MEASURING AND UNDERSTANDING WHAT THE POLICE DO USING MIXED METHODS

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Not everything that can be counted counts, and not everything that counts can be counted.

— Albert Einstein
WHAT MATTERS IN POLICING?

- Depends on who you ask

- Police have focused on **effort** (we made lots of arrest here) while the public focused on **outcomes** (okay, but we still feel unsafe?)

- The measurement frenzy in policing has significant measurement implications
  - What causes crime decline?
  - What does the community (of all types) think of the police?
  - What level of legitimacy is accorded the police and what improves or detracts from this legitimacy?
  - How safe and secure does the community feel?

- Reopens the question of to whom does it matter?
SOME PROPOSITIONS CONCERNING MEASUREMENT OF WHAT POLICE DO

- Police, academics and the community often have a distorted sense of what the police actually do in and for society.
- Deterrence and “crime attack” policing have dominated for many years, and still do.
- Risk eclipsed harm as the medium of social control and police strategy.
- The police science movement tend to reinforce narrow conceptions of policing and “what works”, but rarely “how does it work”?  

YOU GET WHAT YOU MEASURE

- Police have drifted to a rather narrow definition of what they do, and what matters to the community.
- Measuring what matters is not the same as measuring ALL that matters in policing.
  - To whom does it matter?
  - What is its’ instrumental and symbolic importance?
  - How does measurement drive police behavior?
  - How do current measurement systems highlight or detract from a complete picture of policing?
DESIGNING A MIXED METHODS STUDY
The theory and research cycle can be compared to a relay race; although the participants do not necessarily start or stop at the same point, they share a common goal—to examine all levels of social life. Adapted from (Wallace, 1971).
WHY MIXED METHODS?

- **Validity** — corroborate quantitative and qualitative data
- **Offset** — offset weaknesses of each method -- draw on strengths of each
- **Completeness** — create a more comprehensive account
- **Process** — link outcomes and processes
- **Explanation** — qualitative can help explain quantitative results, quantitative can help generalize qualitative findings
- **Explain unexpected results** — especially quantitative results
- **Instrument development** — useful for instrument design
- **Credibility** — mixed methods enhance the integrity of findings
- **Context** — qualitative provides depth of context; quantitative provides breadth generalization.
- **Utility** — together often more useful to policy makers
NO MATTER WHAT METHOD, THE LOGIC OF RESEARCH DESIGN NEEDS TO ADDRESS ISSUES OF VALIDITY

Internal validity — causality
- Is the primary purpose to show cause and effect?
  True experiments are strongest, but problem of black box remains; need to be supplemented by ethnographic, qualitative assessment

External validity — generalization
- Is the primary purpose generalization to other contexts and places?
  Surveys with random sampling are strongest

Measurement validity
- Are we measuring what we think we are measuring?
- Qualitative data can help sort out measurement concerns
MEASUREMENT VALIDITY

Subjective

Face validity -- measure appears to be good on its face

Content validity -- estimate of how much a measure represents the elements of a construct

Objective

Criterion validity – does a test reflect a certain set of abilities

- Concurrent validity measures against a benchmark test, high correlation indicates strong criterion validity.
- Predictive validity is a measure of how well a test predicts abilities.

Construct validity -- how well a test measures up to its claims (theory)

- Convergent validity tests that constructs that are expected to be related are, in fact, related.
- Discriminant validity tests that constructs that should have no relationship do not have any relationship
THEORY PRECEDES METHOD: NUMBERS HAVE NO MEANING WITHOUT A WAY OF EXPLAINING THEM

- In a world of quantification, the underlying theory is what frames the question of interest and then animates the underlying dynamics of variables.

- Statistics are not theoretical explanations.

- Imbedded in all research (basic and applied) is some notion of what is associated with or causes what?
  - Basic research is all about cause and effect.
  - Applied research is often focused on theory versus program failure (Suchman, 1967).

- Numbers should not chase theory.

- You fish differently for tuna than for trout.
THEORY LEADS TO CONCEPTUAL FRAMEWORKS

- What is the object of the research, to explain, test hypotheses, evaluate programs?
- All require theoretical or conceptual grounding
- Sometimes the theory is clear and front stage, other times it is latent and backstage
- Nonetheless, even in evaluation research there are assumptions about cause and effect (Suchman, 1967)
TAKING THEORY TO MEASUREMENT

Abstract

Conceptual definition

Unit of analysis
- Population
- Target population

Empirical

Variable

Operational definition

Sampling unit, case
- Sample
- Sampling frame
PREDICTION VERSUS MEANING

- Quantitative studies are often wide but not particularly deep
- Qualitative studies are often deep but not particularly wide
- Combining them can offset the limitations and build on the strengths of each
### Types of Quantitative and Qualitative Data

#### Quantitative data
- Close-ended instruments
- Attitudinal/behavioral scales
- Behavioral checklists
- Census, performance records
- Closed-ended surveys
- Agency data

#### Qualitative data
- Open-ended responses
- Semi-structured or open-ended interviews
- Observations
- Documents/media coverage
- Digital media
Content analysis – analysis of news accounts, internal reporting processes (workload sheets, field reporting, complaints against police documents) – can be made quantitative or remain qualitative

Systematic Social Observation – police and community field studies designed to frame ethnographic observation often within a quantitative framework

Case Studies and Thick Description – police agency or neighborhood specific qualitative efforts or integrations of qualitative data obtained from observation, interview, qualitative focus group and the like, often with official data for the same site.

Social Problem/Impact Analysis – a policy-analysis viewpoint to use quantitative and quantitative data to trace the contours of social problems (crime, disorder, fear) or proposed impacts for selective interventions. e.g. what level of harm do communities experience?

Program Evaluation – use qualitative and quantitative methods to understand programs processes and impacts, what happened when the police did X and with what effect?
QUESTIONS NOT SUITED FOR RCT

Big Questions

- Who comes to policing now and how do the expectations of new recruits shape police service?
- How is the nature of public policing changing and with what organizational or service delivery implications?
- How are the police integrated with other social service agencies and with what implications for neighborhood safety and security?

Smaller Questions

- What do the residents of Community X think about the safety and the police and how do these attitudes effect police/community relations?
- How do police officers in Agency X conform to organizational life and with what implications for the police performance and community relations?
MANY THINK THAT MIXED METHODS IS COLLECTING AND ANALYZING DATA SEPARATELY

The data are different so they are not merged
THESE ARE NOT MIXED METHODS

• Simply choosing quotes to pepper into quantitative findings
• Failing to integrate the findings of qualitative research with those of the quantitative and into the overall findings
• Treating the qualitative process as less important than the quantitative
BUT HOW DO WE MIX?

We can Converge data:

Qualitative → Results ← Quantitative

We can Connect data:

Qualitative → Quantitative → Results
WE NEED TO DEFINE MIXED METHODS RESEARCH FOR OUR AUDIENCES

[Mixed method research] employs strategies of inquiry that involve collecting data either simultaneously or sequentially to best understand research problems. The data collection also involves gathering both numeric information (e.g., on instruments) as well as text information (e.g., on interviews) so that the final database represents both quantitative and qualitative information (Creswell 2003: 20).
TYPES OF MIXED METHODS DESIGNS

I. Simultaneous Triangulation Mixed Methods Design

- **Quantitative** Data and Results
- **Qualitative** Data and Results

Interpretation

II. Simultaneous Nested Mixed Methods Design

- **Quantitative** Pre-test Data and Results
- **Qual Process**
- **Quantitative** Post-test Data and Results
TRIANGULATION DESIGN: CHARACTERISTICS

- Collecting both quantitative and qualitative data
- Collecting these data at the same time in the research procedure
- Analyzing the quantitative and qualitative data separately
- Comparing or combining the results of the quantitative and qualitative analysis

Example: collect survey data on community fear of crime (quantitative) and collect individual interviews or conduct observations (qualitative) on what fears are most frequent and how fear shapes behavior and then compare the results.
TRIANGULATION DESIGN: WHEN IS IT USED?

- When you want to combine the advantages of quantitative (trends, large numbers, generalization) with qualitative (detail, small numbers, in-depth)

- When you want to validate your quantitative findings with qualitative data

- When you want to expand your quantitative findings on neighborhood crime with some open-ended qualitative data (e.g., survey with closed- and open-ended data) on how community residents feel about crime increase/decreases
NESTED DESIGN: CHARACTERISTICS

- Collecting both quantitative and qualitative data
- Collecting both types of data at the same time
- Having ONE form of data play a smaller role in the study than the other form of data

Also,
- Using one form of data to answer one question; the other form another question
- Collecting one form of data at one level of analysis and another at another level of analysis

Example: You conduct a “hot spots” experiment and during the experiment you gather qualitative interview data or observational data about what the police actually did and whether the citizenry noticed. The outcomes of the experiment assessed quantitatively address different questions than the process of the experiment explored qualitatively.
NESTED DESIGN: WHEN IS IT USED?

- When you do not have time or resources to commit to extensive quantitative and qualitative data collection
- When you want to study the process of an experiment as well as the outcomes (big issue in police experimentation – treatment and dosage)
- When you want to examine different levels in an organization
- When you want to add meaning to the discussion
ILLUSTRATION — WHAT CONSTITUTES EVIDENCE?


- **On Treatment:** “Suitable police enforcement efforts included traditional tactics such as directed patrol and heightened levels of traffic enforcement as well as alternative strategies such as aggressive disorder enforcement and problem-oriented policing. Studies of police crackdown programs were also considered.”

- **Qualitative Research Input:** “Qualitative research on crime and disorder outcomes was not included in this systematic review.”

- **The Sample:** “The search strategies produced 4,315 distinct abstracts [which] were reviewed for any suggestion of an experimental or quasi-experimental evaluation of hot spots policing interventions. 131 distinct abstracts were selected for closer review…19 eligible studies were identified and included in this review”. \( \frac{19}{4,315} \) or a sample of .0044 of the total amount of research devoted to the topic?
TYPES OF MIXED METHODS DESIGNS

III. Sequential Explanatory Mixed Methods Design

IV. Sequential Exploratory Mixed Methods Design
EXPLANATORY SEQUENTIAL DESIGN: CHARACTERISTICS

- Viewing the study as a two-phase project
- Collecting quantitative data first followed by collecting qualitative data second
- Typically, a greater emphasis is placed on the quantitative data in the study
- Example: You first conduct a survey and then follow up with individuals who answered positively to the questions through interviews
- Questions what did they mean when they were responding (think about fear of crime or contact with the police)
EXPLANATORY SEQUENTIAL DESIGN: WHEN DO YOU USE IT?

- When you want to explain the quantitative results in more depth with qualitative data (e.g., statistical differences among groups, individuals who scored at extreme levels)
- When you want to identify appropriate participants to study in more depth qualitatively
EXPLORATORY SEQUENTIAL DESIGN: CHARACTERISTICS

- Viewing the study as a two-phase project
- Qualitative data collection precedes quantitative data collection
- Typically, greater emphasis is placed on the qualitative data in the study
- Example: You collect qualitative patrol work entries through car sheets and observation, analyze the data for themes, and then develop an instrument based on the themes to measure police attitudes towards different work assignments on a quantitative survey.
EXPLORATORY SEQUENTIAL DESIGN: WHEN DO YOU USE IT?

- To develop an instrument when one is not available (first explore, then develop instrument)
- To develop a classification or typology for testing
- To identify the most important variables to study quantitatively when these variables are not known
ILLUSTRATION- POLICE HORSES IN THE UK


- Mounted police spend substantially more time on neighbourhood-level patrol or supporting local policing than on any other area of activity.

- In neighbourhood settings, mounted police patrols are associated with higher levels of visibility, trust and confidence in police.

- Mounted police generate far greater levels of casual engagement than foot officers; however, both generate equivalent levels of more extended engagements.
ILLUSTRATION-- TRAFFIC DUI CHECKPOINTS — AUSTRALIA VERSUS SCOTLAND


- 60 checkpoints, different scripts — procedural justice tested


- Generally the same intervention — different results, legitimacy went down in treatment group

- Demonstrate the difficulty in translating experimental interventions across policing contexts, and challenge the notion that public perceptions may be improved through a simple, additive approach to the delivery and communication of procedural justice.
**HOW WILL WE ANALYZE THE QUANTITATIVE AND QUALITATIVE DATA (WITHIN THE DESIGN TYPES)?**

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<th>Quantitative analysis</th>
<th>Qualitative analysis</th>
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POLICE RESEARCH AS
MASTERING THE TANGO: THE
DANCE AND ITS’ MEANINGS

- Understanding complex culture
- Stages of research/dance
  - The embrace – why are we here? Communication and trust building
  - Creating the vocabulary, sense of rhythm, study from who’s perspective
  - Building the internal structure, understanding that all of policing is political in its implications
  - Creating usable knowledge (Lindblom and Cohen, 1979)


THANK YOU

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