META-RESEARCH TO SYNTHESIZE KNOWLEDGE FROM EXISTING STUDIES IN AGRICULTURE

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Outline of Paper

- Introduction
- Forms and Functions of Re-Analysis
- Two Examples of Meta-Research
- The Promise and Challenge of Meta-Research

INTRODUCTION

- The Analysis of Existing Data

  - Secondary analysis: methodology for research using pre-existing statistical data.
  - Re-use of data from qualitative studies more recently

Objectives of Paper

1. To describe the explanatory potential of re-analyzing existing data or study reports.

2. To present sample studies using meta-research

Forms and Functions of Re-Analysis

- Forms of re-analysis

  - Analysis of pre-existing quantitative data

  - Analysis of pre-existing qualitative data.

Examples of pre-existing quantitative data

Type	Examples
Census data	Different purposes
Administrative data	Employee records, reports
Public records	Libraries
Social surveys	FIES, DHS, BAS data

Examples of pre-existing qualitative data

Type	Examples	Methods
Non-naturalistic or artifactual data	Field notes; Interview transcripts; observational records	Secondary analysis
Naturalistic data	Autobiographies letters; diaries	Documentary/ text analysis

Functions of re-analysis

- Investigation of new research question
  - New use for data originally collected for other research purposes
  - Some data sets are actually designed to supply data for sundry secondary studies
  - Longitudinal studies – address primary research questions and supply long term data for future secondary analysis

- Verification or refinement of existing research

Re-analysis of data sets for verifying or refining findings.

Controversial – Focus is on original research problem and not on a new topic

"Looking at the same questions with different analysis methods."

Contentious in relation to qualitative secondary analysis – epistemological tensions in quantitative and qualitative research

Synthesis of research: Meta-research

Designed to synthesize knowledge arising from existing studies

Seeks to identify, appraise, and aggregate or synthesize existing knowledge on a particular topic

Seeks to integrate findings from a sample of studies

Comparing meta-research with Secondary analysis

- Meta-research is concerned with appraising and summarizing existing knowledge, not exploring new research questions.

- Mainly involves the study of research reports, seldom raw data

- In comparing and analyzing texts, meta-research creates new interpretations

Re-use of own and others' data

- Analytic expansion – researchers make further use of their own data to answer new or extended questions

- Retrospective interpretation – researchers examine new questions which were raised but not addressed in the context of the primary study

- Armchair induction – researchers apply inductive methods of textual analysis for purposes of theory development
- Amplified sampling –comparison of several distinct and theoretically representative data sets
- Cross-validation – re-use data sets in order to confirm or discount new findings and suggest patterns beyond the scope of the original sample

Examples of Meta-research

1. Meta-ethnography of four domains of community relationships in CBNRM studies

2. Inferring paradigms from research designs of studies on CBNRM

Example # 1: Community relationships in CBNRM

- Objective:

  To re-analyze community relationships in four domains from different studies on CBNRM

Four domains of relationships

- Relationships of community with the natural resource
- Relationships among community members
- Relationships of community with NGOs
- Relationships of community with GA/LGU

Conceptual framework

- Relationships of community with the local natural resources

  - World views
  - Life projects

Relationships among community members

- Community attachment
- Formal organization
- Empowerment

Relationships between Community and NGOs

- Organizational development
- Dependency-autonomy
- Networks

Relationships between community and GA/LGU

- Policy and power relations
- Incentives
- Co-management

Methods used: Meta-ethnography

- Criteria for selection
- 95 materials reviewed
- Method of analysis
  - Coding
  - Analysis within and for all domains

I. Relationships of community with local natural resources

1. Beliefs on the interrelatedness of humans, nature and the supernatural
2. Beliefs in mastery of nature and utility of natural resources

1. Interrelatedness of humans, nature and the supernatural

1.1 Organic relationship of the components of the system

1.2 Centrality of land and natural resources

1.3 Indigenous knowledge system

1.4 Values and traditions

1.5 Resource management systems, norms and customary practices

1.6 Identity, belongingness and rsilience

2. Mastery of nature and utility of natural resources

2.1 Application of scientific knowledge and technology transfer

2.2 Emphasis on production and income generation

2.3 Assessment of CBNRM impacts

I. Analysis of relation of community with local resource

- Utilitarian worldview
- Exploitative and instrumental character
- Wide variation in resource management
- Romanticized notion of IPs
- Indigenous systems and indigenous peoples

II. Relationships among community members

1. Community attachment and cohesiveness
2. Formal organization
3. Empowerment

1. Community attachment and cohesiveness

1.1 Cultural heritage and kinship system

1.2 Affiliational ties spurred by collective action and benefits

2. Formal organization

2.1 Purpose for organizing

2.2 Organizational form

2.3 Organizational structure and participation

3. Empowerment

3.1 Education and capability building

3.2 Participation in decision making, planning, implementation and evaluation of resource management projects

II. Analysis of relationships among community members

- Collective action for NRM is predicated on functioning organizations
- Issues on empowerment process
- Issues given little attention
  - Stratification of barangay members
  - Dynamics of elite and marginal members
  - Resilience of IPs
  - Decay of organizations after project termination

III. Relationships between Community and NGOs

1. Organizational development
2. Dependency-autonomy
3. Networks

1. Organizational development

1.1 Community organizing

1.2 Resource management activities

1.3 Addressing tenure and security issues

1.4 Management of projects of the organization

1.5 Organizational concerns

2. Dependency-autonomy

2.1 Participatory processes

2.2 Exit of NGOs

3. Networks

3.1 Federation of POs

3.2 Linkages with private sector, sources of credit and grants

3.3 Formation of multi-sectoral groups

III. Analysis of relationships between community and NGOs

- Enabling role of NGOs
- Modal strategy is establishment of organizations
- Attendant issues
  - Little attention to structural context
  - Lack of preparedness
  - No exit strategies of NGOs
  - NGOs facilitated networking
  - Failure in institutionalizing social infrastructural gains

IV. Relationship between community and GA/LGU

1. Policy and power relations
2. Incentives
3. Co-management

1. Policy and power relations

4.1 Community and DENR

4.2 Community and LGU

2. Incentives

2.1 Land tenure and use rights

2.2 Cash income and livelihood enterprises

2.3 Technical assistance and capability building

2.4 Support services

3. Co-management

3.1 Sharing of responsibility

3.2 Formation of co-management bodies

3.3 Deputized ENRO

3.4 Sharing resources among collaborating organizations

IV. Analysis of relationships of community and GA/LGU

- GA and LGU set policies and regulations
- Project funds accessed thru agencies and LGUs
- Power issues
- Accord respect and trust to the other

- DENR has a lot to learn in effecting partnership norms
- Frequent change in occupants of national and local positions poses challenges
- Community organizations have to demonstrate capability to deserve partnership status.

Conclusions

1. Complexity of community relationships
   - Theorizing community
   - Domains of community relationships
   - Contexts of community relationships

2. Networks, trust and social capital

- Networks – visualizations of associations that map social relations

- Trust – creates a 'bank of resources'

- Social capital – goodwill, bonding and bridging, norms and institutions

Implications of community relationships in NRM

1. Community relationships are by definition people centered.
2. Forging equitable relationships in CBNRM
3. Aim at genuine partnership
4. Spread the modest gains in CBNRM

Example # 2: Inferring paradigms from research designs of studies on CBNRM

- Objective:

  To infer the paradigmatic foundations of studies on CBNRM from the research designs of the individual studies

Social research design

- Research strategy
- Research framework
- Who/what are studied (sample)
- Tools and procedures for collecting and analyzing data

Paradigms

- Beliefs guiding social research about
  - Ontology
  - Epistemology
  - Axiology
  - Methodology

The Four Paradigms

- Positivism/neopositivism
- Interpretivism
- Critical theory
- Participatory action research

Method used

- Qualitative meta-analysis of reports on CBNRM

- 74 studies on CBFRM and CBCRM

- Method of analysis
  - Identification of research design
  - Inferring research paradigm from the research design

Research paradigm by research design

Paradigm	Purpose	Strategy	Sample	Method
Positivism/ Neo- positivism	**To assess impacts; describe management; participation**	Pre- specified	Respond ents, study reports	Survey, meta- analysis
Interpreti vism	**To describe** Organization, **process, participa tion**	Unfold ing	Cases, key informants	**Ethnogra phy, observation , informants**

Paradigm	Purpose	Strategy	Sample	Method
Critical theory	**To assess, appraise; analyze process**	Unfolding	Cases, Informants, documents	Survey, Informants, observation
Participatory action research	**To organize community, undertake policy res**	Unfolding	Project participants	Cooperative action

I. Positivism/neo-positivism

- Purpose of research: To use knowledge to satisfy community needs and control environment

- Outcomes: Imply approaches to alter community relations

Assumptions

- There is pattern and order in social reality

- Rationality and self-interest lead to outcomes

- Explanations are nomothetic

- The research strategy is pre-specified
- Knowledge from the senses is more important than other forms of knowledge
- The observable facts are separate from ideas or values

II. Interpretivism

- Emphasis on what is meaningful to fishers and how they experience everyday life in fishing communities

- Study meaningful social action that focuses on the purpose that fishers attach to behavior

Assumptions

- Social life is intentionally created for purposeful action

- Based on social interactions and meaning systems

- Definitions of situations based on meanings under shifting conditions

- Common sense is crucial as it contains the meanings people use
- Interpretive approach is ideographic
- The interpretation it offers is unique, peculiar or distinct
- The report is rich in thick description and limited in abstraction

- The interpretive approach is inductive
- Facts are context-specific actions based on interpretations of fishers
- The research strategy is unfolding
- Approach is relatively open-ended and unstructured
- Use of ethnographies, key informants, participant observation

III. Critical Theory

- Designed to promote change by revealing the underlying mechanisms for social relations

- Utilize a power perspective in analyzing community relations

Assumptions

- Change is rooted in the tensions and conflicts within the organization
- It is in the deep structures of social reality that relations of superficial reality are based
- Research generates knowledge to empower people to take charge of their lives

IV. Participatory action research

- Research generates and conducts action for speculations to be tested
- Research develops critical perspectives and forms emancipatory commitments
- The CBNRM studies took courses of action that were holistic, culturally sensitive and promotive of empowerment.

- The studies were unfolding in structure
- They used a mix of methods with cooperative action
- The different CBNRM studies
  - Described the problems and issues
  - Collaborative strategies
  - Lessons learned

Conclusions

1. Distinctive contributions of studies by specific paradigm

   Neo-positivism:

   - Empirical support to hypotheses
   - Nomothetic approach for knowledge accretion
   - Implies needed action only

- **Interpretivism:**
  - Ideographic approach offers a distinctive interpretation
  - Reports are descriptive and context based
  - Ethnographies capture the processual nature of social life
  - There is no direct attempt to advocate social action

- **Critical theory:**
  - Identifies structural constraints
  - Raises level of awareness on bureaucratic structure
  - Uses a mix of research methods
  - Studies imply but do not advocate action

- **Participatory action research:**
  - Studies are action oriented involving community members and researchers
  - Cyclical action and reflection generate both theoretical and practical insights
  - Builds on relationship between knowledge from research and action taken
  - Uses a mix of methods and community activities

Complementation of studies guided by different paradigms

- The multi-paradigmatic character of CBNRM brings together the best of both worlds.
  - Benefits from distinctive contributions guided by individual paradigms
  - The complementation of paradigms gives us the bigger picture and helps us appreciate the complexity, elegance and challenge of CBNRM

The Promise and Challenge of Meta-Research

- **The Promise**
  - **Optimize use of existing data and study reports**
  - **Relatively low logistical requirements**
  - **No statistical standards required**
  - **Integrating findings for theory building**
  - **Addressing macro concerns through analysis of micro issues from individual reports.**

- **The Challenge**
  - **Useful for researchers with broad perspectives and cross disciplinal experience**
  - **Reports as units of analysis have to meet standards as defined by Marshall and Rossman (1989)**
    - **Credibility – accurate identification and description**

- Transferability of findings
- Dependability –account for changes in the phenomenon of study
- Utilization/application/action orientation – findings have value for practitioners.

* Methodological contributions through the creative use of meta-research by addressing issues on selection of materials to be integrated and development of models of integration.

THANK YOU FOR
YOUR ATTENTION