Mixed Methods: A problem-solving, “Bayesian” approach.

Centre for Social Science Research and Policy

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Plan for the workshop

- Part A: Mixed methods are not smoothies – the case for a Bayesian approach
- Part B: The information map: a quick tour of quantitative and qualitative methods
- Part C: Research frameworks align questions to lines of evidence
- Part D: Quick tour of lines of evidence
- Part E: Common measures emerge from mixed-mode analysis
- Part F: Mixed modes: A Bayesian view
- Appendix: Review of lines of evidence (quick summary of qualitative and quantitative lines of evidence)

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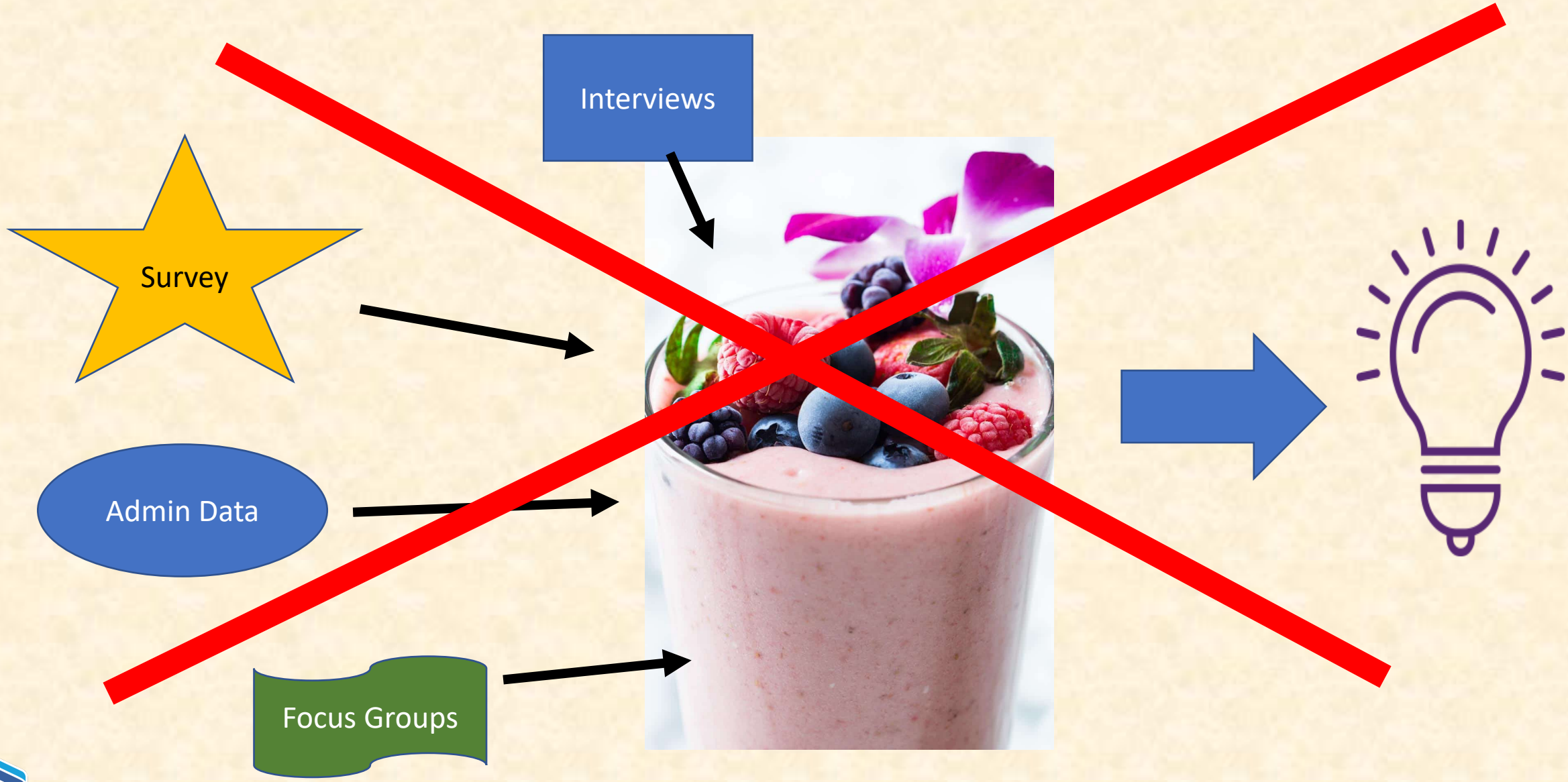
Case Studies used in this presentation

1. Evaluation of Federal Drought Assistance (1991)
2. Evaluation of the Farm Improvement Marketing Loan Act (2002)
3. Evaluation of the National Child Benefit (2005)

Part A
Mixed-Methods are Not Smoothies

Mixed Methods are not smoothies



Mixed Methods – two models

1. **Triangulation**
   - Insight derives from “weighing” the evidence from different sources.
   - The process of assessing the weight and value of information from all sources produces insight.
   - This creates the basis for “judging” the veracity of the null hypothesis.
2. **Bayesian**
   - Start with a statement (the prior).
   - Seek evidence to falsify the statement.
   - Revise (update) the prior
   - Rinse and repeat.

Model 1: Triangulation in social research - Origins

- Social scientists in the sixties became concerned that single methods (interviews or, questionnaires or surveys) were inherently biased.
- Corroborative and collateral evidence became favoured to increase validity and reliability.

"When a hypothesis can survive the confrontation of a series of complementary methods of testing, it contains a degree of validity unattainable by one tested within the more constricted framework of a single method" (Webb *et al* 1966: 174).

"No single method is always superior. Each has its own special strengths and weaknesses. It is time for sociologists to recognise this fact and to move on to a position that permits them to approach their problems with all relevant and appropriate methods, to the strategy of methodological triangulation." (Denzin, 1970b: 471).

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Model 1 Triangulation

Rationale for triangulation

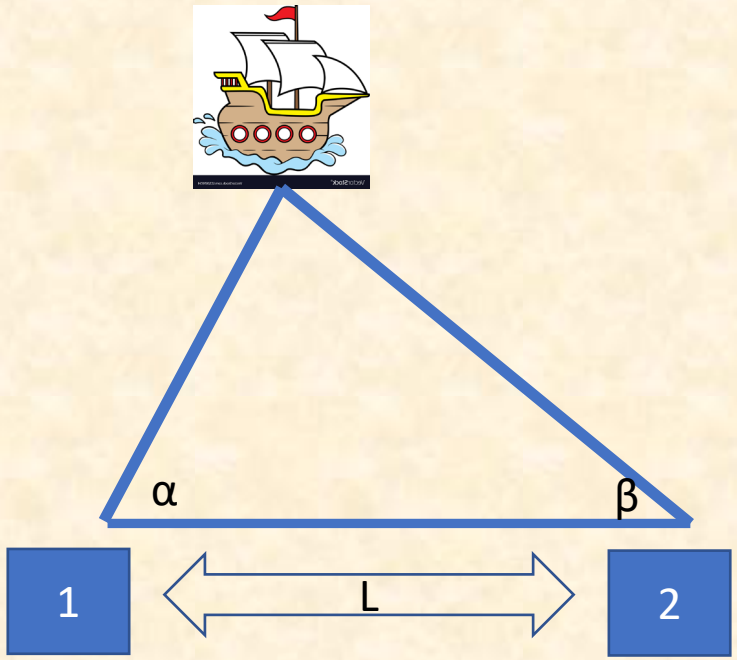
Many use the analogy from land surveying to justify triangulation evaluation

"a single landmark can only provide the information that they are situated somewhere along a line in a particular direction from the landmark. With two landmarks, however, their exact position can be pin-pointed by taking bearings on both landmarks; they are at the point where the two lines cross.

In social research, if one relies on a single piece of data there is the danger that undetected error in the data-production process may render the analysis incorrect… diverse kinds of data *(that)* lead to the same conclusion, one can be a little more confident in that conclusion… *(because)* different kinds of data have different types of error built into them" (Hammersley and Atkinson,1983: 198).

But this view has limitations

Triangulation – one more time



Two observers can “triangulate” the location of the boat (distance from the short) by measuring the angles α and β, using the distance L and the law of sines.

Someone with one watch always knows the time. Someone with two watches is never sure.

The key to triangulation is that both observers must use the same theoretical framework (plane trigonometry)

How does one triangulate the quantitative data from a survey (age, income …) with opinions?

Problems with triangulation in social science

- Does not necessarily increase validity – competing perspectives fail to converge or collectively converge on a mistaken idea.
- May offer differing perspectives, but this may not lead to less bias in social science.
- Using quantitative and qualitative methods in the same study may not lead to less bias in social sciences, which can result in the quantitative data dominating the research.
- The analogy with surveying presents serious theoretical problems in integrating quantitative and qualitative methods.

A better word than combining or mixing

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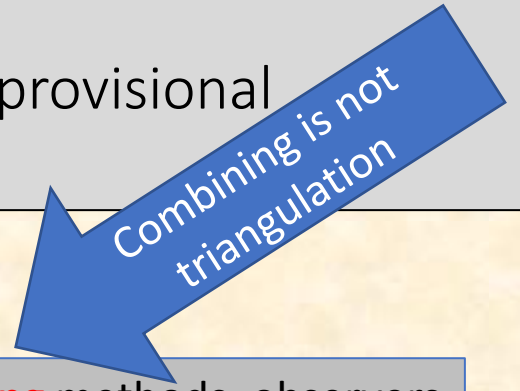
Model 1 Triangulation

Triangulate only within a data methodology applied to similar data.

- Alternative statistical models using the *same data*
- Contrast the views of *similar key informants* (within national managers, local project leaders, and line social workers….)
- Across multiple *homogeneous* focus groups to understand the multidimensionality of experience and perceptions within that type of participant.
- Use other data collection modes to conform/disconfirm provisional understanding



"the flaws of one method are often the strengths of another, and by **combining** methods, observers can achieve the best of each, while overcoming their unique deficiencies" (Denzin, 1970a: 308)."

Model 2: Mixed methods as Bayesian

... is *not a formula* for combining data and information, but represents a **process of discovery**.

The Bayesian approach to mixed methods starts by

Stating a "prior" (belief)

It uses evidence from multiple sources to revise/update the prior.

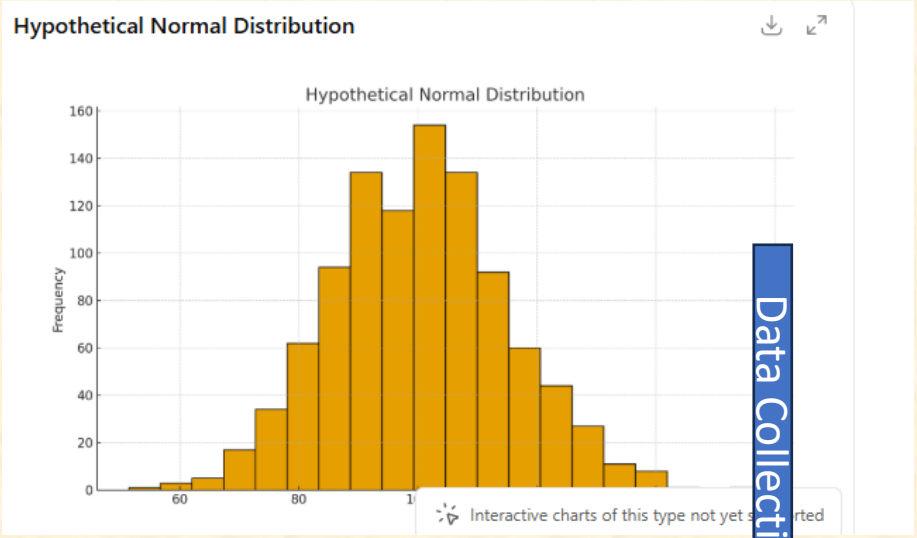
Contradictions (riddles) become opportunities to deepen insight and update the prior.

When my information changes, I alter my conclusions. What do you do sir?
J.M. Keynes

How Bayesian methods work in science

Prior hypotheses: The distribution of natural resources (oil deposits) is normal … there are just as many large deposits as small

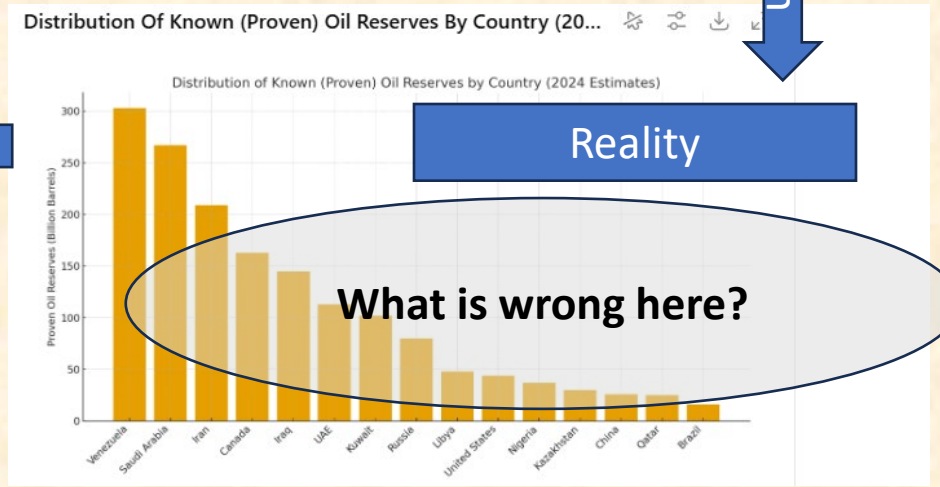
Hypothesis



Data Collection

Posterior hypotheses: The distribution of natural resources (oil deposits) is log-normal…there are a few massive deposits and many smaller ones.

Update



Reality

What is wrong here?

Model 2 Bayesian Method

Null hypotheses are priors

- Without government assistance (beyond crop insurance) during the drought of 1989, farm incomes would have declined
- Government subsidies for loans will allow more farms to survive and strengthen the rural economy
- The basic annual income does not affect participation in paid work.

All research anchors inquiry around a set of questions

“If I had an hour to solve a problem and my life depended on the solution, I would spend the first 55 minutes determining the proper question to ask… for once I know the proper question, I could solve the problem in less than five minutes.” - Albert Einstein

"The art and science of asking questions is the source of all knowledge." - Thomas Berger

"Research is formalized curiosity. It is poking and prying with a purpose." - Zora Neale Hurston

"In research, the art of proposing questions must be held higher than solving them." - Georg Cantor

A Bayesian approach to mixed methods has the following closely aligned features.

1. The answer to a question is a better question.
2. Refining the null hypothesis (the prior) never stops.
3. Know what evidence will change your mind.
4. The current posterior is provisional.

Case study – Evaluation of Federal drought assistance (1991)

The federal government awarded one-time grants to Prairie farmers to offset losses triggered by the 1988-89 drought. The goal was to limit farm bankruptcies and avoid a repeat of the "dirty thirties." This study focused on the experience of Saskatchewan farmers.

The main lines of evidence comprised interviews (program administrators, farm organizations), focus groups, and administrative files (program documents, financial records).

Study synopsis

The Issue: Farmer perceptions are a central line of evidence for the evaluation

- Six farmer focus groups gauged financial support for programs to assist with drought-related losses.
- Challenge: How should we allocate these groups geographically?

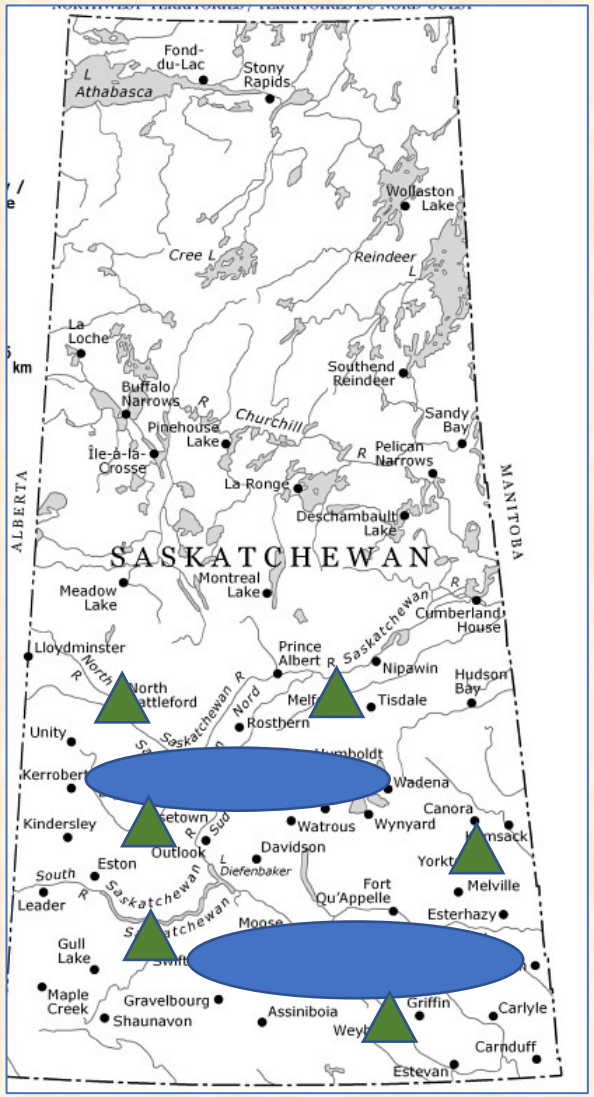
Options:

- Horizontal: Use Regina and Saskatoon as bases and complete the groups in three centres clustered around these two cities.
- Vertical: Split the province vertically and complete the six groups in two bands of three, with two researchers moving north.

Method: As we (two moderators) worked north, we debriefed by phone every evening to compare notes.

Interesting Finding: Producer attitudes became more optimistic, with less expressed need for government support and a more "entrepreneurial" outlook **as we moved north**.

Why?



The resolution – soil zones and micro-climates

Add soil geology data

- The finding that attitudes to government support changed so markedly as we moved north appeared to be an anomaly …
- … until I saw a soil map of Saskatchewan… by chance
- Curious, I phoned an ag economist at the U of M, who confirmed that the darker soil regions offered greater scope for diversification (not just wheat…) that led to higher incomes and more economic resiliency.
- The Palliser triangle is also known for frequent and intensive drought cycles.

Insights on mixed methods from this case

From the case study

- Sometimes dumb luck creates anomalies (choosing the sequence for the focus groups of the location).
- Real-time debriefing supported active hypothesizing.
- Sometimes serendipity (noticing the soil map) begins the process of resolution (adding a line of evidence)
- An expert interview (second line of evidence) offered the insight needed to **understand the focus group findings.**

Some principles start to emerge

- One never starts research with a blank slate

  I assumed that farmers would all be very supportive of government funding. It was a surprise when, as I worked north, attitudes turned to "meh" and then to faint disdain.
- Checking perceptions with the other researcher served to 1) identify the trend, 2) alter the perception, 3) become alert to a new hypothesis.

  Caution! When we become aware of a new hypothesis, we risk unintentionally adjusting our research tools to confirm it. This can lead to a search for a new phenomenon, potentially influencing our work with other participants.

Seek and you will find is not the ideal model for research

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Part B
The information map – A quick tour of quantitative and qualitative methods

Data - features

Quantitative

- Self-report status (age, income, etc., fixed response scales…)
- Observations (counts of cars boarding a ferry, counts by type of car, counts by number of passengers, counts by weight…)
- Physical measures (weight, rainfall, CO2 in the atmosphere…)

Quantitative data are amenable to arithmetic (statistical manipulation)

- units of analysis (individual, firm, household, country…) are assumed to be statistically identical because they are…
- drawn from random samples or census surveys or admin data.

Qualitative

- Audio and video recording (still and animated)
- Text of any kind
  - Interviews
  - Diaries
  - Twitter

Qualitative data have little inherent structure and meaning comes from either:

- coding to transform complex information into quantitative measures.
- “Expert” interpretation.

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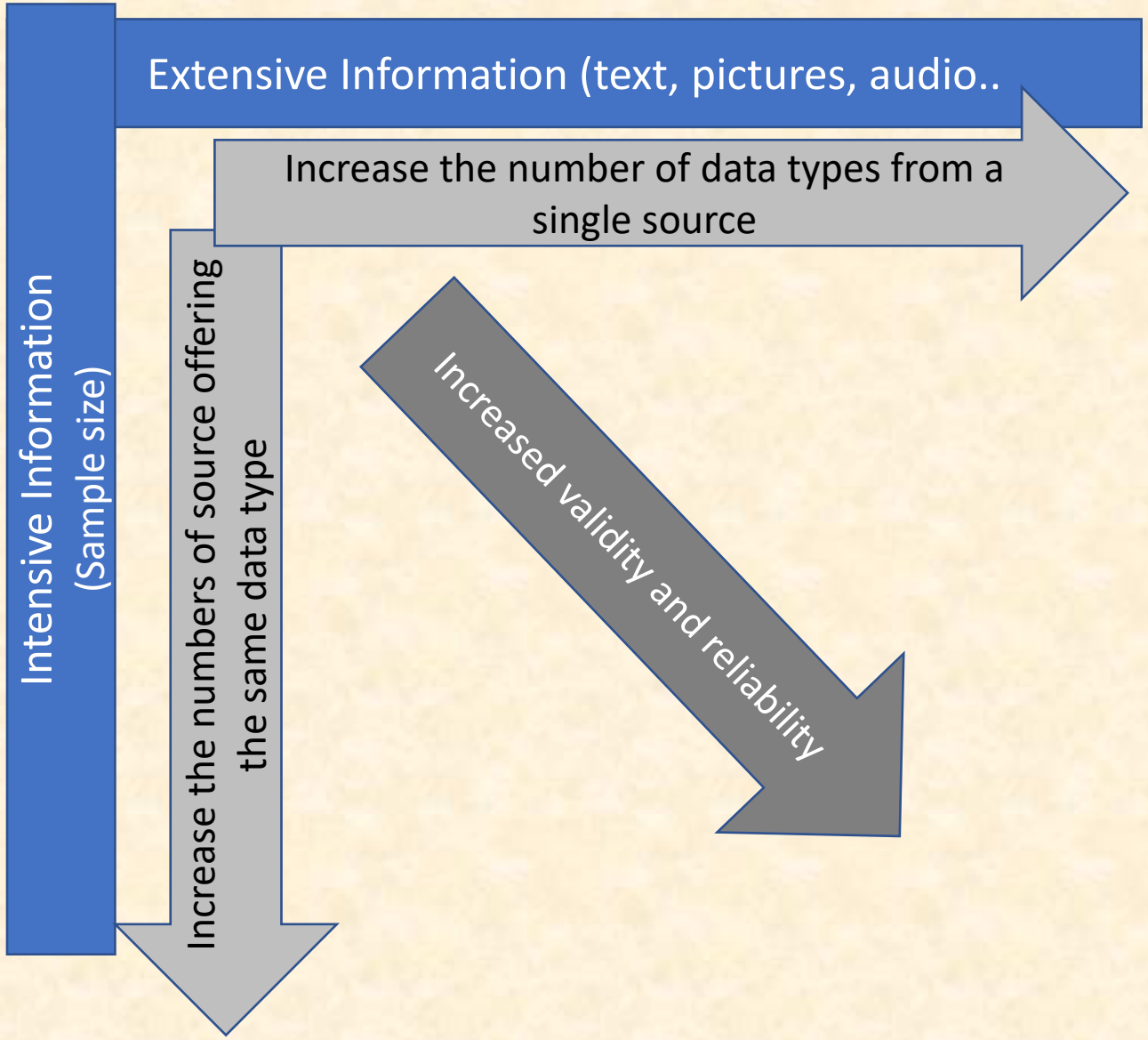
Validity and reliability

Like all social research, the goal of mixed methods is to reduce bias and increase reliability

- ***Bias*** *is the difference between what is measured/observed and what is true*
- ***Reliability*** *is consistency in measurement*

The word "credibility" is common.



Part C: Research frameworks align questions to lines of evidence

Research frameworks

A research framework specifies the main theme (issues, hypotheses, questions…) and aligns each line of evidence to each theme/issue/question.

Evaluation of the National Child Benefit (Stylized Framework)					
Lines of evidence→	Survey of clients	Interviews (managers)	Focus Groups (Clients)	Analysis of tax records	Expert Interviews
Theme/Issue ↓					
1. Work effort	X			X	X
2. Food Security	X	X	X		
3. Education/Training (parents)	X			X	
4. Impact on Family Life	X		X		
5. Administration (cost)		X			X

The National Child Benefit (precursor to the Canada Child Benefit is a basic income for parents of children between 0 and 18)

The evaluation for research focused on five ix themes

Questions within the work effort theme

Survey of clients				
Theme	Questions			
Work effort	Hours of work for heads	Search effort for work	Impediments to work	…
Food security	Food budget	Use of food bank	Times experienced hunger in last month	…
Education	Education history	Participation in training/education in last month	….	….
Impact on family life	Relationship among heads	Relationship among children	Thoughts of separation	….

Part D
Quick Tour of Lines of Evidence

Quantitative Research (1)

Unit of analysis aligned to the program target focus

- *Individuals*
- *Families/households*
- *Firms*
- *Organizations*
- *…*

Unit of analysis aligned to the program delivery focus

- *Managers*
- *Organizations*
- *Classes …*

"…use of standardised measures so that the varying perspectives and experiences of people can be fit into a limited number of predetermined response categories to which numbers are assigned" (Patton, 2001, p.14).

Key idea: Quantitative methods rely on "counting" "similar" units

Quantitative research (2)

- Emphasize facts (expressed as variables) to test causal relations between variables.
- Variables are the tangible (measurable) realization
- Large sample survey and administrative data sets dominate
- Inferences from a sample to population mandate probability sampling
- With sufficient cases, information can be classified and grouped into standardized categories using statistical analysis

Reliability

a. The stability of a measurement over time and among units
b. Control of intervening factors and concepts of "stability" are important ideas

- Validity
- Often defined as "construct validity". The construct is the initial concept, notion, question, or hypothesis that determines which data is to be gathered and how it is to be gathered.
- A key challenge is that researchers may alter the construct in the face of disconfirming data.

External validity – is the analysis extendable to another jurisdiction, unit, time, place…?

Using a straightforward method on good data is far better than using a complex technique on st*&ty data.

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Qualitative Research (1)

Data that cannot be counted and processed statistically

Common data collection methods evaluation include

- *Interviews*
- *Focus groups*
- *Case studies*

"the researcher is the instrument" (Patton, 2001, p. 14).

Two core challenges

- *Selecting subjects (as opposed to sampling) for their information value.*
- *Managing the tension between researcher as actor and researcher as observer*

Reliability

a. Concept of trustworthiness is core for some researchers
b. Others maintain that reliability is a construct that pertains only the quantitative studies.

Validity

a. Not an absolute, but based on the theoretical framework and data collection/analysis process.
b. Many researchers stress discipline and rigour in the process as the guarantor of validity

Data Reduction

Quantitative

- Coding (pre-coding – post coding)
- Scales/indexes (Likert, magnitude)
- Factor/cluster analysis to refine constructs

Qualitative

- Coding (classification)
- Thematic development (detect storylines)
- Typology/metaphor development (analogies)

Both quantitative and qualitative data usually require us to engage in manipulation/processing before analysis

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Quantitative research focuses on …

- Measuring concepts (income inequality, cost-effectiveness, etc.)
- Testing possible causality
- Generalizing from a sample to population
- Replicating and aggregating using standardized methods based on discrete and uniform units of analysis.

Credibility depends on transparency in data collection and statistical methods supported by replication

Qualitative research focuses on

- Explicating concepts and theories
- Supports insight and hypothesizing to detect the subjects' points of view
- "Thick" description of personal and social processes to support a narrative

Credibility depends on transparency in data collection and an evolving narrative that increases insight

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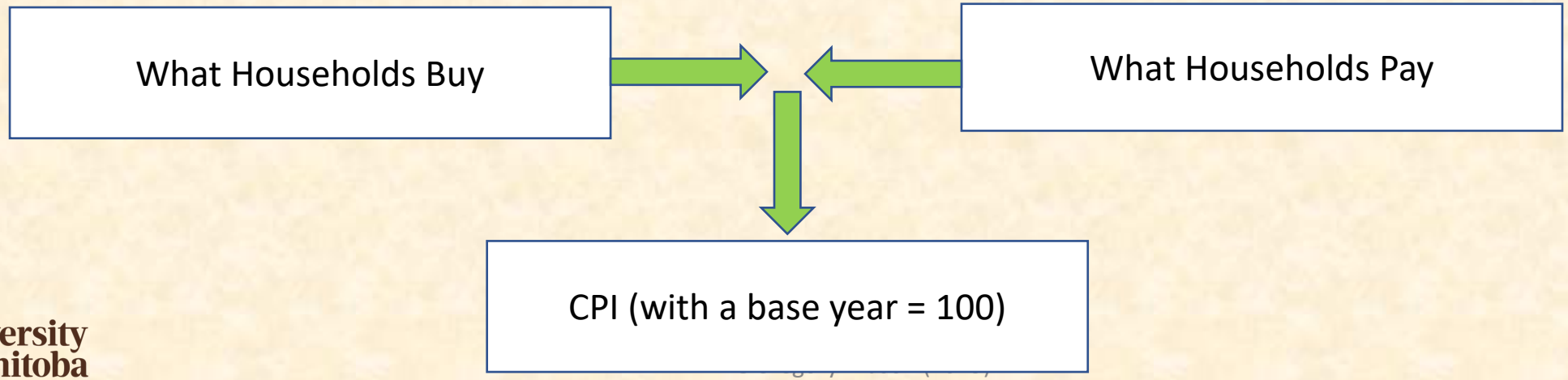
Part E
Common measures that emerge from mixed-mode methodology

Consumer price index (CPI) – Construction

Purpose: To track the cost of a representative basket of goods. While most use this as a proxy for inflation, most statistical agencies maintain is the a "cost of living index."

Method: The CPI uses two modes:

- Survey of household finances collects information of what households buy (product categories and quantities)
- Price monitoring for categories and prices



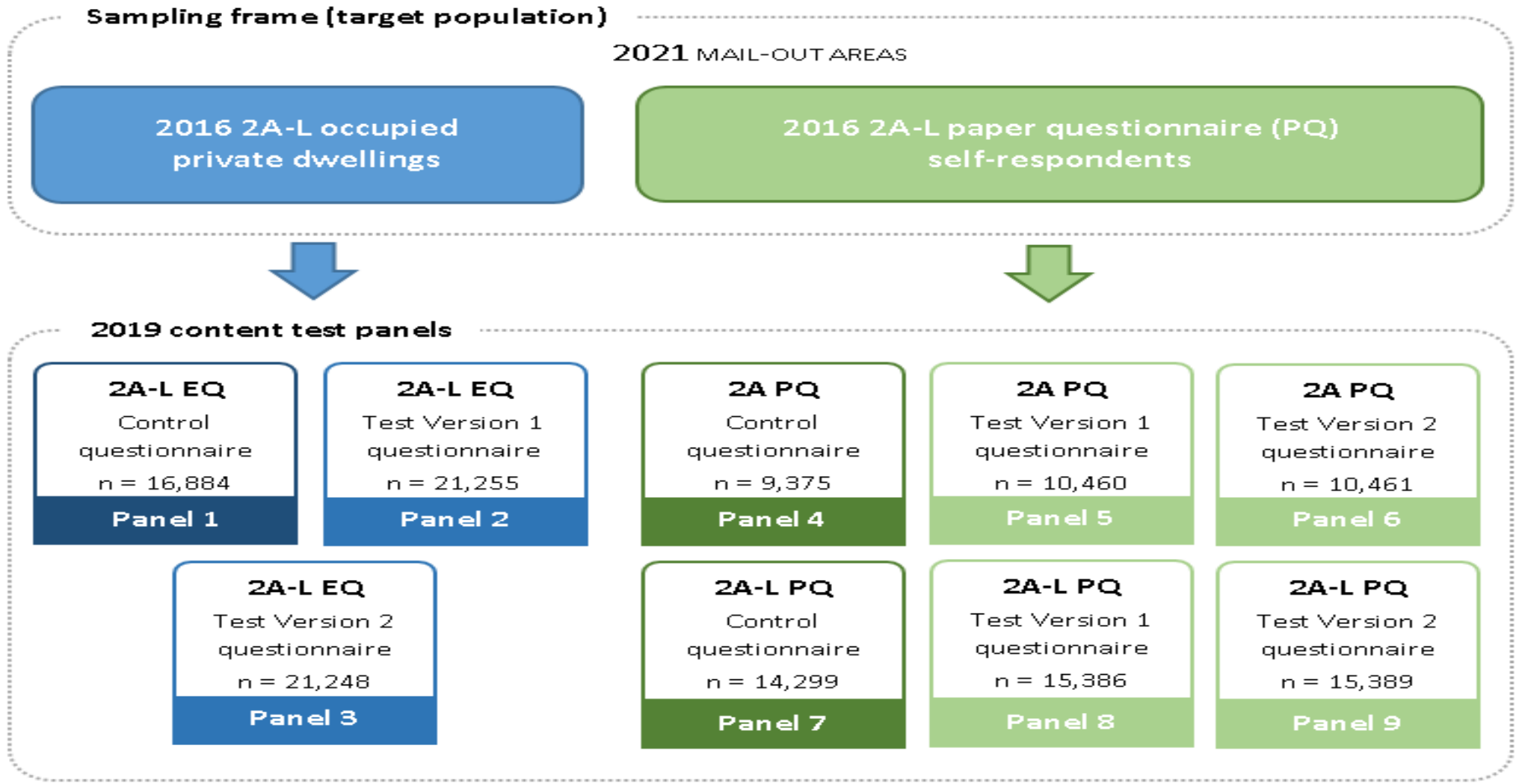
Census questionnaire development

Statistics Canada uses a prolonged process of questionnaire design involving

- Content development (Stakeholder consultations)
- Question development (Expert interviews, focus group testing for meaning)
- Questionnaire development (Pre-tests with follow-up)
  - Order
  - Format
- Survey logistics (Pretest with follow-up)

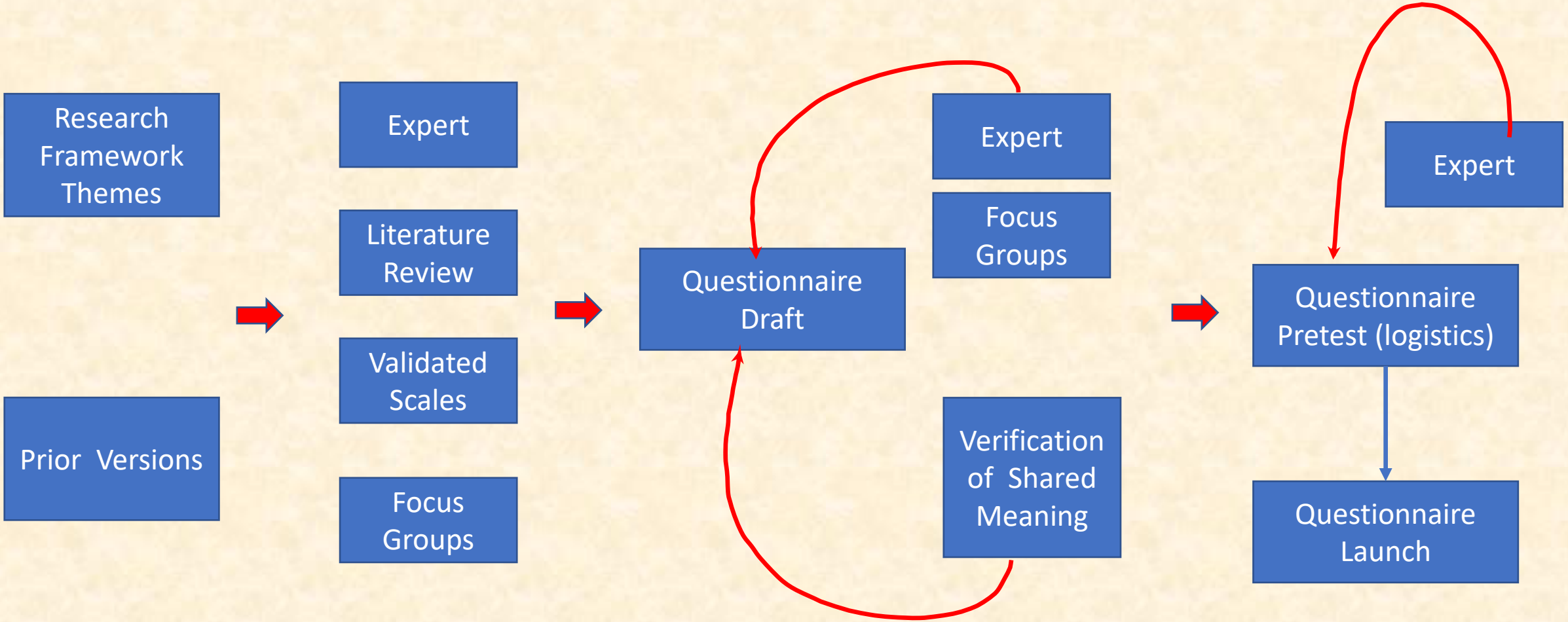
Figure 1

Design of the 2019 content test



https://www12.statcan.gc.ca/census-recensement/2021/ref/98-20-0001/982000012020020-eng.cfm

Survey questionnaire development is usually the outcome of a mixed-mode development process



Case Study 2: Exculpatory Evidence – Farm Improvement and Marketing Cooperative Farm Act (FIMCLA)(2002)

Mixed methods implicitly assumes that no line of evidence dominates

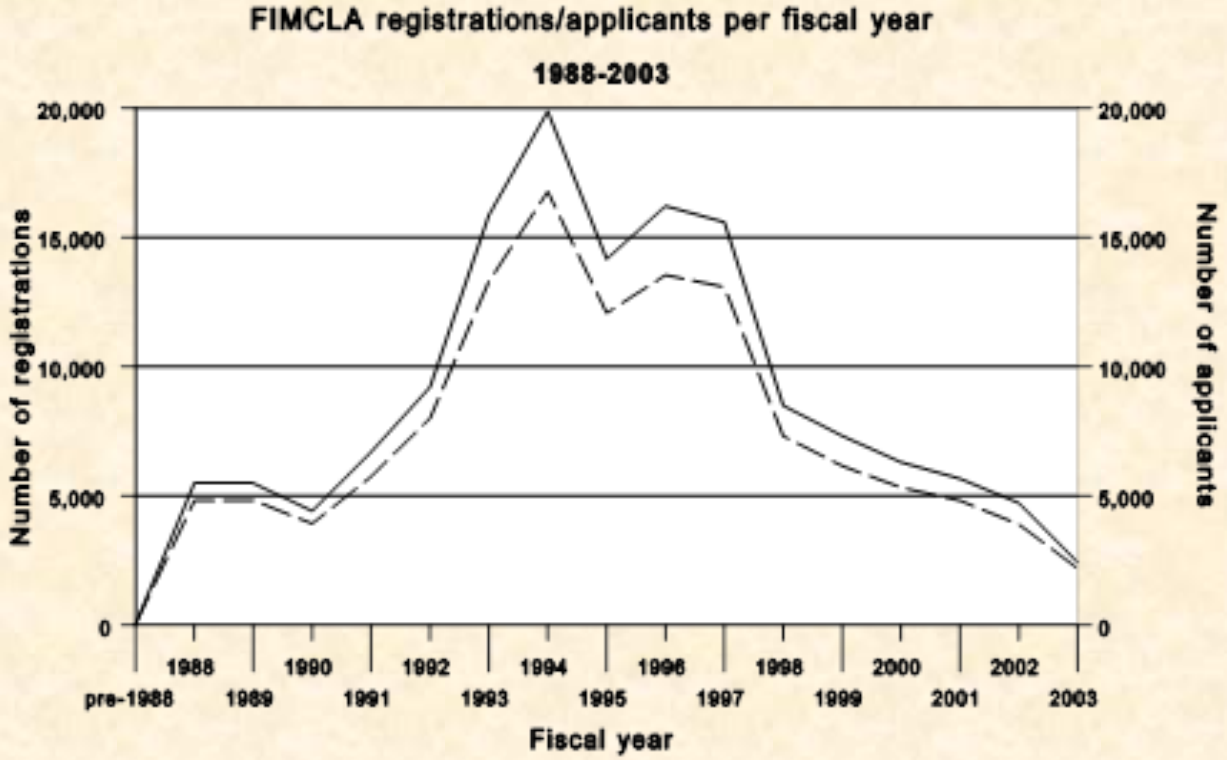
When one "fact" dominates, do we need any other information?

- FIMCLA guarantees bank loans to farmers who are actively engaged in farming for the purpose of earning a profit in Canada
- Banks and credit unions advance the funds and receive payment from the federal government if the farmer defaults
- Bank loans are repayable with interest fixed at 1% above prime
- The rationale was framed during the high-interest era when business interest rates were 3 – 4% above prime and farmers had difficulty securing lines of credit.
- Some 30+ staff in Ottawa worked on the program, with farmer organizations enrolling/qualifying applicants for which they received fees

As a mixed methods evaluation, we used:

- Recipient survey*
- Management interviews*
- Interviews with banks*
- Interviews with farm organizations*
- Analysis of administrative data

* Those with a potential financial interest in program continuance



This chart captures the essence of the program --- it had become a solution in search of a problem

Memorable Quote: Well, we may be delivering an unnecessary program, but we are doing it very efficiently (Anon Manager – AAFC)

"There is nothing so useless as doing efficiently that which should not be done at all."
Peter Drucker

Case Study 3: Evaluation of the National Child Benefit (2005)

- The National Child Benefit was the precursor to the Canada Child Benefit, starting in 1997.
- A joint initiative of the Federal, Provincial (except Quebec) and Territorial governments
- Offer families with children under 18 an income-tested monthly stipend that starts at $6000 annually per child for those with no earnings and taper to 0 for those with family incomes of $33,000.
- The goal was to reduce the depth and incidence of children in poverty without causing parents to reduce their work effort.
- Methods included
  - **Interviews** (n=75) with FPT representatives
  - **Recipient Mail/Phone survey** (n=5500) of NCB recipients with sample drawn from tax records using propensity score matching
  - **Analysis of taxation data** (n=100,000+) conducted at Canada Revenue Agency
  - **Focus Groups** (n=20) in every province, concentrating on urban centres and enrolled from the client survey, split between social assistance and non-recipients of social assistance.

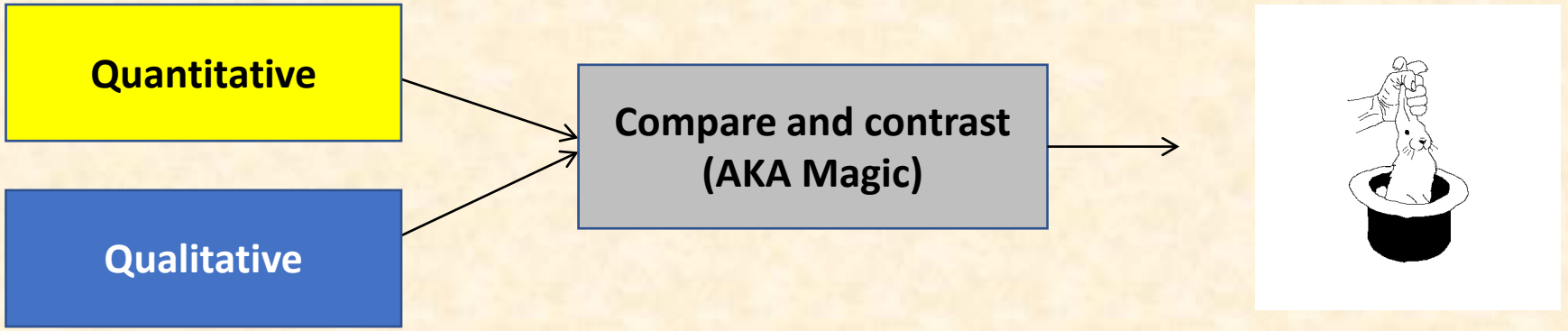
Key Finding – mixed methods save the day:

- The client survey and analysis of taxation data revealed that, on average, the NCB had an adverse impact on family incomes… completely opposite to the program's intent.
- The Federal government rejected the report out of hand and commissioned another study showing that poverty had been ameliorated.
- Re-analysis of focus group results revealed an important detail… many parents with younger children used the income supplement to reduce work hours to increase parenting time, especially when the child had a disability.
- A re-analysis of the client survey established that the NCB was a program that supported parenting, not a poverty reduction initiative.
- The Federal government eventually accepted this perspective.

Part F: Models of mixed methods

Four models:

1. Triangulation



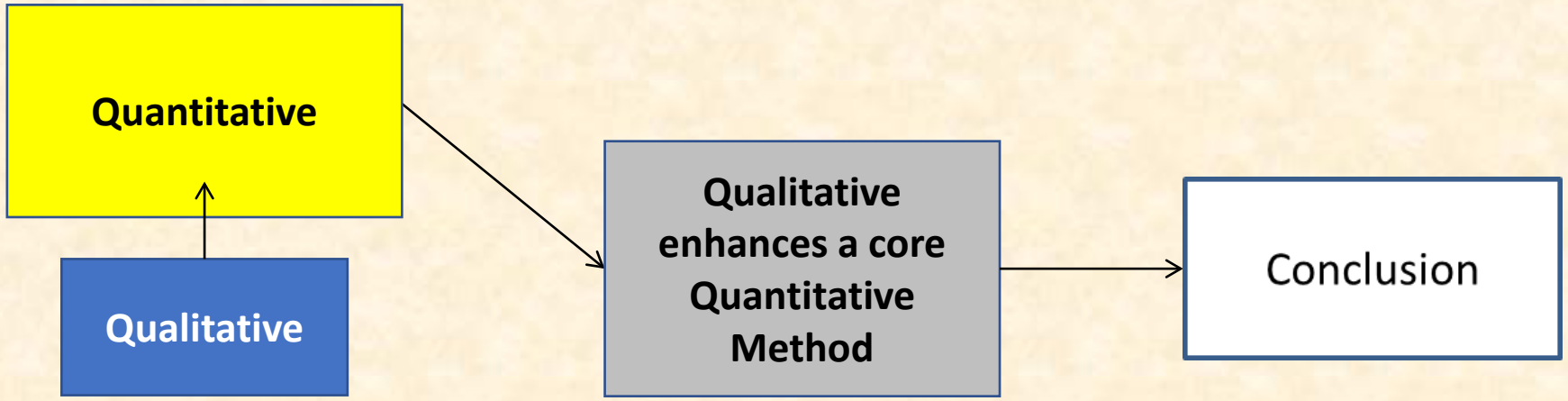
Pros

- The most popular concept
- Aligns Quant and Qual methods as complementary and equal
- Qualitative data are often transformed to Quantitative data (using coding)
- Intuitive approach – appears to balance all types of data
- Less costly and time consuming

Cons

- The process for arriving at conclusions is usually opaque.
- Procedure to combine different types of data must be explicit, but most often omitted from research write-ups.
- It can resemble magic

2. Embedded Design



Pro

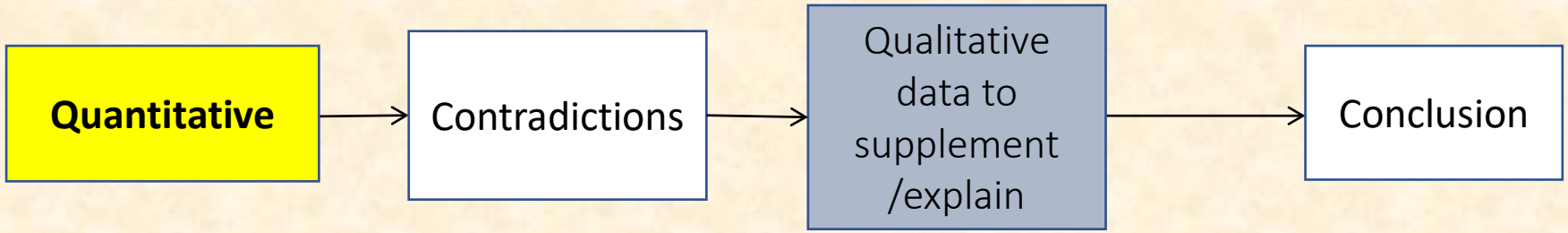
- Qualitative data support the development of quantitative measures
- Increases the theoretical foundation for the study.
- Quantitative data is the "star", which tends to be familiar to many social researchers.

Example: Interviews and focus groups support the design of a survey, which is the main line of evidence

Con

- Weak method when the Quant data are poor
- The role of Qual data as "support" to Quant methods needs explanation
- Poorly executed Qual data will bias Quant methods by supporting a poor survey instrument.

3. Explanatory Design



Pros

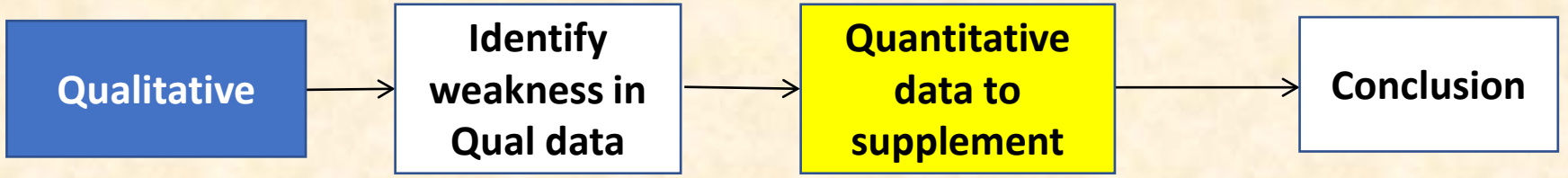
- Quant precedes Qual data collection
- Tends to emphasize Quant results
- Qual used to explain and add insight to Quant results
- Quant results can be used to design Qual research (e.g., selecting focus group participants and case studies from a client survey)

Example: Survey results product contradictions and puzzles. Interviews (experts, management, clients) and focus groups unravel the issues and support re-analysis of the data (and maybe re-surveys of a portion of the sample)

Cons

- Sequential phasing can lengthen the research
- Quant data collection will dominate Qual data collection
- But the Qual data may reveal weaknesses in Quant data that compromises the overall design, requiring repeated data collection.

4. Exploratory/confirmatory Design

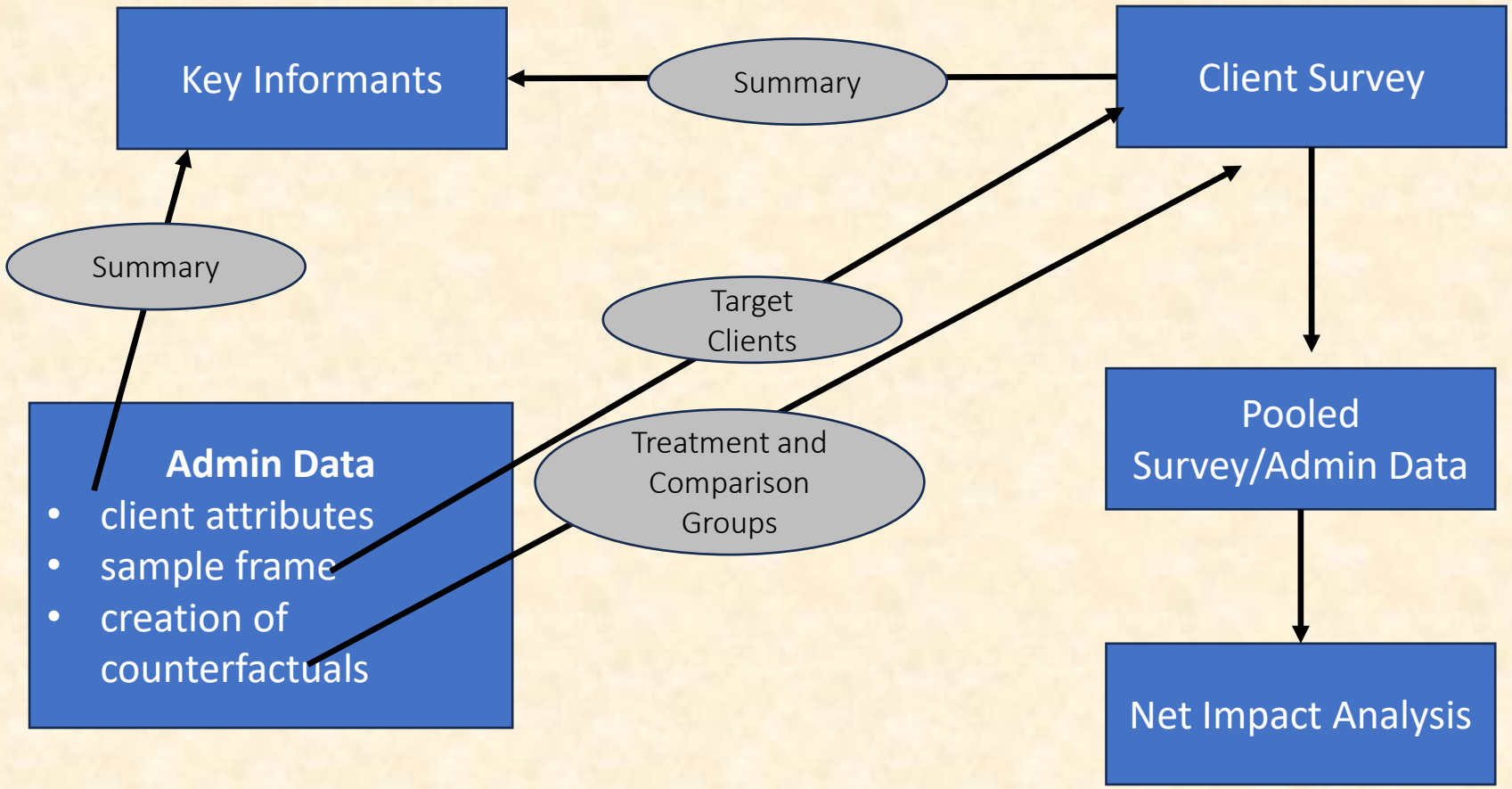


Pro
- Qual data used to explore a concept
- Quant data used to generalize or confirm the Qual information
- Tends to increase external validity of Qual finding

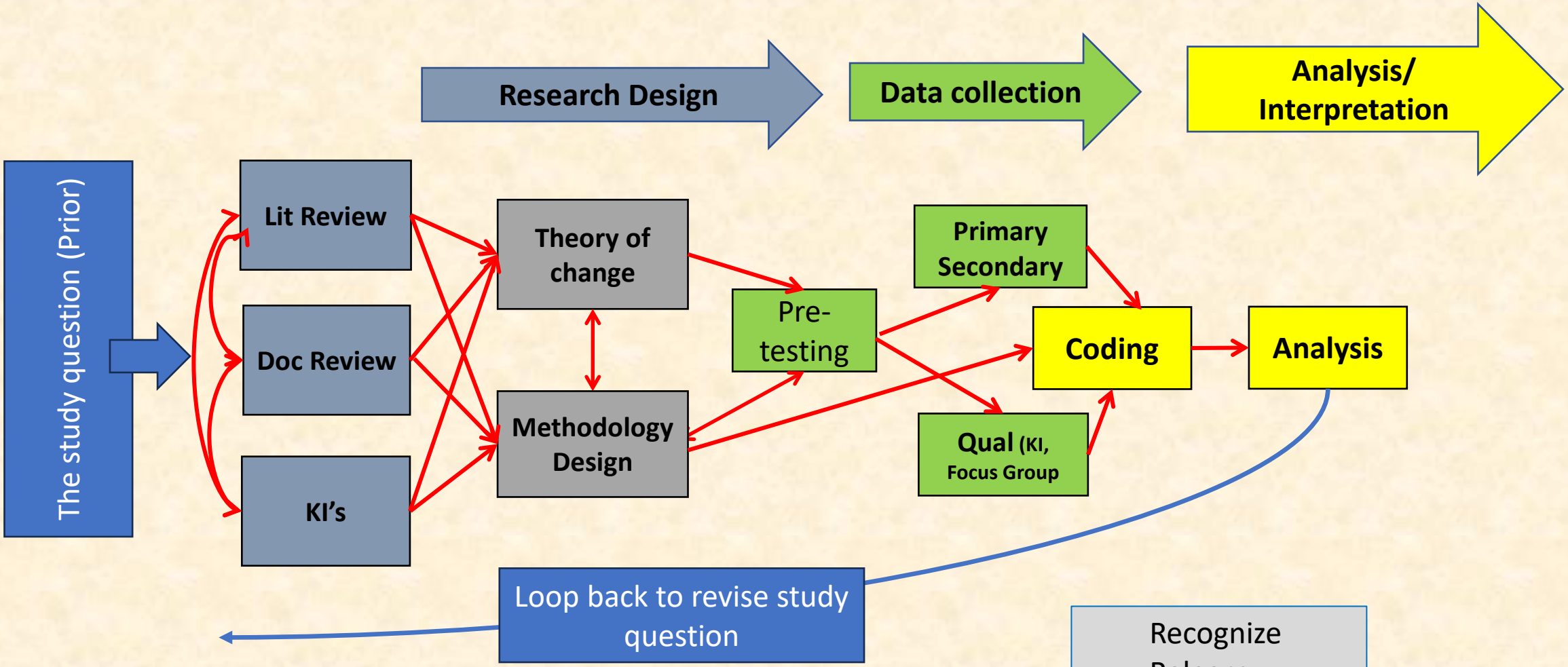
Example: Interviewees (managers) claim client acceptance of program. Survey of clients explores acceptance of program outputs to confirm/contradict interviewee claims

Con
- Can add time and cost
- Qualitative data interpretation may need to be revised in the light of Quantitative results

Stylized mixed-mode study with key informant interviews, administrative data analysis and client survey



Integrating Qualitative/Quantitative Evidence – Bayesian viqw



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Appendix - Lines of evidence

(modes of data collection and analysis)

Common lines of qualitative evidence used in evaluations	
Quantitative Data	Sample surveys (*clients, program administrators*…)
	Administrative/client data (*student records, driver licence data, crime statistics …)*
	Constructed measures (*consumer price index, unemployment rate, inequality measures*…)
Qualitative Data	Documents (*meeting minutes, laws/regulations, policy reports* …)
	Literature/expert interviews and reviews
	Key informant interviews (*managers, recipient group reps, …)*
	Focus groups (*clients, managers, experts-Delphi*…)
	Case studies

Typical large sample survey	
Survey type	Information content
Interviewer mediated (telephone, in-person)	• Interview reads question - Respondent self-report – Fixed response – number/category (Question text must not vary) – Verbatim • Interviewer probes • Interviewer-respondent interaction creates a complex qualitative data field • Probes may increase reliability and validity [*Interviewer clarifies neutrally*] – Probes may decrease reliability and validity *[Interviewer leads the respondent]*
Self-completed (mail, web)	• Respondent self-report – Fixed response – number/category – Verbatim

Does it matter if respondents are allowed to choose between completing a survey online, by mail, or on the phone (with the interviewer)?

Respondent selection (Random) in large sample survey	
Document type	Information content – potential data types
Pure random	• Easy to design and execute (inexpensive) with digital files • Works bets with low-cost data collection (online surveys) • Complex and costly with physical lists or no list at all and in-person data collection.
kth item selection	• Start as a random point in the sample frame and select every "kth" unit • *K = (n for the sample)/(N for the size of the sample frame)*
Stratified sample	• If one knows the attributes (age, gender, school program..) of each sample element, we can separate the sample into sub-populations based on these "strata" • Sampling within these strata will be more statistically efficient • Useful for obtaining a more accurate measure of one population attribute
Cluster sampling	• When a population has clusters (homogenous in several dimensions) one can sample clusters • All elements (households, firms..) in a cluster are interviewed.

Large sample survey – questionnaires	
Document type	Information content – potential data types
Fixed question format	• Each respondent answers the same questions
Questions may be open or closed	• Closed questions off a fixed set of responses from which eh respondents must choose) • Open questions allow respondents to frame their own responses • Open questions are more costly to process and analyze • It is possible to combine open and closed questions
The goal is uniformity in a data structure (fixed response categories) and/or forcing opinions into fixed categories to support statistical analysis.	• Client attributes • Services delivered • Participation in program • Sample frame to support survey and focus group enrollment

Typical administrative files – information potential	
Document type	Information content – potential data types
Management files (meeting minutes, HR records, etc.)	• Number and type of employee Minutes of meetings to – describe implementation, design of intervention – number and type implementation timing and processes
Financial records	• Payments (individual and aggregate) • Distribution and fairness • Payment timing and delay
Client services	• Client attributes • Services delivered • Participation in program • Sample frame to support survey and focus group enrollment

Checklist for administrative files	
Do	**Comment**
Take care with confidentiality.	Many administrative files contain personal identifiers (SIN, names, employee/student numbers… Although the organization releasing the information bears the primary responsibility, researchers are also accountable for managing privacy.
Set aside time to verify/correct administrative data.	Errors in administrative information are common and need reconciliation.
Work with IT to verify calculations based on admin data	See above
Prepare summary reports for internal verification.	Errors in administrative data (for example a description of program clients) that creep into a final report damage the credibility of the research and researcher.
Don't	**Comment**
Share raw administrative data outside the designated members	Breaches of confidentiality will sink evaluation credibility instantly.
Expect administrative data to be accurate, easily understood, or fit for evaluation purposes.	Administrative data serve the purposes of program management, not program evaluation.

Typical documents – information potential

Document type	Information content – potential data types
Foundation documents (political statements, mission statements, strategic/business plans, policy backgrounders)	• Program/policy rationale and relevance • Program/policy origins • Authority (financial, governance) • Desired outcomes • Targets
Performance reports	• Outputs and outcomes • “Thick” descriptions (implementation, outputs, outcomes)
Audits and evaluations	• Program history, benchmark for costs, implementation outputs, outcomes
Program data (client files)	• Client/applicant selection rules (defines program scope)

Checklist for conducting document reviews	
Do	**Comment**
Remain open to relevant documents	Public documents include legislation, regulation, commissions of inquiry, audits (provincial/federal government audits and audits of public companies/NGOs can offer valuable context). Other documents include annual reports, minutes of board meetings, policy statements, strategic/business plans…
Review documents early in the research	Having good knowledge will support other lines of evidence
Use a reference manager to organize and summarize documents, especially when numerous and diverse.	Aside from generating bibliographies, reference managers such as Zotero support effective document summaries and also support collaboration.
Submit your document findings for review to an insider/client/key informant early in the study.	Early verification of you interpretation of organizational/program context will increase the effectiveness of subsequent stages of the research and increase the credibility of the project.
Don't	**Comment**
Delay the review of documents	Program documents are generally more reliable and valid than most other lines of evidence. The can serves as a foil in interviews
Hesitate to revise earlier interpretations in the light of new evidence	Some documents promote the program, and the researcher must separate fact from fiction

Typical key informant – information potential

Interview Subject	Information content – potential data types
Expert	• Theory of change • Program antecedents • History of and projected need for intervention • Unique role for government vs other delivery options
Senior Manager	• Program origins and implementation • Strategic management (program) issues (e.g., FPT relationships) • Resource allocation (macro) • Expected/actual results (macro) • Alternatives (strategic/global)
Line Manager	• Project(*s*)origins and implementation • Local management (project(*s*) issues (e.g., community/organizational relationships) • Resource allocation at regional level (micro) • Expected/actual results at regional (micro) level • Alternatives (program delivery) • Insight on Admin Data
Clients	• Project service impact and benefits to end users • Services issues • Needs fulfilment

As population size increase, so does the feasibility of using a quantitative survey (telephone, mail, web…)

Case studies – information potential	
Case study selection	Information content – potential role in the evaluation
Maximum variation	• Identify key patterns and variation (needs relatively large number of diverse instances. • (n>10)
Typical case	• Uses case that represent the norm
Extreme (successes)	• Best practices (feel good)
Extreme (failures)	• Corrective evaluation (punish the guilty)
Politically/intersectionality critical	• Highlight wanted positive or suppress unwanted negative attention • Oil the squeaky wheel
Convenience	• Low cost – low information

Typology of Sampling Strategies in Qualitative Inquiry

Type of Sampling	Purpose
Maximum variation	Documents diverse variations and identifies important common patterns
Homogeneous	Focuses, reduces, simplifies, and facilitates group interviewing
Critical case	Permits logical generalization and maximum application of information to other cases
Theory based	Find example of a theoretical construct and thereby elaborate on and examine it
Confirming and disconfirming cases	Elaborate on initial analysis, seek exceptions, looking for variation
Snowball or chain	Identifies cases of interest from people who know people who know what cases are information-rich
Extreme or deviant case	Learn from highly unusual manifestations of the phenomenon of interest
Typical case	Highlights what is normal or average
Intensity	Information-rich cases that manifest the phenomenon intensely but not extremely
Politically important	Attracts desired attention or avoids attracting undesired attention
Random purposeful	Adds credibility to sample when potential purposeful sample is too large
Stratified purposeful	Illustrates subgroups and facilitates comparisons
Criterion	All cases that meet some criterion; useful for quality assurance
Opportunistic	Follow new leads; taking advantage of the unexpected
Combination or mixed	Triangulation, flexibility; meets multiple interest6s and needs
Convenience	Saves time, money, and effort, but at the expense of information and credibility

Source: Miles & Huberman (1994, p.28). Reprinted with permission from Miles, M.B., & Huberman, A.M. (1994). *Qualitative data analysis: A sourcebook of new methods* (2nd ed). Thousand Oaks, CA: Sage.

Source: Creswell, John W. (2007). *Qualitative Inquiry & Research Design: Choosing Among five Approaches* (2nd ed). Thousand Oaks, CA: Sage. Pp.127.

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Checklist for conducting Key Informant – Stakeholder Interviews (In person or by Phone/Zoom)	
Do	**Comment**
Send letter/email introducing the research, where the respondent's name was obtaining, guarantee of confidentiality …	This is part of any ethical review, which will have a set of specifications. Do not deviate from REB requirements
Send a copy of the interview guide	A prepared respondent will supply more information.
Use phone/email/Doodle… to schedule and confirm the day before.	Try to remain in control of the schedule and be on time for the interview.
Record the interview (with permission)	Visually being seen recording a few notes is respectful, but it slows the note-taking. Phone interviews allow you to take notes, but excessive keyboard sounds distract. Better to make notes by hand in the guide and summarize immediately after. **Do not get behind in summaries or sharing (see next point.)**
Share your notes with the respondent and invite them to make changes	This is one of the more important credibility enhancing methods in qualitative research, especially if the respondent is a well-positioned stakeholder who might be a consumer of the research. Advanced Procedure: If you have new information or even a conjecture you would like to test…. Embed it in your notes (highlighted) by saying "I heard that X occurred, what has been you experience." You are allowing the respondent to update your understanding and them may conform or deny this alternate information.
Loop back to earlier interviewees when you learn new information to confirm/disconfirm.	Updating the later understanding with the earlier interviewees "flattens" the information

Checklist for conducting Key Informant – Stakeholder Interviews (In person or by phone/Zoom) (Continued)	
Don't	**Comment**
Delay sending notes to the respondent.	Transcribing/editing interview notes is a pain, but delay communicates a lack of commitment, and respondents will be less inclined to return the corrections, slowing the research process. Preparing notes immediately after the interviews means you will work from memory …. After three weeks, you will need to listen to the recording, which slows the research and degrades salience with the interviewee.
Quote after asking permission and only anonymously.	Ensure the quote does not inadvertently identify the respondent and seek their approval as part of the notes verification process. Well-phrased quotes enhance the credibility of the research.
Share the identify of other interviewees	Obvious
Share information provided by other interviewees that you identify.	This can be tricky (see above). You may wish to probe Jill by saying "I heard X, what it your opinion? You may get the response "Oh that is Jack on his hobby horse again… he is full of bunk! This may turn out well if you can get an explanation of the issue, but it can go sour, if Jack hears about it from Jill, or Jill thinks you are biased.
Interviews are social interactions. They are not can openers in which you cut a hole in the respondent's head, invert, and shake out the data.	

Typical focus groups – information potential

Group type	Information content – potential role in the evaluation
Client	• Program implementation • Program impact • Field experiment *
Management	• Program implementation • Program impact
* Certain quantitative methods are ideally implemented in a small group setting. Conjoint analysis applied to program/policy design is an example that should be more widely used.	

Focus groups are often seen as supplementary evidence designed to gather context about program implementation and impact, as well as ideas for program revision

The interaction among the participants means that the information whole is greater than the sum of the information parts.

Checklist for conducting focus groups	
Do	**Comment**
Ensure the groups are homogeneous on key dimensions	Group dynamics are critical to focus groups – mixing dissimilar participants can create tension that subverts discussion. Draw groups from a list with known attributes.
Keep numbers under 10 and time under 1.5 hours	Too many and the group becomes hard to manage. Too few and individuals become self-conscious.
Keep the agenda tight and limited	A long list will skip over important ideas.
Moderators need practice	Neophytes and those with an interest in specific outcomes can submerge ideas
Do not strive for consensus and allow diversity of opinion to emerge.	Working to create an agreement will suppress minority views.
Summarize results soon (within 24 hours)	It is much easier to create a summary of results from an immediate memory than a recording later in the study,
Feedback to the group (where feasible)	This is only feasible with focus groups of experts. This enhances the reliability/validity of the individual group and the set of focus groups
Focus groups are not unstructured explorations of broad themes. **They are focused**.	