed.

Definition 1: Cycle of Inquiry

A dynamic interplay of deductive (theory-driven) and inductive (data-driven) reasoning: hypotheses, data collection, empirical generalizations, and theory refinement.

3 Types of Research Questions

- **Descriptive** ("What?", "Does?"): describes phenomena.
- **Explanatory** ("Why?"): explains relationships; why some things happen or don't.
- **Exploratory** ("How?"): uncovers new phenomena and informs future research. Also informs operational definitions.

3.1 Operationalization

Definition 2: Operationalization

Defining variables in measurable terms, specifying indicators and criteria for data collection.

3.2 Variables

A variable is a concept that can take on different values (attributes are indicators that comprise a variable).

- **Independent Variable**: presumed cause.
- **Dependent Variable**: presumed effect.
- **Attributes**: the specific indicators or categories of a variable.

3.3 Reliability and Validity

- **Reliability**: consistency/precision of measurement; same results under repeated observation.
- **Validity**: accuracy; measures what it is intended to measure.

4 Influence of Paradigms on Research

Paradigms shape:

- Choice of methods.
- Selection and definition of concepts.
- Types of data considered relevant.
- Interpretation and conclusions.

5 Quantitative vs. Qualitative Methods

5.1 Quantitative

Translates concepts into numerical indicators. Examples:

- Surveys, experiments, statistical analysis.
- Measurement scales: nominal (seperate categories, cannot be ordered [gender, religion, etc]), ordinal (ordered differences not measured [likert]), interval ratio (separate, ordered, measurable [age]).

5.2 Qualitative

Produces contextualized descriptions. Examples:

- Interviews, ethnography, content analysis.
- "Thick description" (Geertz) to explain how and why variables relate.

5.3 Dichotomies of Approach

Key methodological contrasts:

- Quantitative vs. Qualitative.
- Deductive vs. Inductive.
- Nomothetic (general laws) vs. Ideographic (case depth).

6 Ethics in Social Research

Core principles:

- **Do no harm**: avoid physical or psychological injury.
- **Respect**: voluntary participation and informed consent.
- **Justice**: fair treatment and equitable distribution of research benefits and burdens.
- **Transparency**: honest reporting and analysis.