Qualitative Data Collection

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Exploratory Data-Collection

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Agenda

- What do we mean by ….
- How does exploratory data-collection fit into the larger research enterprise?
- What are the pros and cons of different techniques for eliciting qualitative data?
- What are the basics of an exploratory approach to research?

What do we mean by ….

"Qualitative Data Collection"

What do we mean by "Qualitative"?

- **Numbers/words?**
  - Zip codes
  - "Three"
- **Quantitative**
  - Implies "quantity"
  - Assumes unidimensional continuum
  - Assumes "ordinal" properties at a minimum
  - *None, a little, a lot* are "quantitative"
- **Qualitative**
  - No quantity but quality or characteristics
  - Gender, ethnicity as categories
  - All phenomenon are qualitative

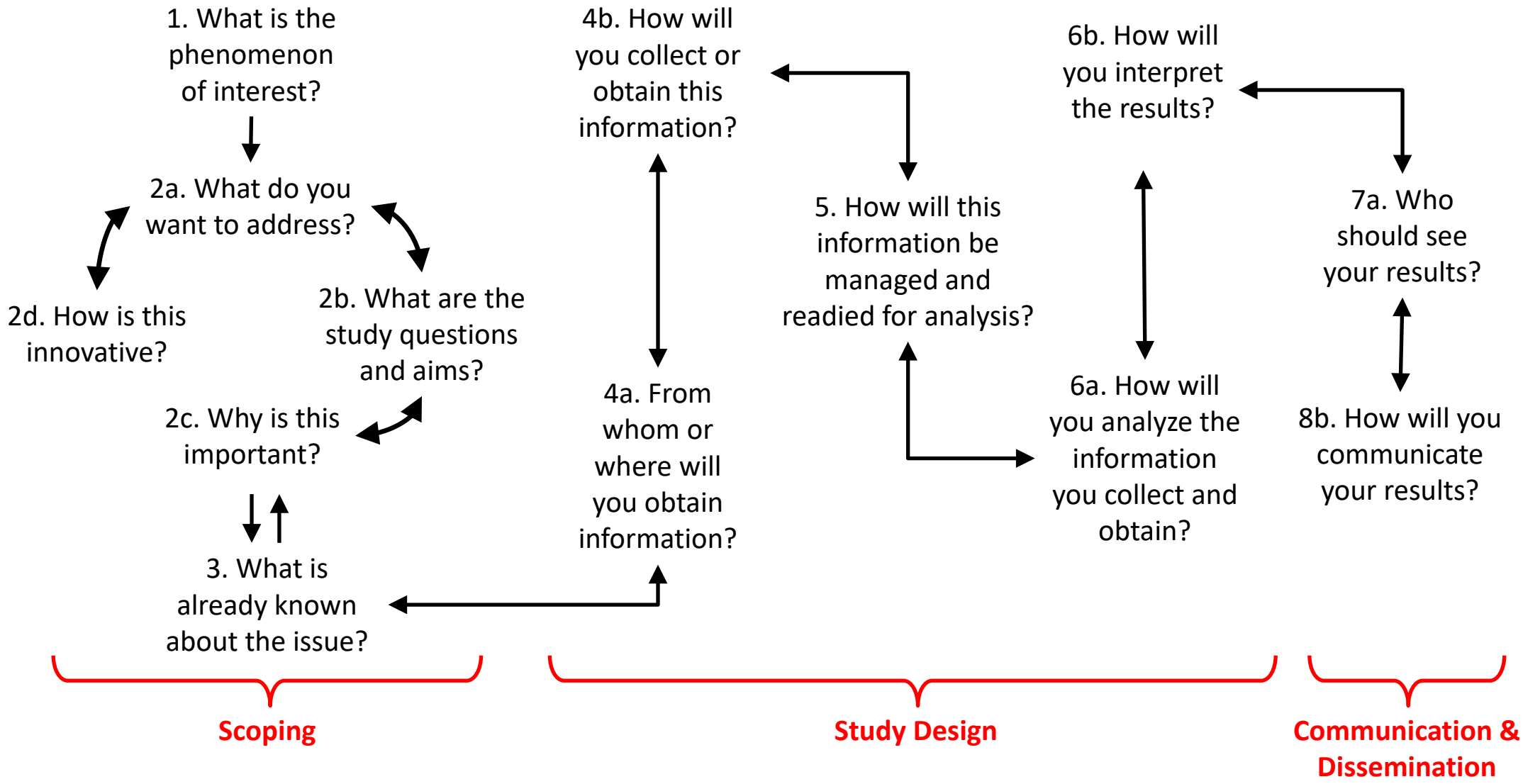
- **What does "Qualitative" modify?**
  - Data
  - Data-collection

- Qual/Quant distinction
  - Good for "data"
  - **Bad for "data-collection"**

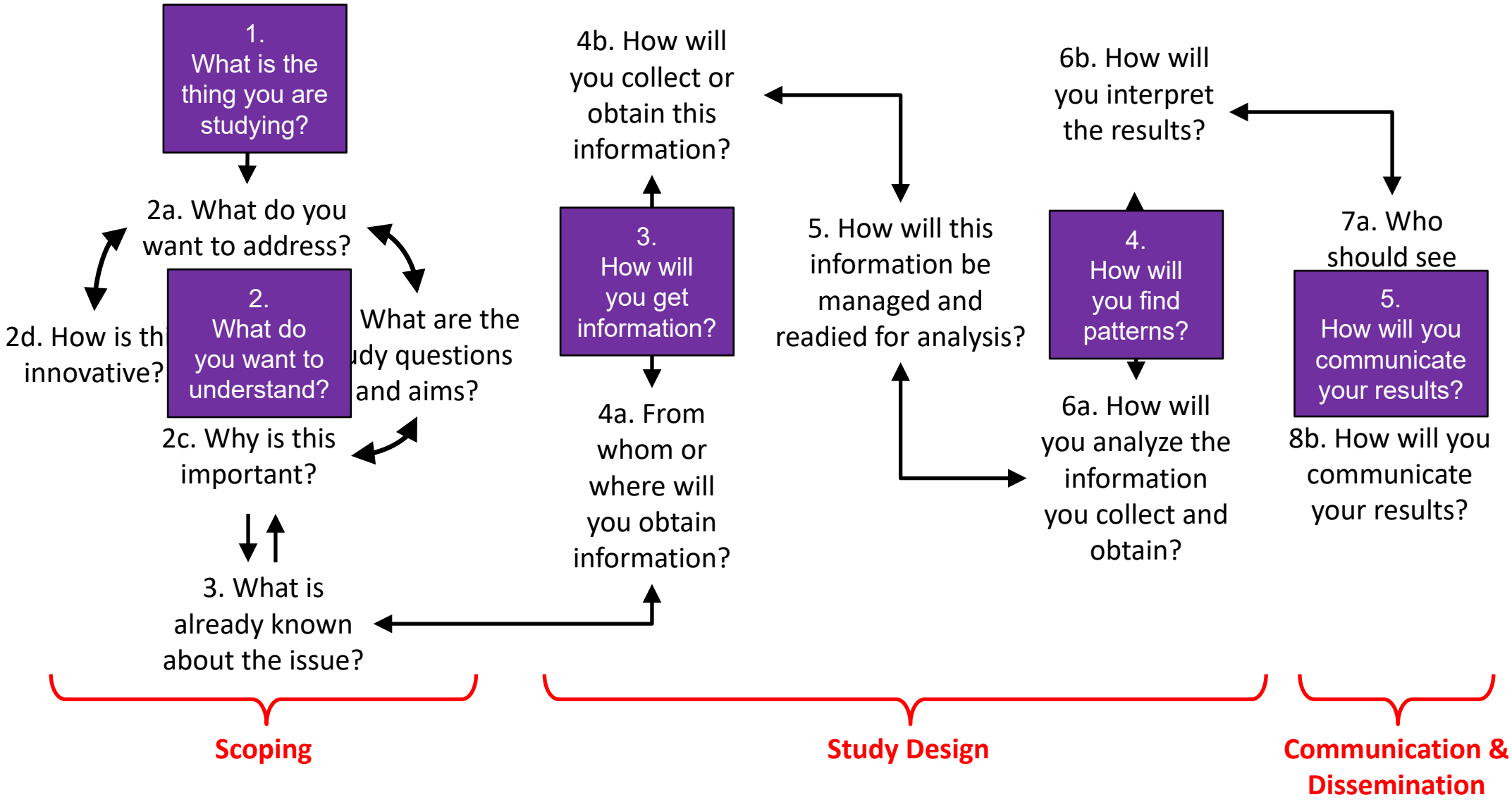
- **<u>Exploratory/Confirmatory</u>** distinction
  - **Good for "data-collection"**
  - Bad for "data"

How does exploratory data-collection fit into the larger research enterprise?

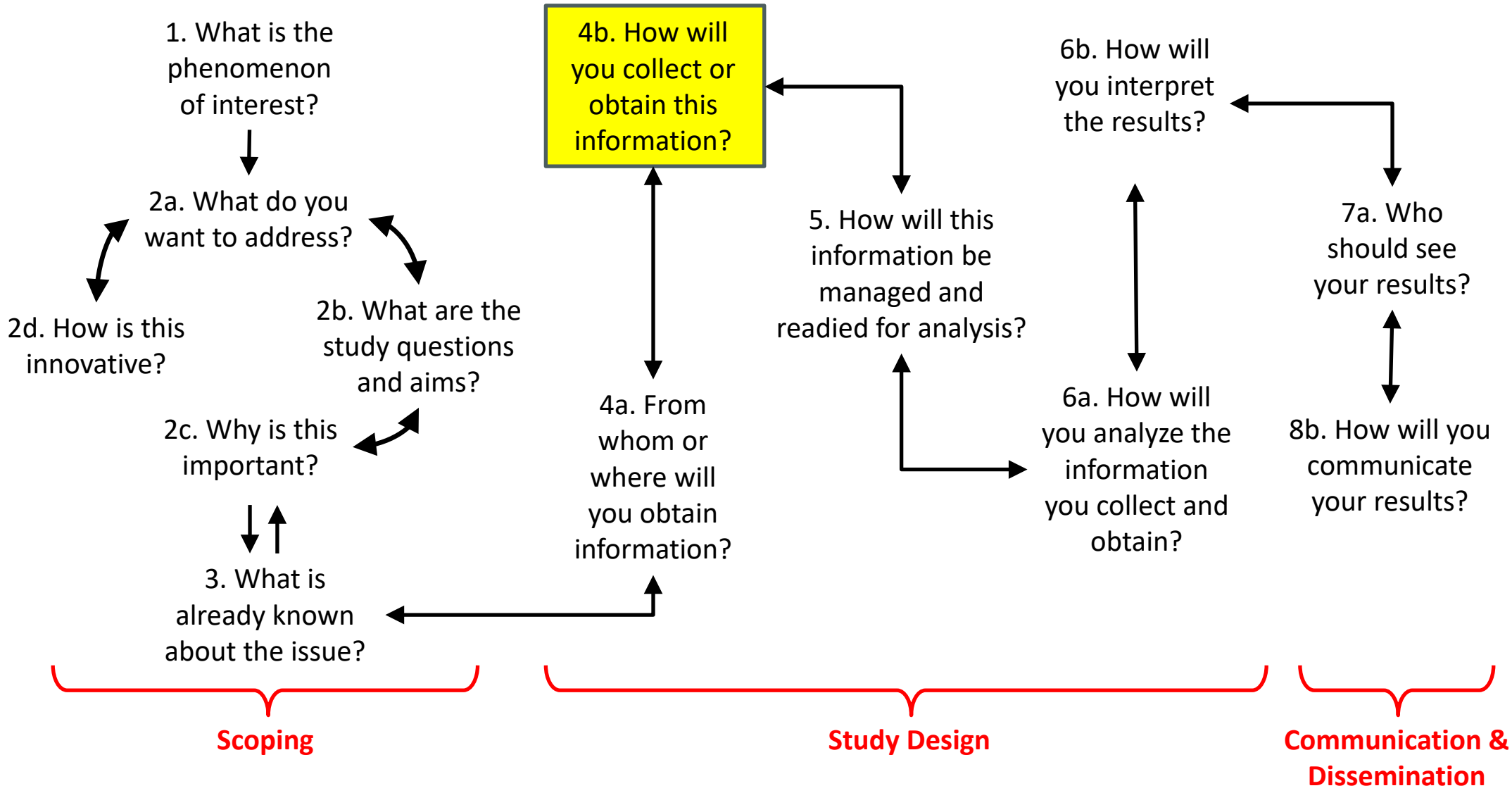
Basic Steps in Developing a Research Project



Basic Steps in Developing a Research Project

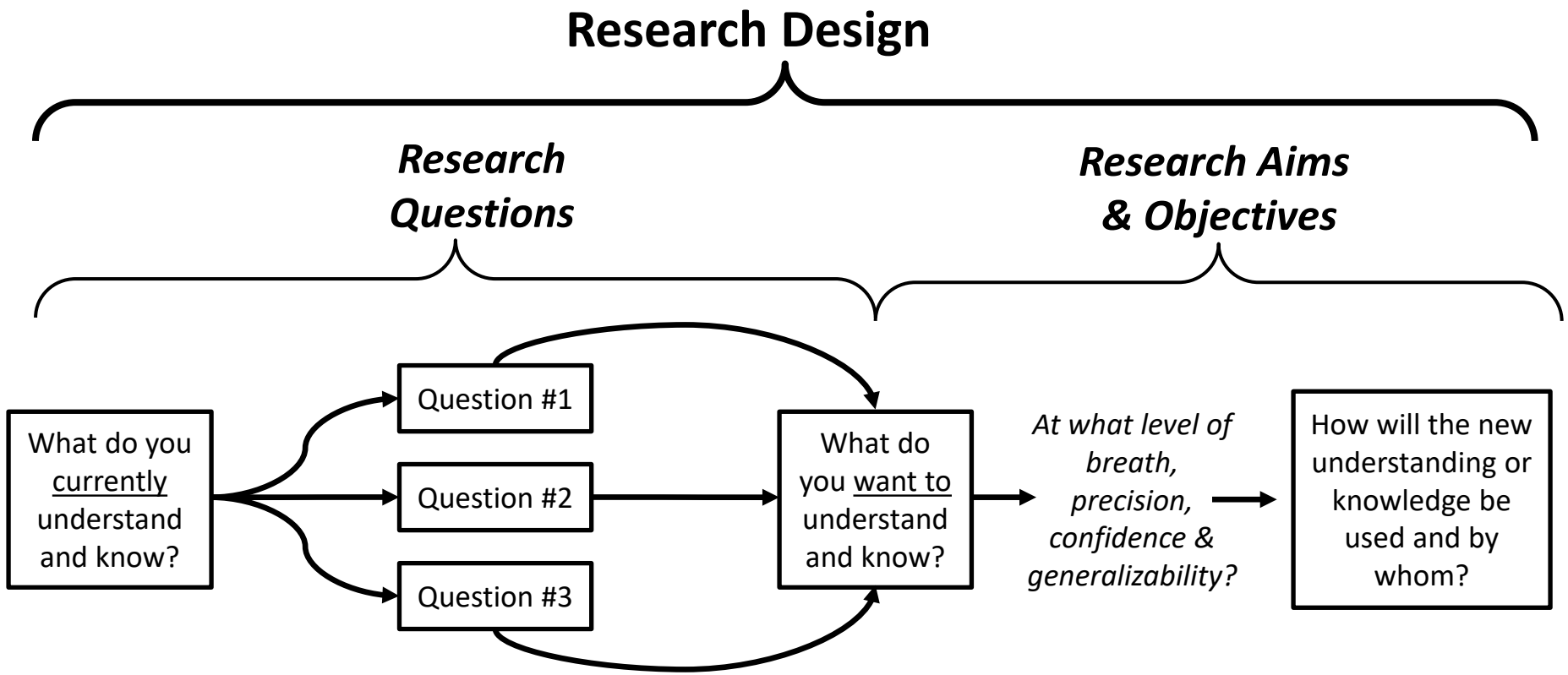


Data collection is one step in a larger process.



***Scoping* is about: (a) defining what you are looking at; *and* (b) describing what you hope to accomplish.**

Key Components of Research Designs

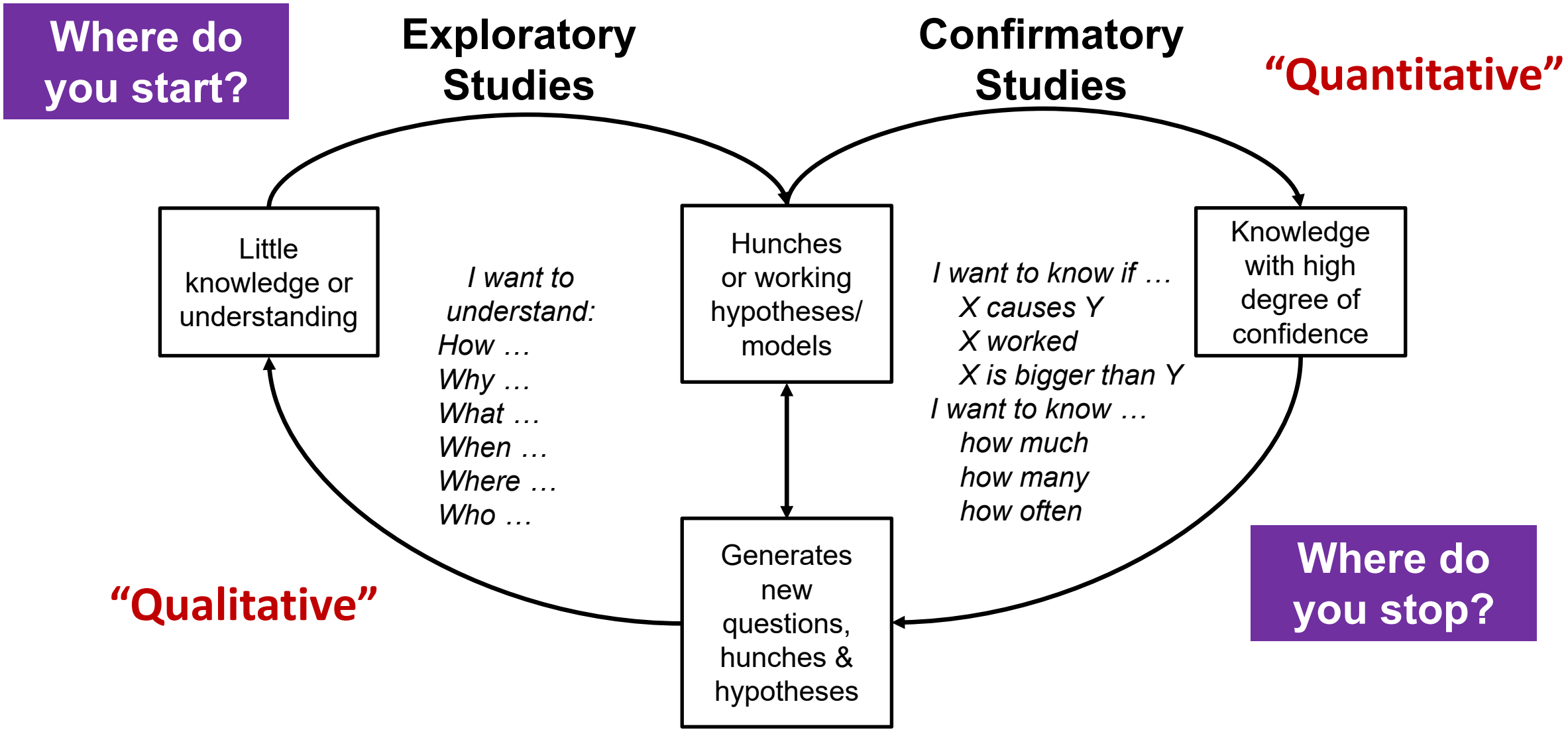


Forward design →

← **Backward design**

"I want to learn about this (questions), to affect that (aims)."

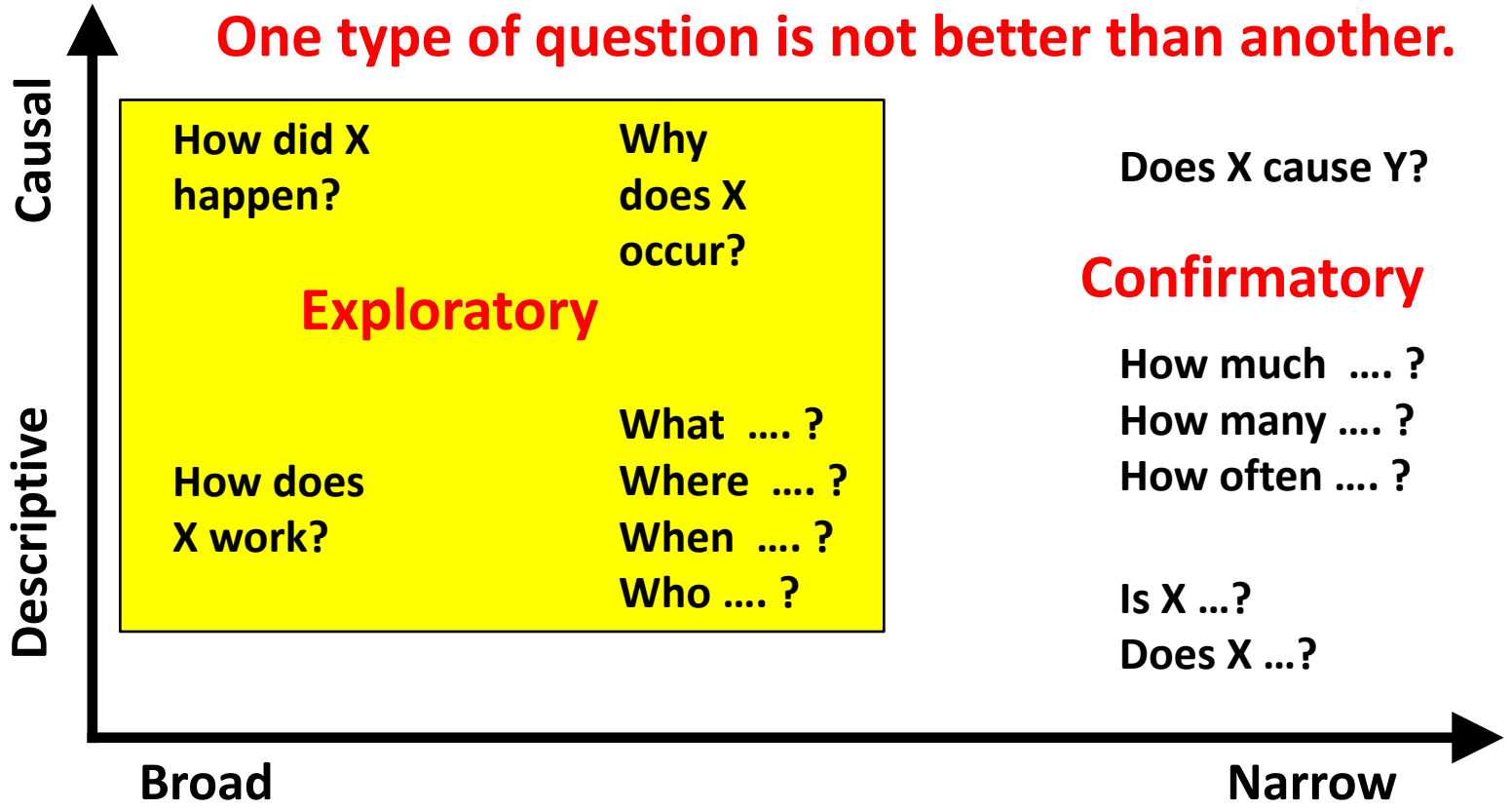
Types of Studies



What are your key study exploratory objectives?

- **Discovery**
  - Identify stuff and the relationships between stuff
- **Description**
  - Range of variation (stuff & relationships)
  - Measures of centrality
    - Average, Modal, Typical, Common/Rare
  - Degree of variation around what is common
- **Comparison**
  - How is Group A similar/different from Group B
    - Compare ranges
    - Compare distributions of responses
- **Explanation**
  - Relate one set of stuff to another set of stuff
  - Can be causal or non-causal

Research questions can be characterized by the types of answers they generate.

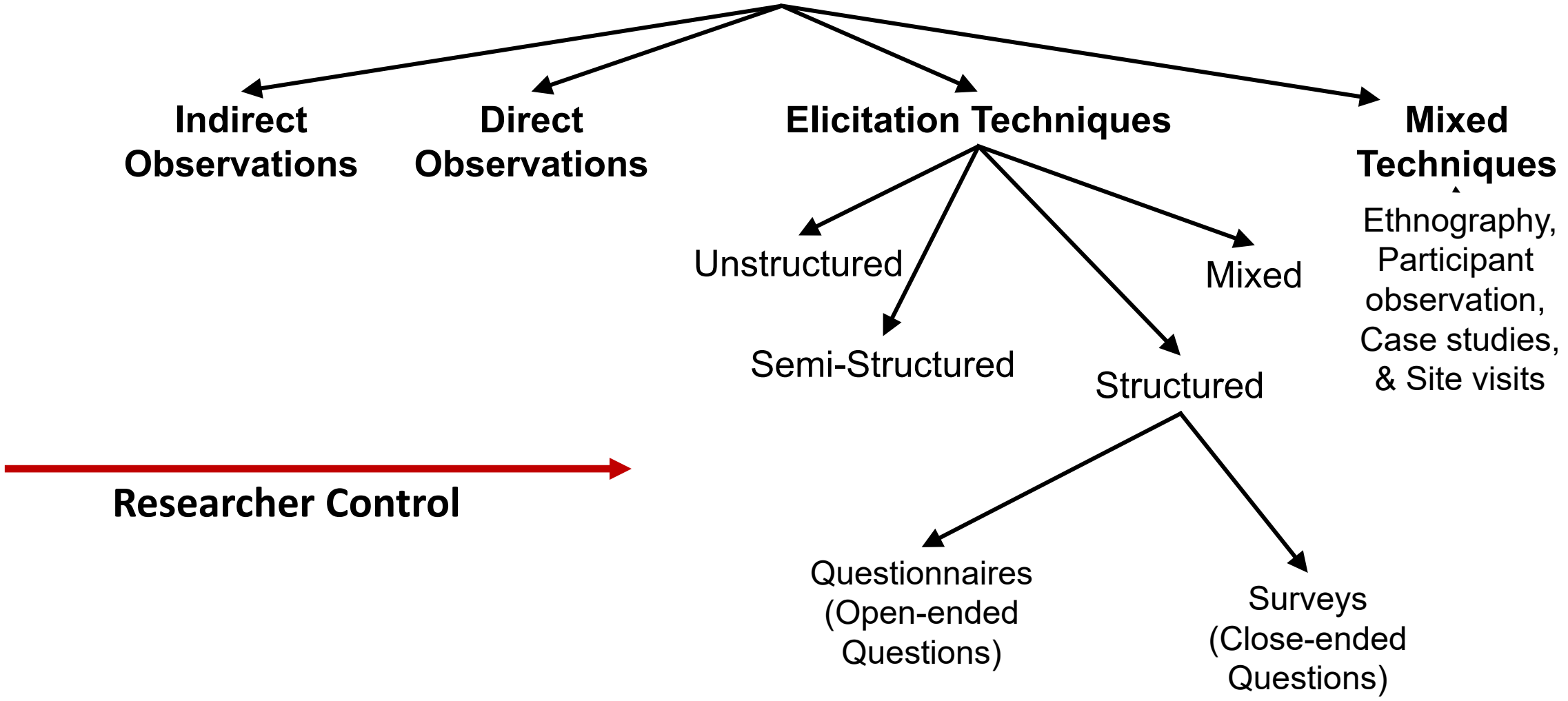


What are the pros and cons of different techniques for eliciting qualitative data?

Where Do Data Come From?

Where do qualitative data come from?

Where do quantitative data come from?



Adjectives matter when applied to interviews and questions.

- **Interviews vary by amount of structure, standardization, and mode**
  - Unstructured / Semi-structured / Structured / Mixed
  - Standardized / Non-Standardized
    - All respondents get the same questions
    - All respondents get the same questions in the same order
  - Mode
    - Face-to-face
    - Phone
    - Mail
    - Web-based
    - **Virtual**
- **Questions vary by the kinds of answers they generate**
  - Open / Closed
  - List / Relational
  - Short / Medium / Long

Open-ended vs Closed-ended Questions

- **Open-ended questions**
  - Advantages
    - Captures full range of responses
    - In respondent's own words
    - May be most appropriate way of understanding respondents' categories
  - Disadvantages
    - Non-responses are difficult or impossible to categorize (e.g., driving)
    - Labor intensive to code responses
- **Close-ended questions**
  - Advantages
    - Fewer non-responses
    - Easier to code
  - Disadvantages
    - Limited to investigator-determined categories
    - Limits the range of response variability and richness

List vs Relational Questions

- **List Questions**
  - Tell us what items exist in a domain or a topical area & how salient an item is (based on frequency and order of mention)
  - Come from:
    - Standard free lists
    - Sequential free lists
- **Relational Questions**
  - Tell us how items are related to one another
  - Come from:
    - Structured tasks
      - Pile sorts
      - Paired comparisons
      - Triad tests
      - Frame-substitution tasks
    - Compare and contrast questions
    - How questions
    - Narrative tasks (e.g., Please tell me about….)

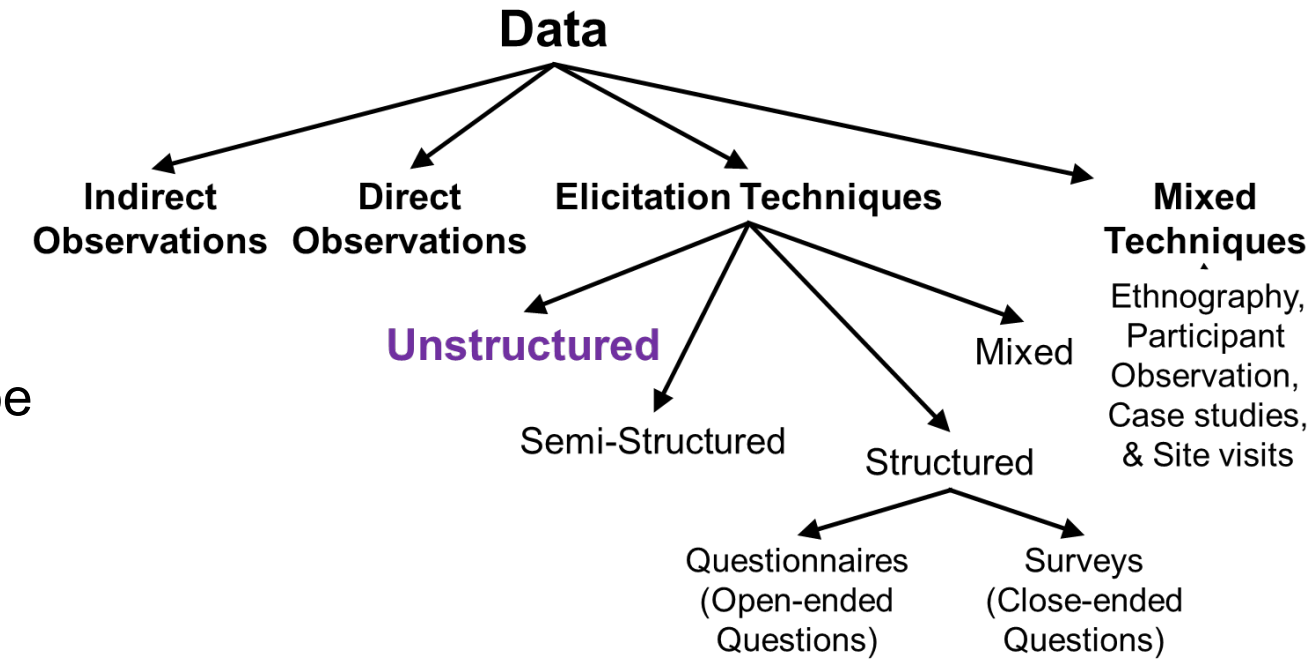
Unstructured Interviews

Informal or Casual Interviews

- "Hanging Out"
- Key part of participant observation
- Respondents may not know you are conducting research
- Unstructured in that respondent has great deal of control over questions
- Often used in preliminary phases, but can be used throughout research

Ethnographic Interviews

- Both parties know the encounter is an interview
- Allows for longer and more in-depth questions and probes
- Ideal when respondent can be interviewed multiple times



Semi-Structured Interviews

Characteristics

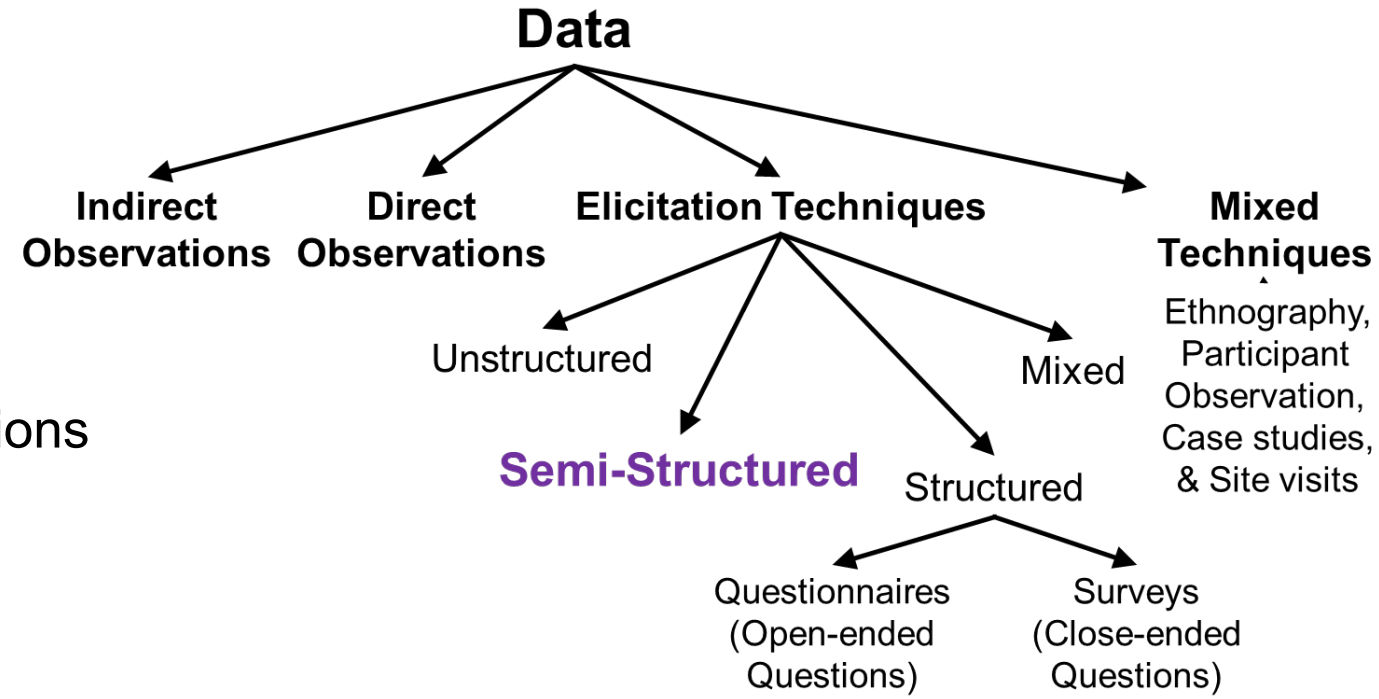
- Structured but respondent has control within topical areas
- Can be used throughout a research project

Include a mix of elicitation techniques

- Open-ended questions
  - "Grand tour" question
  - List & relational open-ended questions
  - Compare and contrast tasks
- Close-ended questions

Ideal for:

- When you need to discover and compare
- When you are in discovery mode and only have one chance at an interviewee



Semi-Structured Focus Groups

Advantages

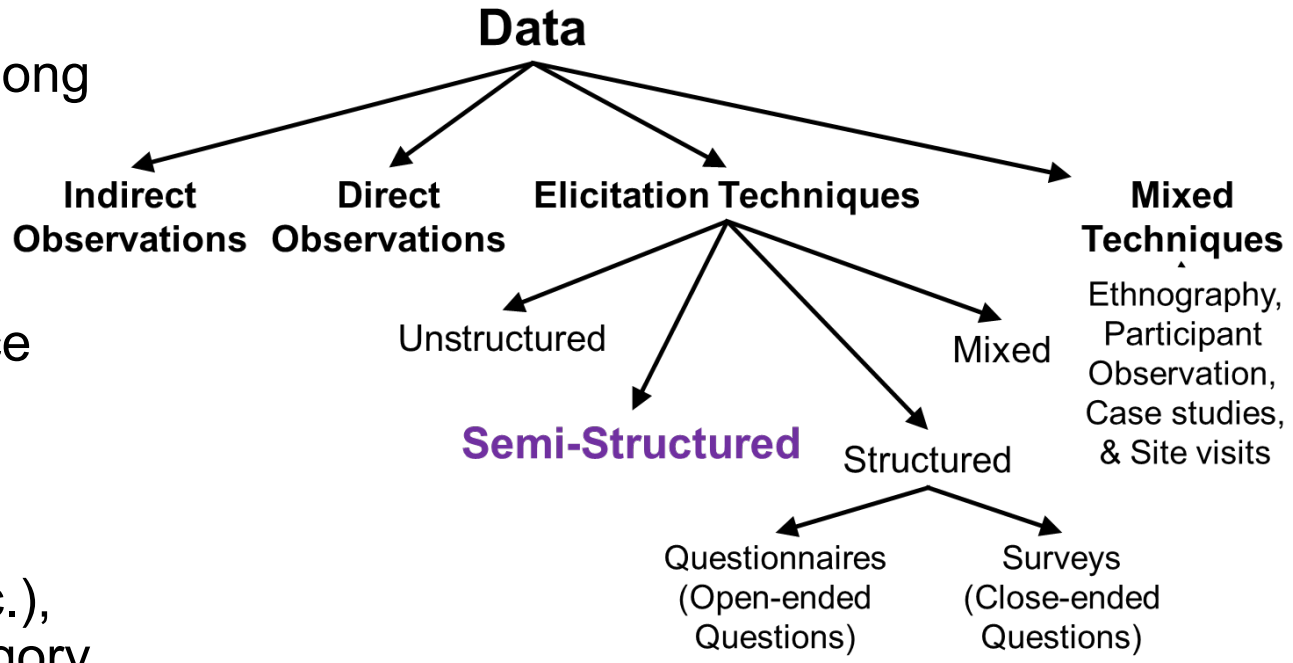
- Good way to generate range of perspectives
- Good for listing to how people talk to each other
- Provide a "general feel" for consensus among group and for contentious issues

Disadvantages

- N=1
- Terrible method for understanding variance within a group
- Lack of independence
- If you want to compare across group categories (men/women, ethnic group, etc.), you will need at least 3 focus groups/category

Workarounds

- Ask participants to complete short questionnaire with open-ended questions



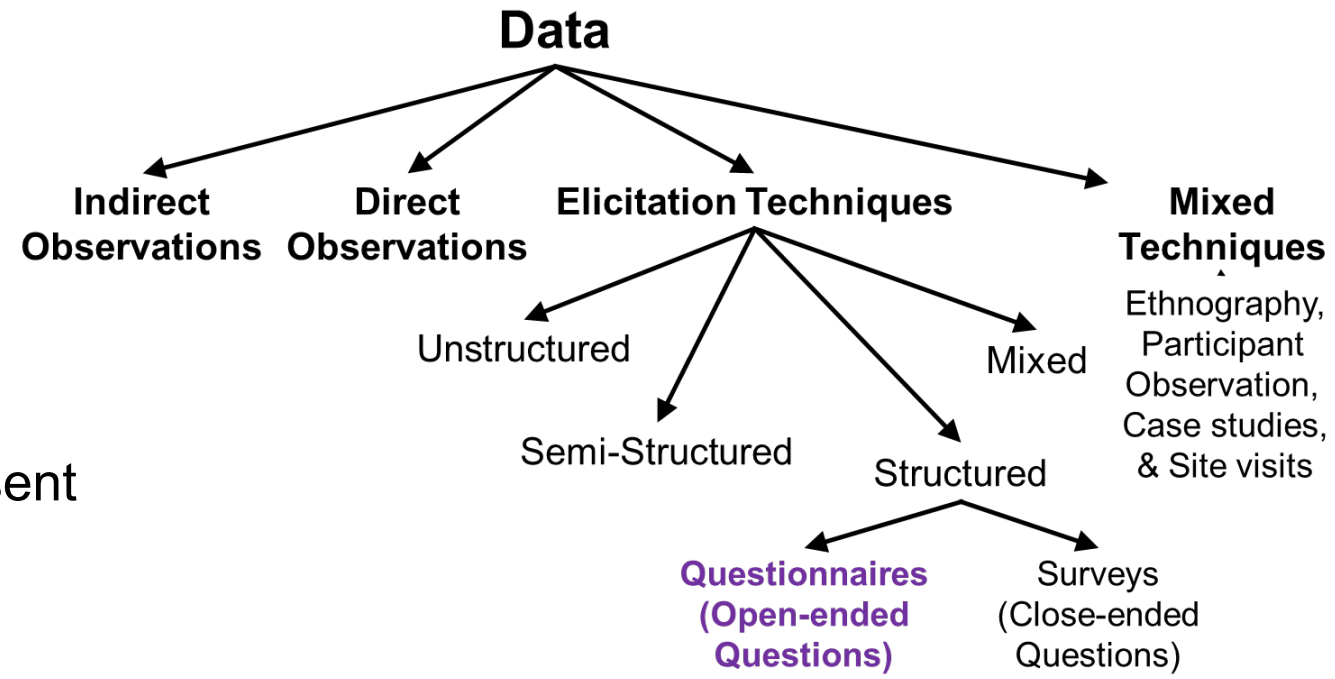
Questionnaires

Advantages

- Highly structured (same questions, same order)
- Comparable across respondents
- Allow for respondent-driven responses
- Respondents often feel empowered
- Often provide information than surveys

Disadvantages

- Difficult to interpret responses that are absent
- Time consuming to code responses into categories/themes
- Can be time consuming for patients
- Writing and typing skills can influence types and size of answers



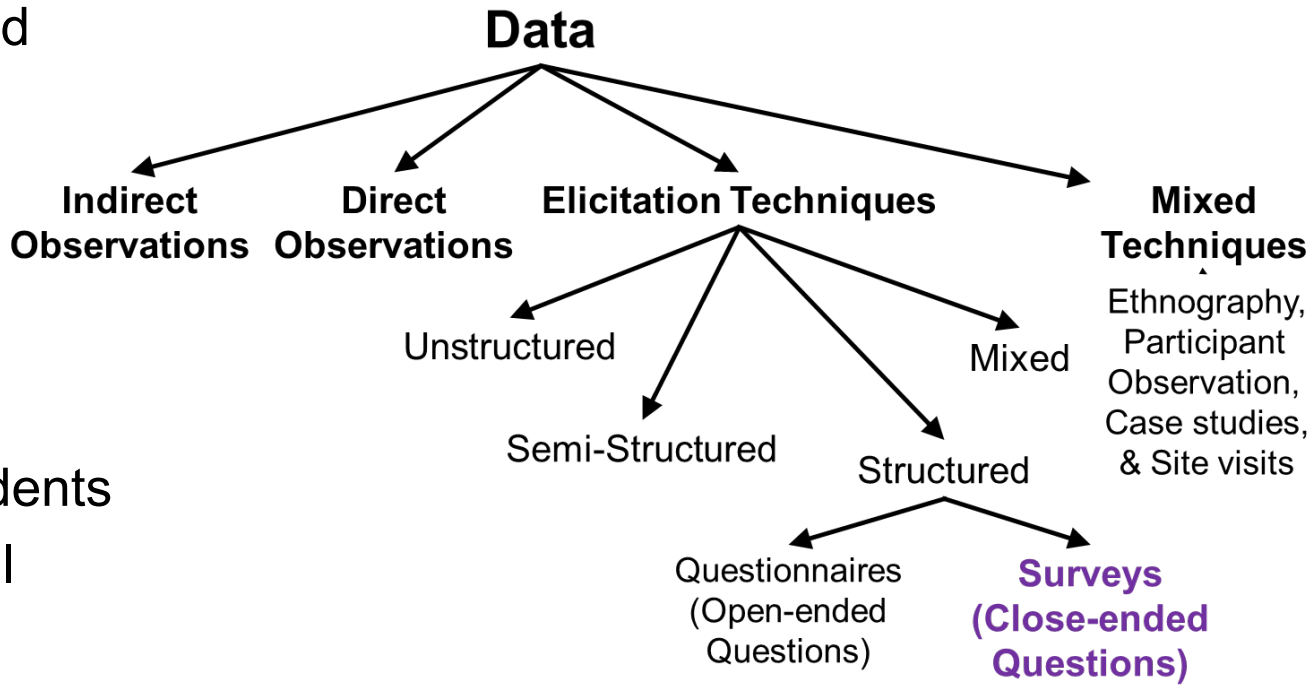
Surveys

Advantages

- Highly structured (same questions, same order)
- Easily comparable across respondents
- Response categories already established
  - Mutually exclusive
  - Exhaustive
- Easier to analyze results

Disadvantages

- Answer categories are limited
- Can be boring and frustrating to respondents
- Difficult and time consuming to write well



Other Comparisons

Semi-structured Interviews

- Good for:
  - Personal, private, stigmatized and traumatic topics
  - Informed consent
- Costs/Benefits
  - More time with interviewees
  - Less set up time
  - Easier to get wider sample
  - Novices can do (if highly structured)

Focus Groups

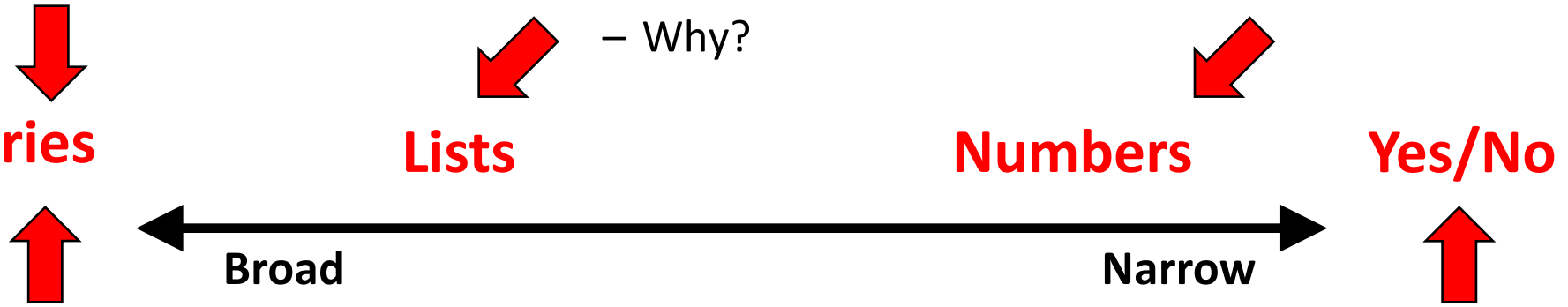
- Good for:
  - Cultural and shared, non-private experiences, test-driving interventions or products
- Costs/Benefits
  - Expensive to set up
  - Sample limited by time and travel
  - Requires experts
  - Requires good understanding of subject matter and language

Questions Matter

How questions
- How does it work?
- How do you feel?
- How did it happen?

The Classic 5-Ws
- What?
- Where?
- When?
- Who?
- Why?

Quantity questions
- How much …. ?
- How many …. ?
- How often …. ?



Tasks
- Describe ….
- Walk me through …
- Compare ….
- Explain ….
- Etc.

Dichotomous questions
- Is X …. ?
- Does X…. ?

What are the basics of an exploratory approach to research?

What do we mean by “searching” and “exploring”?

1. **How would you explore the following?**
   - Looking for lost keys
   - A new art museum
   - A new city

2. **How would you know if you did a good job exploring each of the above?**

3. **What do these examples tell us about effective exploration?**

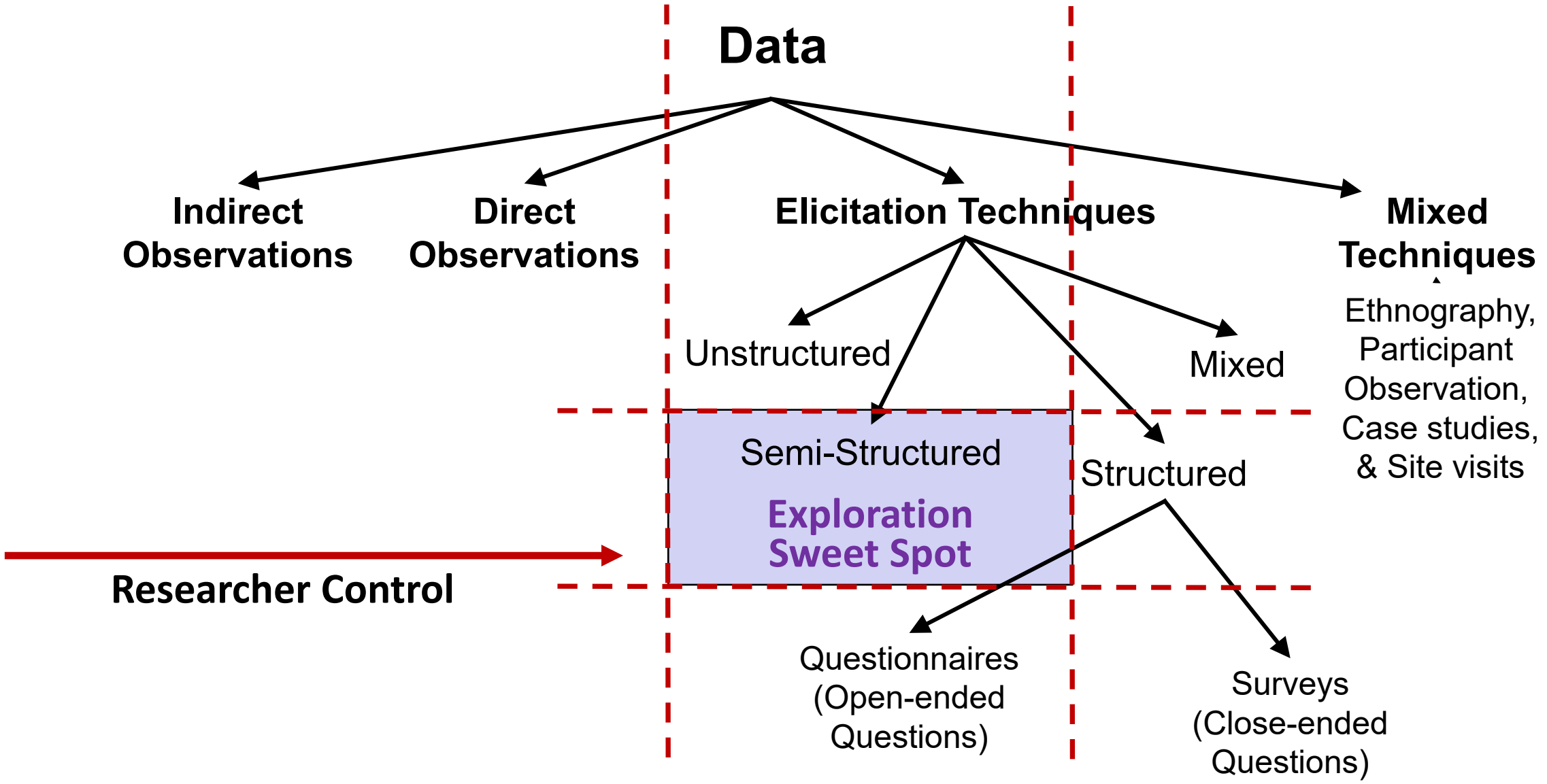
Good exploration is neither random nor overly specified.

Good exploration is:

- **Strategic**
  - Has clear goals and aims
  - A set of explicit steps to reach the goals and aims
- **Structured, opportunistic, and adaptive**
  - Structured to ensure all core aspects of the phenomenon are examined
  - Opportunistic to allow for the discovery of new insights
  - Adaptive to pursue new avenues of inquiry as they arise

Effective exploration intentionally balances the "semi" within the "structure" of a thoughtful framework.

The sweet spot of exploration is where you have control to give away to others with more knowledge than you.



Good exploration is like bird watching, it is best done quietly.

- An interview is a time-limited opportunity for you to elicit another person's wisdom and experience.
- You want to guide the interviewee toward specific topics but without:
  - Taking up valuable time
  - Distracting their thought processes with too many questions
  - Putting words in their mouths or ideas in their heads

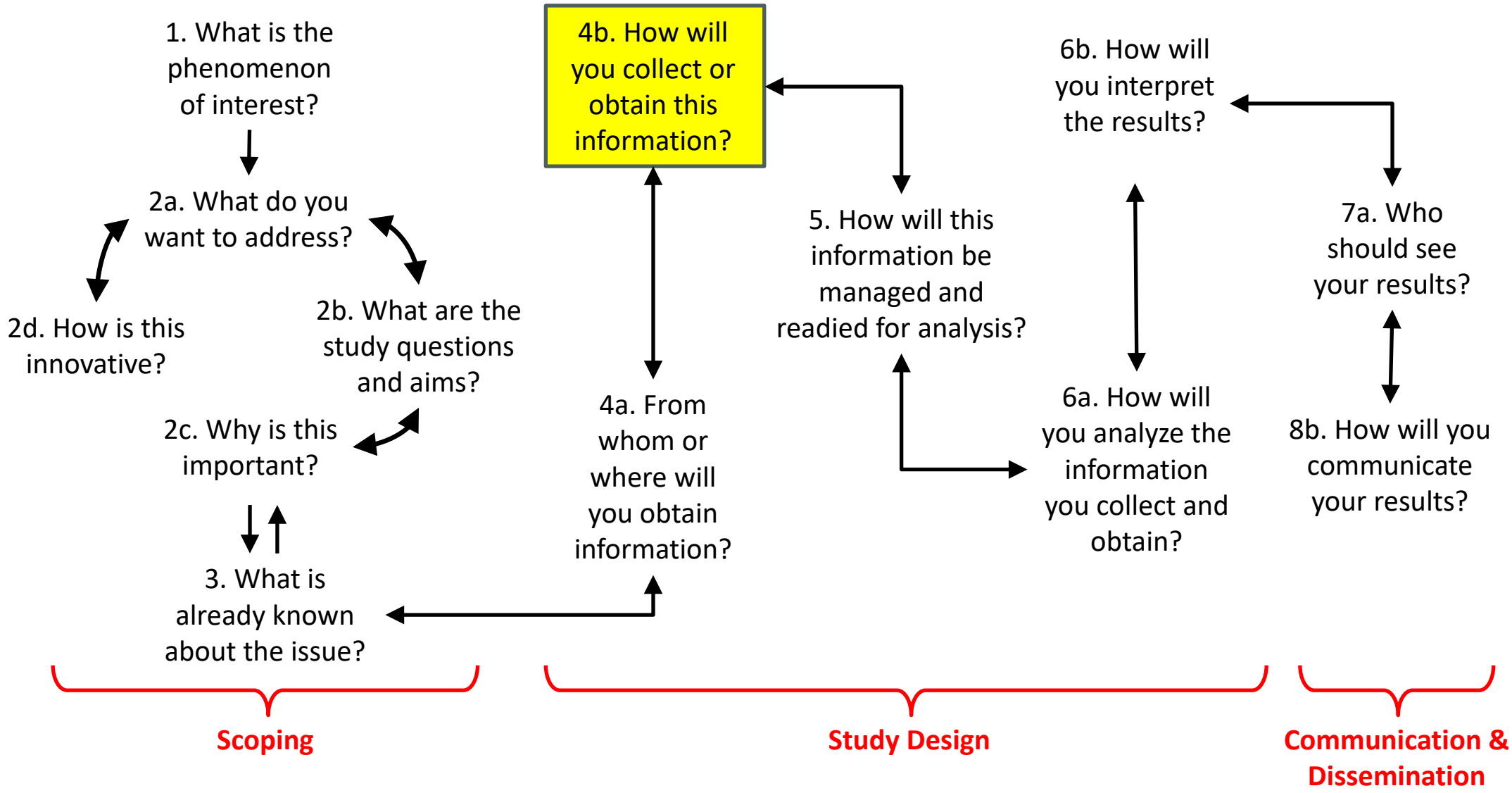
Inefficient

Biased

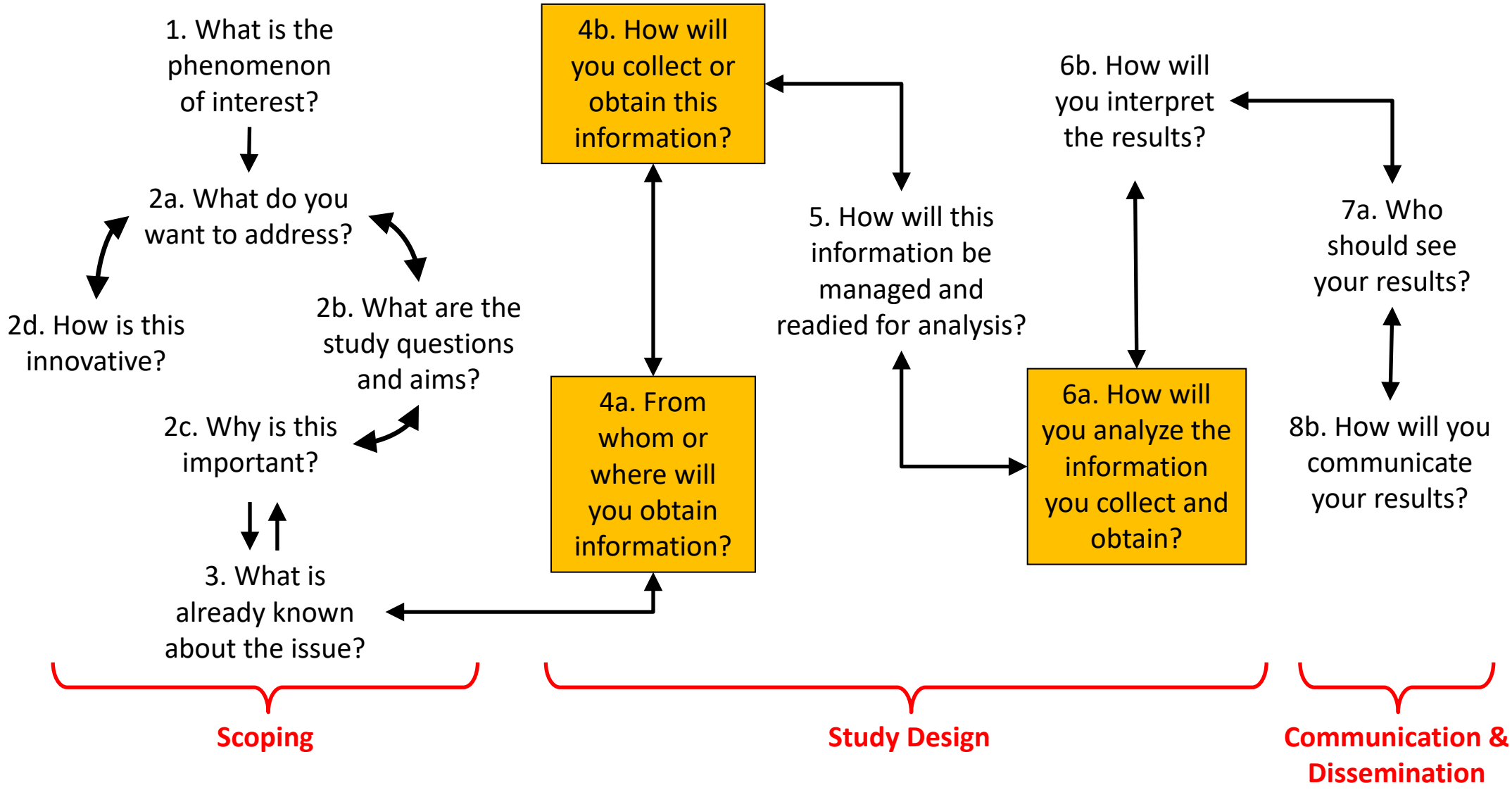
- In good interviews, interviewees:
  - Feel comfortable providing unvarnished responses
  - Respond using their own mental maps of the phenomenon of interest
  - Provide rich and detailed responses using their own vocabulary
  - Speak 5 to 10 times more than the interviewer

The trick in exploratory interviewing is to guide interviewees toward a topic of interest, ask a limited number of broad questions, and get out of the way.

An exploratory approach is more than asking open-ended questions.



An exploratory approach aligns sampling, data collection and analysis.



Take homes

1. **Use the right adjective!**
   - Qual/Quant for data
   - Exploratory/Confirmatory for studies and designs
   - Structured/Unstructured for elicitation techniques
   - Open-ended/Closed-ended for questions

2. **Be strategic in your exploratory interviews!**
   - Build a framework to ensure you are covering your phenomenon of interest.
   - Ask H and W questions or get intervie**w**ees to describe, compare, walk me through….
   - Ask broad questions and get out of the way.
   - Probe for more detail only as needed.

3. **Develop a strong exploratory design!**
   - Strategically align your sampling, data collection and data analysis steps to maximize your exploratory objectives.
   - Make sure that what you collect is aligned with your study aims and objectives.

Questions?