Socio Week 1: **An Introduction to Social Research**

1: What is sociological research and how does it differ from research in other social science fields?

How would your family react if you decided to have a baby this year?

- Sociology is the **scientific** study of the social lives of individual, groups, and societies
- The core mission of sociology is to teach us how to understand the behaviours, beliefs, and feelings of those around us and to answer key questions about the human condition
- Example: Why do some students succeed in school while others struggle?
-

Macrosociology versus Microsociology

Social systems → Social groups → Families → individuals

- Macrosociology: is the study of large-scale social systems, such as the political system or economy
    - Ex: We're talking about the economy, provinces, welfare state
- Microsociology: is the student of personal concerns and interpersonal interactions
    - Spouses, peers, doctor-patient interactions

The sociological imagination

- The distinctive viewpoint of sociology, which originated with C. Wright Mills
- The sociological imagination recognized that our personal experiences are powerfully shaped by macro social and historical forces
    - Helps us to see how macro and micro phenomenon are linked together
- If a handful of people experience a problem, it may be just a result of their personal choice. However, if the problem affects large numbers of people in patterned ways, it is more likely a public issue

  What does the Sociological imagination tell us about postponing childbearing?
    - 1940s women had first child age 25
    - Decreased and then has rapidly increased
    - Now average in just under 30 years
    - Large scale pattern change in behaviour
    - Start to think about changes in society
- Personal choice explanations vs public issue explanations
    - Economy affecting child bear: financially unstable, housing prices, changes about seex and relationships- public issue explanation

Agency and Social Structures

- Agency: is our capacity to make our own choices and act autonomously
- Social Structures: refer to the patterned social arrangements that may constrain (or facilitate) our choices and opportunities
    - Social structures affect agency]

Difference and Hierarchies

- Sociologists seek to understand the ways in which social hierarchies affect our lives
- Social hierarchies are comprised of race, class, gender, age, and other axes of inequality
- **Intersectionality**: is a theoretical tradition emphasizes that our overlapping identities and group memberships are critical to our life experiences

Sociology versus Anthropology

- Anthropology is the study of societies and cultures, often with a non-western focus
- Anthropology differs from sociology by:
- Focusing (traditionally) on non-western and early societies
- Placing a stronger emphasis on fieldwork methodologies in their work
- Their strong commitment to cultural relativism

Sociology versus Psychology

- Psychology is the study of individual behaviour, attitudes, and emotions, and their causes
- Individual differences include: personality, intelligence, motivation, and biological and neurological differences
- Most psychologists use experimental methods to study how a treatment affects what people do, think, or feel

Sociology versus History

- History is the study of past events, presidencies, social movements, or cultural patterns
- Historians use materials-based approaches to document and understand the past
- Historians do not attempt to make broad generalizations about human behaviour the way sociologists do
    - Differ in types of explanations that they use
    - Sociologists more often study people that are alive today

2: Approaches and Methods of Sociological Research

Types of Social Research: Basic Research

- **Basic** research is a form of research that seeks to answer theoretically informed questions or resolve fundamental intellectual puzzles about social behaviour
- This research is most commonly done in academia
- Researchers conducting basic research use the method that is best suited for answering the particular research questions

Types of Social Research: Applied Research

- **Applied** research: is a form of research that seeks to answer a question or concrete problem in the real world or evaluate a policy or program
- It is conducted by researchers at policy organizations, think tanks, institutional research departments, and market research firms

Quantitative methods:

- Rely on data that can be represented by, and summarized into numbers
    - Most common surveys

Qualitative Research

- Collect and analyze data that enable rich description in words or images
    - Ex: ethnography, in-depth interviewing

Mixed Methods Approaches:

- A mixed methods approach use more than one method in a single study
- This approach is used when researchers become aware that new insights can revealed through more than one method
- Researchers will then use **triangulation** to determine if different types of evidence and approaches lead to consistent findings
- Example: Roscignoet al. 2007

Types of Research Designs: Cross-sectional Design

- A cross-sectional study is a study in which data are collected at one one point in time
- The design provides a snapshot of a population at a particular point in time
    - Single sample drawn at a single point of time
    - Snapshot of either attitudes, beliefs, behaviours at a particular point in time

Types of Research Designs: Repeated Cross-sectional Design

- A repeated cross-sectional study design is a type of longitudinal study in which data are collected at multiple time points, but from different subjects at each time point
    - Two or more distinctive samples drawn at two or more distributive time points
    - Interviewing diff people in diff times
    - Ex: changes in gay marriage views overtime
    - Implementing same survey every year, canadian health survey

Types of Research Designs: Panel and Cohort Designs

- A panel design is a type of longitudinal study in which data are collected on the same subject at multiple time points
    - Single sample drawn at two or more distinctive time points
    - Looking at the same people over time
- A cohort design is a type of design in longitudinal study design in which data are collected from a particular cohort at multiple time points
    - Health and retirement study
    - Ex: taking birth cohorts (people of the same age) of older adults and follows then over time and as they age you add younger birth cohorts to the study
    - To see how dynamics of individuals are changing over time

Benefits and Limitations of Cross-sectional Study Designs

Strengths:

- Relatively inexpensive
- No need to recontact subjects
- Can be quickly implemented to address current events and hot button issues

Limitations

- Cannot access causal ordering
    - Data only collective once
    - Hard to see the first one thing that happens that leads to second thing happening

Benefits and Limitations of Longitudinal Study

Strengths

- Can access change over time
- Can access causal ordering
    - Individuals recontacted
    - Can help with grasping what change is causing what other change

Limitations

- **Attrition** in panel studies
    - Some people drop out of the study over time, can have systematic bias, can change the results
- Costs are higher
    - Have to find people, can take quite a bit of tracking down

Units of Analysis

- Units of Analysis: are the level of social life about which we want to generalize
    - States → cities→ neighbourhoods→ individuals
    - Could focus on one or more - macro or micro

3: How do we conduct sociological research?

The Sociological Research Process

- Sociology is a social science, and it uses the scientific method to ask and answer questions
- The **scientific method** is a systematic process of asking and answering questions in a rigorous and unbiased way

5 Steps of the Scientific Method

- Identify an important question that needs an answer
    - Socially significant, can't know the answer
- Construct a hypothesis, or prediction, about the answer to this question
- Gather data that allow the researcher to assess the accuracy of this prediction
- Analyze the data to determine whether the prediction is accurate
- Draw and report conclusions

Characteristics of Good Sociological Research Questions

- Social Importance
    - Whether or not the research has the potential to make a difference in the world
    - How harmful it is, number of people affected, grow number of people affected
- Scientific relevance
    - Or resolve an important theoretical or practical puzzle in sociology
    - Generally conduct literature reviews: which means your accessing what is known already and then what are the gaps that we could potentially fill with new research
- Feasibility
    - Need to consider how difficult it will be to access the appropriate data, how much money, how long it will take to answer the question
    - If you can get the data you need or not
- Value Free
    - Questions are objective and not biased by any personal ideologies that we have
    - Need to be unbiased in how you frame your research question, collect data, and interrupt results

Research Goals: Descriptive Research

- Descriptive research documents or describes trends, variations, and patterns or social phenomenon
- It can explained *what* is happening but not necessarily *how* or *why*
- Descriptive research can use either quantitative or qualitative methods

Research Goals: Exploratory Research

- Exploratory research tends to answer questions of how, with the the goal of documenting precisely how particular processes and dynamics unfold
- Qualitative methods are best suited for exploratory research

Research Goals: Explanatory Research

- Explanatory Research: documents the causes and effects of social phenomena, thus addressing questions of why
- Must begin with descriptive patterns
    - And then we look at causal relationships between variables
    -

Week 2: Linking Sociological Theory and Empirical Research

1. The role of theory within the scientific method

Do we Live in a Meritocracy? The idea that talents and skills are recognized and rewarded as a significant part of our culture. The idea that systems in which a person's efforts are proportionally rewarded are meritocracies.

- Wealthier, more educated people are given more influence in jury deliberations because they are viewed as more capable

- College students strongly weight instructor physical attractiveness in evaluating their effectiveness as teachers
- Mothers are less likely to be hired that otherwise similar women because they are viewed as less competent workers
- Idea that we have a meritocracy is not well supported by data
    - Based on these trends something else is going on in society

Theories about these findings

- *Status Characteristics theory*: In group settings, external markers of status are used to sort people by calling on ideas about worth and esteem that set performance expectations
    - Race, gender, social cass, attractiveness
    - These expectations can then shape who leads in social situations and who is marginalized
- *Schema theory*: Humans need to categorize, and stereotypes can be used for this purpose

What is Theory?

- In science, a theory is not simply a hunch or a guess
- A **theory** is a sequential argument consisting of a series of logically related statements put forward to illuminate some element of social life
    - Needs to be articulated, well reasoned, and needs to allow the researcher to move systematically from one point to the next in order to arrive at a conclusion

Theory, Empiricism, and the Science Method

- Empiricism is the idea that the world can be subjected to observation, which is the use of the sense to gather data about social phenomena
- In social research, the integration of both theory and empiricism is essential
    - Both necessary in social research
    - Without empirical evidence theory is speculative, there would be no proof to justify or reject any theory
    - Theory without empiricism is just sort of unguided observation - dustbowl empiricism or fishing expedition or data mining because there is no systematic process that guides the observations
    - Theory and empiricism are the two key ingredients that we need for the scientific method

Scientific method is the systematic process of asking and answering questions in a rigorous and unbiased way

- Rigorous as it follows a series of steps
- List (write later)

Theory, Empiricism, and the Science Method: Example Cooley's Looking Glass Self

- Theory: Cooley proposed the looking glass self 1902
    - How people's sense of self develop
- Central tenet: the reactions we solicit in social situations act as a mirror through which we see ourselves

    - Person's sense of self is influenced by how others respond of them
- Empiricism: Evidence shows that individuals do not passively accept response from others. Instead, we take act to elicit the responses we want from others
    - Create a self fulfilling prophecy, trying to make others react to us the way we want them to
- Theory plus empiricism: the looking glass self theory has been refined in light of this evidence

Purpose of Theory: to Describe

- Descriptive theories: explain how or why phenomena occur
    - Provides a board context through which the observations can be understood
- Not simply an accounting of observations
- Example: Corsaro's descriptive of children's play representing of culture

Purpose of Theory: to Explain

- Explanatory theories make predictions about the process through which a social phenomenon occurs
- This prediction is a hypothesis that can then be tested with empirical data
- Example: the general theory of crime
    - Poor quality or lacks socialization in early life affects a person's level of self control and that then determines whether that person will engage in crime when the opportunity arises
    - Quantitative

Purpose of Theory: to Explore

- Exploratory theories provide a framework that can help researchers develop more specific hypothesis that can then be empirically tested
- Example: the life course perspective says that human lives are best characterized as dynamic trajectories that are through key transitions
    - Going to school, getting married, leaving the workforce

Levels of Abstraction in Theory: The Macro Level

- The **macro level** is the broadest way of thinking about social life, focusing on the structure, composition, and processes of society
    - Will Focus on the largest units that make up society
    - Such as, political, ecommoy, or educational systems
- Example: Institutional theory argues that nations change over time because they strive to gain legitimacy among other nations and not because of the actual value of the change for the citizens of the country
- These theories are common in social science fields that focus on macro-level processes, such as demography and political science

Levels of Abstraction in Theory: The Micro Level

- The **micro level** is the most intimate way of thinking about social life, focusing on face to face interaction and small group processes
    - Therefore an attempt to describe, explain, or explore these intimate interactions
- Bridging social experience with psychology and cognition process

- Example: Social comparison theory, which argues that individuals evaluate themselves by using the people around them as benchmarks
    - Your own self-appraisal is contingent on the perceived abilities or success of others around you

Levels of Abstraction in Theory: The Meso Level

- The **meso level** is the middle ground way of thinking about social life, focusing on the physical settings or organization that link individuals to the larger society
- The "channel" through which the effects of the macro or micro level are experienced
- Example: neighbourhood collective efficacy theory, which argues that neighborhood poverty influences deviant behaviour in children by decreasing the level of collective efficacy
    - Decreases the ability for a community to come together to pursue common goals, interferes with the neighbourhoods ability to control and promote healthy behaviours among young people

Levels of Abstraction in Theory: A Summary

- Almost any sociological topic can be studied at each level, and each level can provide distinct insights
- How could differences in academic success be explained by theories at each level?
    - Chart
- Macro: States, governments, populations
- Meso: Groups, organizations, local contexts
- Micro: Individual, interaction, Dyads

Commonalities among Theories

- **Testiable**: can be quantitatively or qualitatively examined
- **Falsifiable**: can be proven wrong
- **Generalizable**: can explain broad classes or events
- **Probabilistic**: refer to what is likely to happen, not what is definite

Uses of Theory in Research: Inductive Approach

- **Inductive approach**: the process by which scientists draw up a general understanding of social phenomenon through empirical observations
    - When using this approach researchers don't start with a specific theory or hypothesis, instead they begin with a more general idea of what they are interested in studying, they gather and analyze their data and they they sort of build up to a theory bases on what they observed in their data
    - "Through observations that her theories emerged"
- Does not state with a specific theory or hypothesis
- Researchers "build up" to a theory through observations of data

Use of Theory in Research: Deductive Approach

- A **deductive approach**: is the translation of general theory into specific empirical analysis
    - Begins with a theory, uses that theory to guide the empirical analysis

    - Start with existing theories about a social phenomenon and integrate them into a coherent argument that attempts to explain, predict, or hypothesize what a phenomenon will be like when its observed empirically
- Researchers begin with existing theories and use them to hypothesize about what they will observe
- Example: differential association theory
    - Argues that young people learn to be criminals when they are surrounded by people who have positive attitudes about deviant behaviours
    - Used in deductive approaches to hypothesize that young people's delinquent activity will increase as the number peers doing that kind of thing in their schools and communities increases as well

Table;

- Inductive: begging with empirical observations and build up to theory
- Deductive approaches: begin by using a theory to develop some sort of hypothesis about empirical observations
- In practice; often used together to further study

2. Social science theories and paradigms

3. The Elements of theory, and how to use theory in empirical research

Elements of Theory: Concepts

- A concept is an idea that can be named, defined, and eventually measured in some way
- Concepts are not inherently concrete or observational; rather, they are abstract
- Concepts are assembled to form a theory
    - The researches use paradigm to help them nicely define and measure the concept

Relations among concepts: Positive and Negative relations

- Positive relationship: an increase (or decrease) in another concept
- Negative relationship: an increase or decrease in one concept leads to the opposite reaction another concept

Relations among concepts: Mediation

- In mediation, the expected relation between two concepts is channeled through a third concept that links them to each other
- Example: the effect of social class on children’s school achievement mediated through parental investment
    - In this theory, social class is the root cause and school achievement is an effect, and the reason that being from a higher social class as an influence on school achievement is because higher social class leads to more parental investment,

which in turn leads to more school achievement. Parental achievement is the reason for the cause and effect relationship

Relations among concepts: Moderation

- In moderation, the strength of the relationship between two variables is conditioned by a third variable
- Conditioning can make a relationship weaker or stronger
- Example: Economic hardship and children's behavioural problem is conditional on parental support
    - Idea that more behavior problems when economic hardship in family but that this relationship might not hold when the parents remain really supportive
    - Parental supports is therefore a moderator of the relationship

Relations among concepts: Spuriousness

- In **Spuriousness**, the relation between two concepts is complicated by a third fact that makes them appear related when in fact they are not
- The complicating factor us canned **confound**
- Example: the relationship between economic hardship and children's problems is confounded by parental education
    - This means that the relationship between economic hardship and children's problems may appear to be related but only because this third factor, parental education, is influencing both of them

Elements of Theory: Hypothesis

- A **hypothesis** is a testable statement of a relationship
- A hypothesis cannot be proven, only disapproval
- Researchers actually aim to prove the **null hypothesis**
    - Null hypothesis predicts that two concepts have no relationship with one another and then we try to disprove that by showing that they do have a relationship with another

Types of Hypothesis

- A **hypothesis of difference** makes testable statement about group differences
    - Could state that race differentiates people on alcohol consumption; whipte people drink more than non-white people, does not state that race is the reason. Only that two groups different in outcomes
    - One group drinks more than others
- **A hypothesis of association** deals with variables that increase or decrease together, without an explicit specification of cause and effect
    - States two things are related but not a cause and effect relationship
    - Positive or negative, of religiosity goes up then health problems would go down
    - Suggesting that the move together not not necessarily causally related
- **A causal hypothesis** is a prediction about cause and effect within an association of difference
    - Religiosity prevents health problems
    - Suggesting that one concept causes a change in the other concept
    - Hard to prove

Elements of Theory Variables:

- A **variable** is a representation that captures the different dimensions, categories, or levels of a concept
    - By capturing these elements variables allow researchers to make concepts measurable which in turn allows them to be empirically observed in our social research
- Variables define concepts so they can be concretely measures
- Example: How can the concept of crime be made in a variable?

From Theory to Data (and Back)

Step 1: Identifying a Question

(these steps are more in line with an deductive approach than an inductive approach)

- When identifying an important researched question, researchers should consider the feasibly studied , social importance, and scientific relevance of the question
- Researchers will conduct **literature reviews**
    - A systematic reading of a broad body of theory and evidence to determine what has been done, how, and what gaps there are
- The internet has complicated the meaning of reliable
- Peer=reviewed journals are typically the focus of sociology

Step 2: Generating Hypotheses and Variables

- To transfor, a research question into a hypothesis, concepts must be first defined as variables
    - Define key concepts as variables
- Next the researchers should set parameters around concepts, including units of analysis and time frame
    - Need to decide whether they are collecting data on individuals or aggregated data or a certain group or geographical regions and over what period of time they want to study the problem
- Third, the relationship between variables must be specified
    - **Independent variable**: the cause (predictor, cause, actor)
    - **Dependent variable**: the effect (Outcome, effect, acted upon)
- Finally, concepts are linked together to form a hypothesis
    - To form a testable hypothesis that can be written as a statement. Statement can include one of the five relationships between concepts

**NEXT RESEARCHERS will proceed with steps 3,4,5 of the scientific method: Gathering data, analyzing data, and drawing conclusions

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Week 3: From Concepts to Models: Hypotheses, Operationalization, and Measurement

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How would you measure…

- Happiness?

- Wealth?
- A Healthy diet?
- Stress?
- Poverty?

Conceptualization and Operationalization: An introduction

- The terms social scientists use to identify what they want to study and how they want to study it

Conceptualization: is the process of precisely defining ideas and turning them into variables

Operationalization: is the process of linking the conceptualized variables to a set of procedures for measuring them

Chart: Abstract concepts in hypothesis (Conceptualization) → Concrete definition of concept (Conceptualization & Operationalization) → Measure of defined concept (Operationalization)

Conceptualization and Operationalization: The example of Poverty

- The seemingly simple concept of poverty has been measured in hundreds of ways
- What first comes to your mind where you hear the term “poverty”?

Conceptualizing Poverty

- **Absolute Standards:**
    - The same threshold applies to everyone regardless of context
    - Example: whether or not a person has food, clothing, and shelter
- **Relative Standards:**
    - An individual is compared to what is typical in a population
    - Example: whether or not a person falls below the average income level, than that person would be considered poor by this relative standard

Operationalizing Poverty in the US

- The US government operationalizes poverty with the federal poverty line (FPL)
- Measured as the annual cost of an adequate diet for a family of given size multiplied by 3
    - This is an absolute standard
- Federal Poverty for the US is shown here: Table

Issues with Operationalizing Poverty using the FPL

- It does not include wealth (material possessions and investments)
    - Does not account for wealth or a person's material possessions
    - Wealthy people who have zero income, would technically be counted as poor
- It doesn't account for variations in costs of living throughout the United States
    - Varys in some regions

Operationalizing Poverty in Canada

- The Candian government operationalizes poverty with a Market Basket Measure
- Measured as the people that do not have “enough income to purchase specific basket of goods and services in their community” (e.g. food, housing)
    - Varies
- Canada’s official poverty live is shown here: table
- In addition to the official poverty line in Canada, the current government has created a range of other indicators of poverty capturing different dimensions
        - E.g:Deep income poverty: persons with income below 75% of Canada’s official poverty line
        - Households reporting food insecurity
        - Relative Low income: Persons who had less than half of the median after tax income
            - Link to website posted, about how canada is tracking measures

The Process of Conceptualization
Concept in hypothesis → Dimension → Variable → Indicator
Abstract/ General----------Concrete/Specific

The Process of Conceptualization: Concepts
- A **concept** is an idea that can be named, defined, and eventually measured in some way
- It is important to remember that not every concept has just one accepted definition. Reality is subjective!
- Example: How would you define the “onset of puberty”?
    - Puberty, gradual process, its onset must be conceptualized before being used on research

The Process of Conceptualization: Variables
- The process of turning abstract conceptions into concrete measures begins with creating **variables**, or representations that capture different dimensions, categories, or levels of a concept
    - Variables are representations
- Variables have to “vary” meaning they convert concepts into data points that can be compared
- Example: Variables for the onset of puberty can include “early,” “on time” or “late” onset.

The Process of Conceptualization: Units of Analysis
- Conceptualization may differ depending on the unit of analysis being used
- Social artifacts are aspects of social life that can be counted, such as news articles, tombstones, or text messages
- Concepts can often be measured with more than one unit of analysis
- Example: onset of puberty
        - Micro level: individual differences in onset puberty
        - Macro level: differences in average onset across racial and ethnic groups
            - Average age cross….

- Measuring at different levels of analysis can be tricky because individuals data are often **aggregated**
    - The process of counting or averaging individual level data in some contexts to capture individual level concepts but at the group level
    - So researchers would measure the onset of puberty from the united states by data on puberty from individuals and then calculating an average or some other measure across the group making the country's average age of onset of puberty an aggregated form of that individual level data

The Process of Conceptualization: Dimensions

- Concepts often encompass multiple **dimensions**, or components that represent different manifestations, angles, or units of the concept
    - Impractical for researchers
- Researchers must determine which dimension has the greatest relevance for their study
- Example: School quality has many dimensions, all of which may be important for different research studies
    - Academic skills, degree of health and safety…

Identifying Dimensions of Concepts : CHART

- Concept: The idea
    - Top: Parental Discipline
- Dimensions: Different manifestations of the idea
    - Middle: Negative reinforcement or positive reinforcement
- Variables: Different representations of dimensions
    - Botton: Spanking and punishment (N.R.) or Moral Teaching and Reward (P.R.)

The Process of Conceptualization: Types of Variables

**Four main types of variables that we can use and the type used determines how that concept is measured and analyzed, important part of linking conceptualization to operationalization

***Four main types of variables can be classified as categorical or Continuous

Categorical	Continuous
Have a finite set of possible values	Have an infinite set of possible values
No known distances between values	Values have fixed distances between them
Includes **nominal** and **ordinal** variables	Include **interval** and **ratio** variables

Categorical Variables: Nominal Variables

- A **nominal variable** catalogs states or statuses that are parallel and cannot be ranked or ordered
- Examples: Race, School Sector (Catholic school, public school….)
    - No inherent way of ranking categories as being quantitatively less than or greater than one another, can't be ordered

Categorical Variables: Ordinal Variables

- Ordinal Variables have categories that can be ordered in some way
- Despite this order, the distance between the values is not known
    - Examples:
        - Scales or “agree” or “disagree”
        - Some clothing sizes (such as S, M, L, XL, XXL)
            - Not clear how much bigger the medium shirt actually is to the small shirt
    - Differ as they can be ordered in some way however the distances between categories is not known in an ordinal variable
    - Many surveys ask how much you agree with a particular statement, not one way to see how much distance there are between each other
    - Not way to quantify how much more agreement from somewhat agree to very much agree

Continuous Variables: Internal Variables

- Internal variables have a continuum of values with meaningful distances between them, bu no true zero
- The values can be compared directly, but they cannot be used in proportions or mathematical operations
    - Distance between is known
    - Zero, is the only value that does not have a true value
- Examples:
    - SAT Scores
        - Not possible to get a score of zero
    - Temperature
        - No possible to have a true zero that represents the total absence of any temperature
        - Can’t express temperature readings in proportions
    -

Continuous Variables: Ratio Variables

- Ration variables are interval variables that do have a true zero
- The distance between values can be measured, and values can be expressed as proportions
- Examples:
    - School size
        - Is possible for a school to have zero students
    - Income in U.S. dollars
        - Income can be zero

Classify the variable by type

- Height in inches: Interval variable
- Religious affiliation: Nominal variable
- Number of days an individual has sumptions of depression in the past month: ratio variable
- Drink sizes at fast food restaurant: Interval variable if the size differ by a known amount or it would be an ordinal variable if the sizes don’t differ by a fixed amount

Continuous Variables: Internal Variables: Indicators

- Indicators are the values assigned to a variable

- The values provide the blueprint for measurement
- Example: length of time between birth and onset puberty
    - Months are better indicators of years

The Process of Operationalization

- Operationalization: the process of identifying a plan for measurement
    - Researchers always have to justify the operationalization choices that they make
- Often involves making trade-offs between the potential benefits and drawbacks of using proven measures and developing novel ways to measure variables
    - proven measures: allows us to compare our results with a previous study
    - Novel way: might improve on the limitations of measures which had been used in the past

The Process of Operationalization: Field of Study
Whether researchers are quantitative or qualitative will affect people's decisions about measurement

- This is the first "filter" of the operationalization process
- Quantitative researchers typically view operationalization as the end result of the conceptualization process
- Qualitative researchers start with a more open conceptualization process and use observation and data collection to refine the process (conceptual definitions)

The Process of Operationalization: Mismatches between units of Analysis

- When one unit of analysis does not translate into another, the results of a study can be invalidated
- The **ecological fallacy** is a mistake that researchers make by drawing conclusions about the micro level based on some macro-level
    - Refers to drawing conclusions about micro level phenomenon based on the analysis for which the unit of analysis were at a macro or meso level
    - When you have data on a broad higher level but you want to generalize to the individual level
- **Reductionism** is a mistake that researchers make by drawing conclusions about the macro-level unit based on analysis of micro-level data

The Process of Operationalization: Forms of Measurement

- Reports
- Observation
- Artifact counts/assessment
- Manipulation

Week 4: Sampling

Intro:

- Social research allows us to make very specific descriptive statements about large populations without actually collecting data on every single peoples in the population

Part 1: How samples describe populations.

Samples and Sampling

- Data about large populations are often based on **samples**, or sublets of a population selected for a study
- The population being studied is called the **target population**
- **Sampling** is the process of deciding what or whom to observe when you cannot observe and analyse everything or everyone
    - Research findings only as a good as the sample being based

Importance of Good Sampling Strategies

- Research findings may be only as good as the sample on which they are based
- The challenge is obtaining a sample that accurately represents the population being studied
    - When the goal of sampling is to describe a population there should be no systematic differences between the people who were selected for the sample and the people who were not
    - Increases the likelihood that the sample is representative of the population

Obtaining a Representative sample

- The goal is to obtain a sample that does not systematically differ from the population being studied
- The solution is to choose randomly. Every member of the population should have an equal chance of being selected into the sample
- A sample chosen via random selection is called **probability sample**
- Probability samples have two key characteristics:
    - Random chance is used to select participants for the sample
    - Each individual has a probability of being selected that can be calculated

Censuses

- A **census** is a study that includes data on every member of a population, as opposed to only a sample
- Censuses allow social researches to assess **population parameters** directly
- However, they are often not feasible in social research

Advantages of Probability Samples over Non Probability Samples

- The simplest type of nonprobability sample is a **convenience sample**, for which the cheapest and easiest observations are selected
- Example: A professor studying undergraduate drinking habits selects all students in his/her sociology students into the study sample
- A probability sample has two key advantages over non probability samples:
    - Estimates are **unbiased**

    - The only difference between the estimate and true population parameters are due to chance. This is the **sampling erro**r

Margin of Error

- The **margin of error** is the amount of uncertainty in an estimate
- It tells researchers how close their sampling estimate comes to the population parameter
- The margin of error pertains only to the sampling error. It does not account for the possibility of systematic error in the sample
- As the sample size gets larger, the margin of error gets smaller

Sampling distribution

- A **sampling distribution** is a set of estimates that would be observed from a large number of independent samples that are all the same size and drawn using the same method
- Because 95% of estimates are only 4.4% off from the parameter, the margin of error is 4.4%

Confidence Levels and Intervals

- Confidence levels are the probability that estimate includes the population parameter
- The conventionally used confidence level is 95%
- The range implied by the margin of error is called the **confidence interval**

Confidence Levels and Intervals : Example

- According to poll, 43% approve of the job the president is doing, with margin of error 3%
- Translation: we can be 95% confident (confidence level) that the true level of presidential approval is between 40% and 46% (confidence level interval)
- 43-3=40
- 43+3=46

Part 2: Probability sampling

Preventing Systematic bias in Probability Samples

- A **sampling frame** is a list of population members from which a probability sample is drawn
- Creating a sample from a sampling frame helps researchers prevent bias in their sample

Types of Probability Samples:

- Simple random samples
- Systematic samples
- Cluster samples
- Stratified samples

Simple Random Samples

- A **simple random sample** is a type of probability in which
    - Each individual has the same probability of being selected
    - Each pair has the same probability of being selected
- Social researchers can use computer software to ensure that sample selection is truly random
    - Like choosing names out of a hat

Systematic Samples

- A Systematic Sample is a probability sampling strategy in which sample members are selected by using a fixed interval
    - Example: Researchers can choose every nth member of their samping frame
    - Each pair in a systematic sample does not have an equal chance of selection

Cluster Samples

- Clusters samples: are a probability sampling strategy in which researchers divided up the target population into groups or "clusters"
- Researchers first select clusters randomly, and then select individuals within those clusters randomly
    - Simple random samples and Systematic samples both presume that a sampling frame is available, but it's not always the case that there will be access to a list of of the members we are interested in studying

Cluster Samples

- NCES (national centre of education statistics) conducts in person surveys in classroom across the country
- Interviewers travels to randon schools
- Then they interview randomly selected students within those schools

Cluster Samples

- There are certain situations where using cluster samples is advantageous
    - There is no accessible list of all population members
- Gathering data from members of all clusters is not feasible

Stratified samples

- **Stratified samples** is a probability sampling strategy in which:
- The population is divided into groups called **Strata**
- Members are selected in strategic proportions from each other

Stratified Sampling

- Sociologists wanted to study the effectiveness of diversity training, mentoring, and other practices for encouraging workplace diversity
- The researchers first divided companies into groups:
- A: Companies that employed > 500 worker
- B: Companies that employed < 500 workers
- Since there are more companies in group B, the researchers selected twice as many companies from group A for their sample

Stratified sampling

- Statifiying allows researchers to oversample a group that is likely to be underrepresented in a simple random sample
- Satisfying also helps prevent samples from becoming nonrepresentative due to pure chance

Weighting in Probability Samples

- Members of stratified samples may be **weighted** differently, to account for the fact that the sample is no longer representative
- Weights determine how much sample members "count" when producing estimates
- A group that is oversampled should receive less weight than other members of the sample

Weighting in Probability Samples

• Older adults account for 18% of the U.S. population, but researchers obtain a sample that is composed of 27% older adults.

• Older adults are overrepresented by a factor of 1.5 in the sample (0.27/0.18), and should therefore be weighted less.

• Through **postsurvey weighting**, older adults are weighted to count only 0.67 (1/1.5) as much as younger adults in the samp

Part 3: Non-representative samples

Using Non-representative samples

- Representative samples are ideal for estimating and describing characteristics of large populations
- However, they are not ideal for estimating cause and effect relationships

The Benefits of Non-representative samples

- The diversity of representative samples makes deterring cause and effect relationships more difficult
- We can often gather more or better information on non representative samples than we can on representative samples
    - Since they tend to be smaller and non-homogenous, more detailed info
- David Snowden's work with 678 nuns from the School Sisters of Notre Dame allowed him to learn more about alzheimer's disease than he could have with a representative sample

Generalizability in Non Representative Samples

- When a nonrepresentative sample is used, researchers cannot conclude that a hypothesis holds true in the same way throughout all population subgroups
- To evaluate a study's robustness, researchers can test whether a hypothesis that holds true with a nonrepresentative group also holds with a more representative population

Sampling Strategies for Case-oriented Research

- In **variable oriented research**, scientists study large number of cases, but gather only a limited amount of data (or variable) about each
    - Ex: Often probability samples
- By contrast, in **case orientated research**, scientists gather large amounts of data about single case or small number of cases
    - Non-representative samples are better for this one
- Choosing a single case study is still considered sampling!

Types of Case-oriented Sampling Strategies

- **Purposive Sampling**: a sampling strategy in which cases are selected on the basis of features that distinguish them from other cases
    - Researchers choose the case or cases that they believe will be especially informative for answering their questions
- **Sequential sampling:** a sampling strategy in which researchers make decisions about what additional data to collect based on their findings from data they've already collected
    - To use insights from an initial case to guide decisions about what to look for next

Purposive Sampling Considerations:

Purposive Sampling : Access to and quality of Data

- Researchers may choose cases that will offer the most promising insights
- However, they must also gain access to the people they wish to study. The "best" cases may not always be the most accessible

Purposive Sampling: Typicality

- A case us typical when its features are similar in as many respects as possible to the average of the population it represents
- Sometimes the least special case is the best case

Purposive Sampling: Extremity

- Focusing on "extreme" cases can provide researchers with particularly vivid examples of the phenomenon they wish to study

Purposive Sampling: Importance and Deviant

- Researchers can choose cases that are of the greatest importance to the phenomenon they wish to study
- Alternatively, researchers may choose **deviant cases**, cases that are unusual, unexpected, or hard to explain given what is currently known about a topic
    - Different, compare

Purposive Sampling: Contrasting Outcomes

- Researchers may sometimes choose a pair of cases that represent a "puzzle" or in some way have different outcomes in response to the same stimulus

Purposive Sampling: Key Differences and Past Experience and Intuition

- Researchers may be interested in the range of consequences that might follow from a key difference between two cases

- Finally, researchers may use their past research experiences or their intuition about which settings will be useful for studying their research question

Sequential Sampling: Benefits

- This method allows researchers to make decisions about what data to collect next on the basis they have already been collected
- Insights gained from an initial case study canguide later choices about what case to study next
- After completing a single case study, researchers may become interested in how their observations contrast with other cases, leading to a comparative project

Sequential Sampling

- **Key informants** are the first point of contact a researcher has with his or her study population
    - Key informants are people whom the researcher interviews intensively typically multiple times over the course of field work project
    - Key informants can also recommend additional people that the researchers can interview and this is called snowball sampling
- The aim of this strategy is usually to **sample for range**
    - Researchers are typing to maximize the respondents range of experiences with the phenomenon being studied
- Researchers know when they have collected data from enough subjects when they have reached **saturation**

Sequential Sampling

- **Snowballing sampling**: is a strategy in which the researcher starts with one respondent who meets the requirements for inclusion and asks one respondent who meets the requirement for inclusion and asks him or her to recommend other people to contact
- This method is useful for studying populations we would otherwise know very little about
- More recently, efforts have been made to formalize this method

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Week 5: Survey Research

What are Surveys?

- A survey is a social research method in which researchers ask a sample of individuals to answer a series of questions
    - Ex: used by a wide variety of industries including market research firms, gov org.
    - In sociology field surveys account for about ⅓ of all published articles
- All **surveys** are highly structured, meaning that they ask prewritten, **closed-ended** questions with fixed response options
- Surveys allow social researchers to describe patterns, test hypothesis , explore subgroup difference, document patterns of stability and change over time, and develop theories of human behaviour

Primary versus Secondary Data

- **Primary data** collection occurs when social researchers design and carry out data collection
- Secondary data is a resource that was collected by someone else
- **Secondary data** can be obtained from survey data depositories, such as the Inter-University Consortium for Political and Social Research
    - (www.icpsr.umich.edu).
    - When researchers use data that was collected by someone else

Cross-Sectional Versus Longitudinal Designs

- **Cross-sectional surveys**: are surveys for which data are collected at only one point in time
    - Best for comparing difference across subgroups at the same point in time
    - Not well suited for addressing changing overtime within a certain population
- **Longitudinal Surveys**: are studies in which data are collected at multiple points in time
    - Accessing change over time requires a longitudinal survey

  Types of longitudinal surveys:
    - **Repeated cross sectional surveys:** data are collected at multiples time points but from different subjects at each time point
    - **Panel surveys**: data are collected on the same subject at multiple time points
        - Panel surveys which follow people over time allow researchers to additionally measure the causal ordering of relationships between variables because cause has to happen before effect

Strengths and Limitations of Survey Designs

Characteristic	Cross-Sectional Surveys	Panel Surveys
Cost	Relatively low, as respondents are contacted only once	Relatively high, as respondents must be "traced," retained, and reinterviewed over time
Ease of administration	Relatively easy, as participants are interviewed only once	Difficult, includes following up and locating subjects, long wait times between waves
Causal inference	Cannot ascertain causal ordering, as all measures are obtained at the same time	Excellent, because measures at one wave can be used to predict outcomes at subsequent waves
Sources of bias	Coverage and samples typically exclude those who are difficult to reach	Same biases as cross-sectional survey, with addition of selective attrition, or "loss to follow-up"
Ability to document change	Cannot assess within-person change	Well suited to assess within-person change over time
Attention to social history	Cannot disentangle age, period, and cohort effects	Panel studies focused on a single cohort cannot differentiate age versus period effect. Multicohort longitudinal studies cannot differentiate age versus cohort effect.

- Main limitation of cross-sectional surveys is their inability to measure cause and effect since data are collected at only one point
- Main limitation of Panel studies is attrition from people dropping out of the study. Leads to a biased sample, people who are most likely to remain in the panels over time tend to be healiter, better educated, make more money then those who drop out, Run the risk of providing overly positive views.
- When choosing what kind of data are needed for our research project we have to choose the one that best matches the research aims depending on what the question is

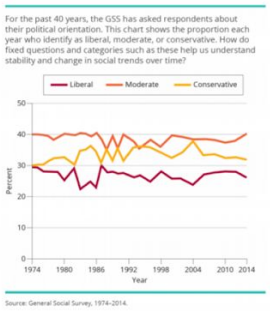
Strengths of Surveys: Breadth of Topics

- Nearly all surveys contain basis demographic questions because social scientists are interested in documenting inequalities on the basis of race, age, sex, and other factors
- Beyond this, surveys can take the form of brief, **single-topic polls** or larger **omnibus surveys**, which cover a wide range of topics and can be used by social scientists with diverse interests
    - single-topic polls: might be used for a topic research fund to collect reback about a single new project
    - omnibus surveys: more commonly used in research because they collect data on a wide range of topics related to social life, and these can contain thousands of questions and take several hours to complete
- Ideally, a survey should take no more than 30 to 45 minutes of the respondent's time
- To maximise the amount of data they can collect without taking too much of the respondent's time, researchers may use a **split-ballot design**.
    - Ex: half of the sample might receive one version of the questionnaire and the other half receive another version, two sub samples
    - Allows for the collection of data on two separate issues without

making the survey too long

Strengths of Surveys: Comparisons across Groups and over Time

- The fixed-response categories used in surveys make them ideal sources for measuring differences across groups and change over time
- If identically worded questions produce different responses in a population over time, researchers can be confident that a population-level change as occurred



Strengths of Surveys: Generalizability

- Surveys tend to have better external validity than other research methods
  - Especially those that are conducted via random sample
  - external validity: how generalizable some findings are to a larger population
- This is especially true if the survey was conducted using a random sample

Sources of Error in Surveys

- **Nonresponse**
  - Respondents may choose not to participate in a survey at all or they may choose not to respond to particular questions on the survey
  - If individuals who do and do not respond differ in systematic ways, then the results of the study may be biased
    - Ex: if we find that order individuals tend to complete the survey, while younger individuals did not. Our results may be biased to views around older people.
- **Measurement error**
  - It occurs when the approach used to measure a particular variable affects the response provided
  - It may include the surveys design, the interviewer, or the setting
- **Coverage Error**
  - The sampling frame does not adequately capture all members of the target population
  - It results from either systematically omitting respondents or including the same respondents multiple times
    - Ex: telephone surveys excluding individuals who don't have a phone. Or included those who have cell and home phone twice.

- **Sampling Error**
  - It involves differences between the characteristics of the sample and the characteristics of the population that the sample represents
    - Social researchers can use sampling strategies to minimize the chance of sampling error

Response Rates

- Achieving a high response rate is a serious challenge in survey research, and obtaining a 100% response rate is virtually impossible
- Response rates can vary from 20% to 80%, depending on the mode of survey administered
- The response rate equals the number of surveys completed divided by the number of reporting units (the level at which the survey were collected)
  - Ex: 1000 people invited for survey, and 200 people **completed** it, the response rate would be 25%

Modes of Survey Administration

- ・Face-to-face interviews
- ・Telephone surveys
- ・Mail surveys (also known as self-administered questionnaires)
- ・Internet-based surveys

Modes of Survey Administration: Face-to-Face Interviews

- The interviewer meets the respondent in persona and asks questions from an **interview schedule**
- Interviews can take place in the respondent's home or in a public place, but but the researchers should be considerate of how a respondent's answers may vary across interview settings
- Interviews will note observations about how and where the interview took place in the **paradata**
  - Home details, how long interview...

Computer-Assisted Personal Interviews (CAPI)

- Today, CAPI software makes face to face interviews more efficient to conduct
- Interviewers use a laptop or tablet computer that is preprogrammed with at the survey questions and response categories. They will read the question aloud to the respondent and record his or her answers.
- Showcards may be used to aid respondents on questions for which there are many response categories
- CAPI software is also useful for helping the interviewer navigate the **skip patterns** and **screener questio**n in the survey
  - Skip pattern: a question or series of questions associated with a person's response to a previous question

    - The previous question is called a screener question

Strengths and Limitations of Face-to-Face Interviews
Strengths
- Interviewers can ensure that respondents understand the questions and do not skip any that are troubling or sensitive

Limitations
- The characteristics of the interviewer may influence how the respondent answer the questions

Social desirability bias: respondents may report socially values behaviours and attitudes in the survey setting
    - Might over report or under report
        - Solution: Audio assisted self interview (improves comfortability)

Modes of Survey Administration: Telephone Surveys
- Telephone surveys can be administered via landlines, cell phones, or smartphones.
- A common method for obtaining participants is **random-digit dialing** (RDD).
    - Computer software is used to generated telephone numbers at random
- As of 2010, more than 95% of the U.S. population had either a landline or a cell phone.

Strengths and Limitations of Telephone Surveys
Strengths
- Interviewers can ensure that respondents understand the survey questions and that no questions are skipped.
- The cost is lower than for face-to-face interviews.
- Interviewers can be monitored from a central location, such as a call center.
- They require less advance planning than face-to-face interviews

Limitations
- Some respondents may be reluctant to discuss personal matters over the phone.
    - Not sure who they are speaking to, less trust
- Interviewer effects are still possible.
- Interviewers can be mistaken for telemarketers.
- Respondent fatigue is possible.
    - Older, morelonier people more likely to answer phone
    - Can send advanced letter
- There is no ability to collect paradata.
    - Don’t know about what the persons house of community looks like

Modes of Survey Administration: Mail Surveys

- Respondents independently complete questionnaires that they received through the mail.
- A mail surveys is typically presented as a highly structured questionnaire in booklet form.
- Researchers ask that respondents complete and return their questionnaires within a particular time frame, such as 2 weeks

Strengths and Limitations of Mail Surveys

Strengths

- They are less susceptible to interviewer effects.
- The cost is relatively low when compared to other modes.

Limitations

- Researchers cannot help respondents understand the questions or ensure that they do not skip questions.
- Obtaining a high response rate can be difficult.
- Sometimes it is easier for respondents to lie

Internet-Based Surveys

- One of the most rapidly evolving survey modes in academic and government research
- Surveys accessed via an email link that takes the respondent to a preprogrammed survey on a website

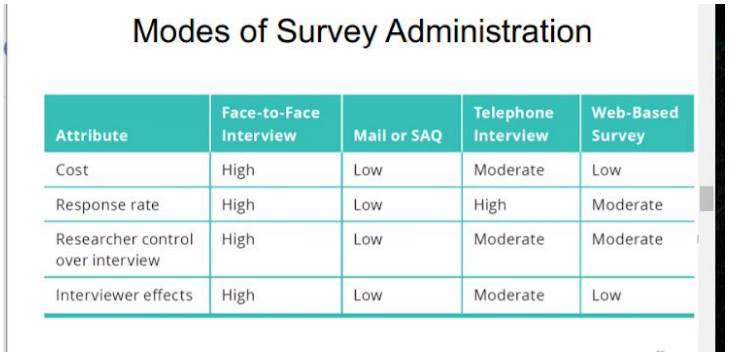
Strengths and Limitations of Internet-Based Surveys

Strengths

- Costs for printing, mailing, and data entry are eliminated.
- Software makes surveys easy to design and administer.
- Software can help respondents navigate skip patterns.
- Surveys can reach a large geographic area

Limitations

- Response rates may be biased toward younger people and those with higher socioeconomic status.
- Surveys may be filtered into junk or spam mailboxes.



Modes of Survey Administration

Attribute	Face-to-Face Interview	Mail or SAQ	Telephone Interview	Web-Based Survey
Cost	High	Low	Moderate	Low
Response rate	High	Low	High	Moderate
Researcher control over interview	High	Low	Moderate	Moderate
Interviewer effects	High	Low	Moderate	Low

- Will often use mixed modes approaches

Mixed-Mode Approaches

- In practice, researchers often use more than one mode of survey administration.
- Advantages to mixed-mode approaches
- Can obtain new or different information from the same respondent
- Allow researchers to assess **mode effects** and sources of bias in the data
  - Mode effects: effects of the mode of administration on the surveys results
- Provide the opportunity to solicit participation from individuals who may be uncomfortable with a particular mod
  - Increases response rate
  -

Types of Survey Questions: Closed-Ended Questions

- The most basic type of closed-ended questions is **dichotomous**, which requires a simple "yes" or "no" answer.
- Regardless of the number of response categories, closed-ended questions should always be **mutually exclusive** and **exhaustive.**
  - Mutually exclusive: no overlap between the different response categories
  - Exhaustive: if they account for all possible response a respondent could have for a particular survey question

- Closed-ended questions often use rating scales. A common rating scale is the **Likert scale**, which captures the respondent's level of agreement or disagreement with a particular statement.
- Some researchers believe that **forced-choice questions** produce the best quality data.

ta.

Circle the ONE number that best describes your agreement or disagreement with each statement.

I see myself as someone who...	Agree Strongly	Agree Moderately	Agree Slightly	Disagree Slightly	Disagree Moderately	Disagree Strongly
a. is talkative.	1	2	3	4	5	6
b. tends to find fault with others.	1	2	3	4	5	6
c. does a thorough job.	1	2	3	4	5	6
d. is reserved.	1	2	3	4	5	6
e. prefers the conventional, traditional.	1	2	3	4	5	6
f. is full of energy.	1	2	3	4	5	6
g. prefers work that is routine and simple.	1	2	3	4	5	6
h. is a reliable worker.	1	2	3	4	5	6
i. can be tense.	1	2	3	4	5	6
j. tends to be quiet.	1	2	3	4	5	6
k. values artistic, aesthetic experiences.	1	2	3	4	5	6
l. tends to be disorganized.	1	2	3	4	5	6

29

Source: John, Naumann, & Soto, 2008.

Types of Survey Questions: Open-Ended Questions

- Open-ended questions typically take one of two forms in surveys:

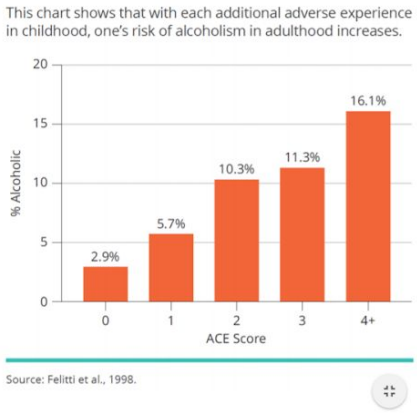
- 1. Open-ended responses embedded in closed-ended questions, such as "other: _____"
- 2. Purely open-ended questions, in which respondents can write a response in their own words
- Open-ended questions can provide new insights that the researchers had not previously considered when writing the survey.
- To report their findings, researchers can either transform open-ended responses into closed categories or present illustrative quotes from the open-ended responses.

Closed- or Open-Ended Questions?
(Paul Lasiers Failed, One of the founding fathers of survey research)

- Researchers should consider:
  - The goals of the survey
  - The respondent's knowledge about the topic
  - How much thought a respondent has given to a particular topic
  - The respondent's motivation to answer the question
- Closed-ended questions are preferable for documenting frequencies of behavior, factual information, and levels of agreement or disagreement.
- Open-ended questions are useful when the respondent has no previous knowledge or opinion about the topic.

Composite Measures

- Some topics that social researchers study may require more than one questions to study
  - Composite measures: Combines multiple items to create a single value that captures some muti-faceted concept
- An **index** is a sum of responses to multiple survey items that capture a particular concept being measured.
  - Ex: the number of symptoms of a particular illness an individual has or the number of fundamentalist beliefs an individual endorses
- A **scale** averages the responses to multiple items that capture a particular concept
  - Ex: levels of depressive symptoms or self esteem
  - Scales are being at measuring how intensely a respondent measures on a particular concept



Characteristics of High-Quality Questions

- Use clear and simple language.
    - No double-negatives, grammatically correct
- Avoid **double-barreled questions.**
    - And questions that ask about two or more ideas or concepts in a single question. Should be one question per concept
- Define abbreviations the first time they are used.
- Define concepts that are not readily recognizable by laypersons.

Characteristics of High-Quality Questions

- Do not assume that respondents will have prior knowledge about complex issues.
- Make response categories as precise as possible.
- Use neutral language when dealing with sensitive or emotionally laden topics.
- Avoid leading questions
    - Ex: Avoid leading questions

Characteristics of High-Quality Questions

Q: People working at Acme Corporation love their jobs. How do you feel about your job here at Acme?

A: a) I love it.
b) I like it.
c) I hate it.

.,

- Ex: Double Barreled question (should be one idea)

Characteristics of High-Quality Questions

Q: How much confidence do you have in the president's ability to handle domestic and foreign policy?

A: a) a lot
b) some
c) a little
d) none at all

The Placement of Survey Questions: Establishing Rapport

- Researchers should establish rapport with respondents early in the survey to obtain high-quality data.
- The first questions asked in a survey should be simple, easy to answer, and

unobtrusive.

- Demographic questions should be asked at the end of the survey

The Placement of Survey Questions: Avoiding Monotony and Response Set

- Alternate modules on "fun" topics with the more serious modules.
- Vary either the response categories or the positively and negatively worded questions to help avoid **response set**.

To avoid response set, researchers will often word some questions positively and others negatively. Response set is the tendency to select the same answer to a series of questions.

	Questions	Agree Strongly	Agree	Disagree	Disagree Strongly
1.	On the whole I am satisfied with myself.				
2.*	At times I think that I am no good at all.				
3.	I feel that I have a number of good qualities.				
4.	I am able to do things as well as most other people.				
5.*	I feel I do not have much to be proud of.				
6.*	I certainly feel useless at times.				
7.	I feel that I am a person of worth, at least the equal of others.				
8.*	I wish I could have more respect for myself.				
9.*	All in all, I am inclined to feel that I am a failure.				
10.	I take a positive attitude toward myself.				

Source: Rosenberg, 1965.

The Placement of Survey Questions: Avoiding Order Effects

- **Order effects** occur when the order in which questions appear biases the responses.
- **Priming effects** are a type of order effect in which exposure to a particular image, word, or feeling shapes how respondents think and feel in the immediate aftermath.
    - Example: the effect of recalling politicians involved in scandals on the ratings of currently elected officials, low trust in politicians

Conducting the Survey: The Pretest

- A **pretest** is a trial run of a survey administered to a group of people who are similar to the study sample.
- The pretest should be conducted in precisely the same way that the final survey will be conducted.
- Pretesting may also include a **cognitive interview**.
    - In which respondents share their thoughts about and interpretations of the survey, so researchers might be able to improve the clarity of the survey

Conducting the Survey: Conducting Preliminary Data Analyses

- Researchers can use both "soft" and "hard" data to analyze the pretest.
    - Ex: soft data mights be comments that respondents give during the cognitive interview, about the survey questions
    - Ex: hard data are preliminary statistical analysis such as frequency distributions or responds to different questions in the pretest
- **Frequency distributions** help researchers assess problems with the questions, such as a large percentage of respondents choosing the answer, "I don't know."
    - Indicate the proportion of observations for each value of a variable

- If the frequency distribution for a question shows clustering, it may indicate the need for more fine-grained response categories.

Conducting the Survey: Going into the Field

- After the survey has been pretested and revised, researchers are ready to go into the field.
- At this point, they may send advance mailings about the survey to respondents.
- Regardless of the survey mode chosen, the researchers' initial contact with respondents should involve a brief explanation of the survey and obtain informed consent.

Ethical Concerns in Survey Research: Confidentiality

- Researchers must protect the confidentiality of their respondents' survey responses, but it is unrealistic and impractical for survey researchers to promise complete anonymity to their respondents.
- To maintain confidentiality, researchers often assign an ID number to each survey respondent, which serves as the only identifying information visible on the survey.
- Any documentation that links the ID number to respondents' personal information must be held in a private and secure location.

Ethical Concerns in Survey Research: Psychological Distress

- Researchers should be sensitive to survey questions that may cause respondents to experience minor psychological distress.
- This harm can be minimized by warning respondents about any distressing questions ahead of time, providing them with access to appropriate support resources, and reminding them that their participation in the survey is voluntary

Strengths of Surveys: Breadth Of Topics

- Spotlight: Videos: Patrick Denise, Yoko Yosihda, kate choi bout using surveys

Yoko Yosihda

- Yoko Yoshida studies immigrant integration and migration. In her work, she uses quantitative methods of either survey data or administrative data. The kinds of surveys she uses are those collected by Statistics Canada. The administrative data that she's currently using is called the Longitudinal Administrative Database, which is a government database of immigrants that can be used to see how immigrants economic and social outcomes evolve over time. She has also done a lot of collaboration with local, provincial and national governments to help with applied policy issues.
- How well they are being fared in canadian market, are they finding jobs
- Now she is looking at secondary immigration. Vancouver, toronto, montreal. Why immigrants end up leaving small cities.
- Those who left Atlantic canadian, higher averages. Family immigrants stay.

- STARTED USING LONGITUDINAL

Kate Choi

- Kate Choi's research focuses on race, diverse families, and social inequality across generations. In this video, she explains some of her projects where she's used survey data and applied quantitative methods and various statistical methods (she mentions log linear models) to examine how the children of interracial marriages fare compared to other groups in terms of health and wellbeing.
- Research examines the nature, determinants, and consequences of social inequality
- With in this board theory I focus on:
    - 1. Examines the determines of partner selection and how the resulting marital sorting patterns affect future generations
        - Identify the characteristics of those who intermary and access how children born into racial unions are doing relative to their counterparts same race unions
    - 2. Examines racial and socioeconomic disparities across a variety of different outcomes, including education and health
    - 3, Examines immigrant integration across a variety of different countries in particular, the united states, canada, uk, and australia
- A quantitative sociologist and a social demographer
    - Use really large data sets, often that are national representative, analyze them using survey research methodology and i determine patterns of inequality
    - Ex: for work looking at intermarriage trends, I pull serverl yers of census data and use a methodolgy called long linear to look at the the characteristis of indivudals who intermarry and i look at changes in those characteristics over time

Patrick Denice

- Patrick Denice is a sociologist studying social inequality in education and in work. His research has focused on pay for union and non-union workers, race and gender inequality in school, and stratification in higher education.
- In this video below, he explains how he uses survey data to study race, education, and social integration. He explains how he sometimes uses secondary data from surveys (collected by other researchers, governments, or schools) and other times uses administrative data records from schools. When data aren't available to answer his questions, he has collected his own survey data. He recently fielded a survey about whether workers disclose their wages to their colleagues and how they make these decisions.

Dr Patrick Denice, Department of Sociology

- Inequality in the labor market
- Education: diff access, diff decisions on where to go
- Teaches Statistics 2205 and racial inequality 4000

- Why do we see racial identities in education, labor market, housing, the criminal justice system?

In the US, where you live dictates where you go to school

- Neighborhood dictates how good your school is
- Where you live, means more common groups, schools more segregated all from one neighborhood
- Diff option: Charter/open schools (non-neighborhood charter public schools)
- What predicts enrollment> Segregation?
- When seg is lower, white more likely to go to non-neighborhood charter when seg is higher blacks more likely to go to a non-neighborhood charter school
- Black families→ better-performing schools than existing their neighborhoods

How many times he said the phase: for historical reasons

Sociological Imagination- history, redlining..

- Everyone single one of us is born into a world the preexists us
- Inserted into a world that is already structured with certain norms, practices, cultures
- **Historical tendency in the United States to separate people who are identified as white and people who are identified as black**
    - Segregation→ legal separation
    - Redlining→ people of certain races prevent from living in certain places like white-dominated neighborhoods
    - Funding schools→ Schools funded on district based tax- fewer income schools, less tax, fewer resources to schools (the decision to fund schools this way-local decision making/funding)

Funding decision: made 100 years ago tend to perpetuate how things are

- Great school→ higher social mobility
- Lousy school→ lower social mobility (where they start off is likely where they end off)

TEND: not fixed (probability, but not certain) Larger patterns: these tendencies, not deterministic

- In North American societies we tend to be methodological individualists: for ourselves
- Attempts to say that the individual disproves the pattern
- Need to keep in mind the overall tendency, trend

Week 6: Experimental Research

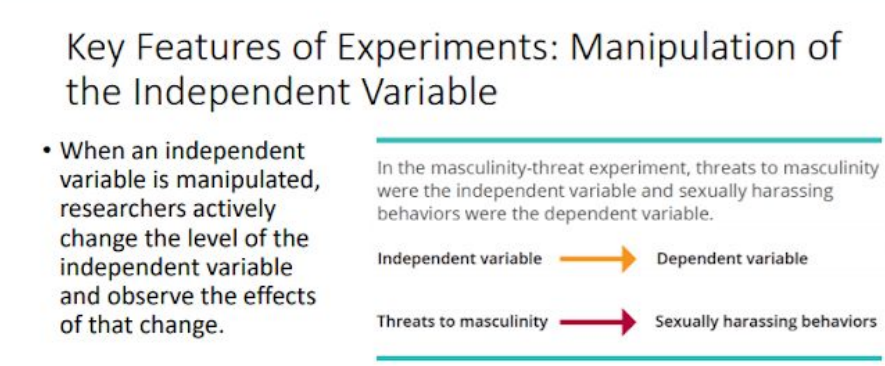
- Black men with a criminal record receive fewer job opportunities than white men with a criminal record.
- Having a criminal record harms job opportunities for black men more than it does for white men
    - Causal
    - Experimental research allows us to make these causal claims

What Are Experiments?

- In an **experiment**, the researcher manipulates one or more independent variables to determine the effect on a dependent variable
    - Independent variable is assumed to be the cause in a hypothesis about the relationships
    - The variable in which the dependent variable may depend
- An **independent variable** is the purported cause of causal hypothesis, on which the dependent variable may depend
- A **dependent variable** is the variable that is acted upon, or the outcome the researcher seeks to understand.
    - The Outcome that the researcher is trying to understand

3 Key Features of Experiments: Manipulation of the Independent Variable

- When an independent variable is manipulated, researchers actively change the level of the independent variable and observe the effects of that change.
    - Defining feature of an experiment is the manipulation of the independent variable, done by researchers who changes the level of the independent variable and observe the effects of that change on the outcome



Key Features of Experiments: Random Assignment of Participants

- The **experimental group** is the group that is exposed to the experimental manipulation.
- The **control group** is the group that is not exposed to the manipulation of the independent variable.

Key Features of Experiments: Random Assignment of Participants

- Participants are randomly assigned to experimental and control groups.
- Random assignment distributes individual differences equally across conditions

Key Features of Experiments: Experimental Control of Other Factors

- Researchers conducting experiments have more control over other factors

that can affect the relationship between the independent and dependent variables than in other research methods.
- This control gives researchers more confidence that the outcomes of the experiment are a result of manipulating the independent variable

Advantages of Experiments: Establishing Causality
• **Causality** refers to a relationship in which one factor or variable is dependent on another factor or variable.
• Experiment control over other factors allows researchers to assess causality.

Advantages of Experiments: Three Conditions for Establishing Causality
- Two variables must be correlated with each other
    - Meaning, an increase or decrease in one variable is associated in an increase or decrease in the other
- The cause, or independent variable, must precede the effect, dependent variable
    - The participants must be exposed to the manipulation of the independent variable before the outcome being measured occurs
- The relationship between the independent variable and dependent variable must not be **spurious**

Advantages of Experiments Establishing Causality
- **Spuriousness** is a condition when the apparent relation between two concepts is actually the result of some third concept, or confound (confounder), influencing both of them
- The control over other factors researchers have in experiments makes this method well-suited for assessing spurious relationships

Example:
- Experimental methods were used to assess whether the "motherhood wage penalty" found in survey research represented a causal relationship
    - The inability to control for all the possible variations between mothers and non-mothers means that we can't really know for sure whether the motherhood penalty occurs because employers discriminate against mothers or because there's some other difference that we don't observe

Advantages of Experiments: Uncovering Mechanisms
- Experiments allow researchers to understand how and why outcomes occur
- Researchers attempt to go beyond identifying relationships between variables to explaining the mechanisms that produce the relationships

Example:
- Experiments are useful for identifying the mechanisms for how and why discrimination occurs

Advantages of Experiments: Testing Abstract Theories

- Experiments are often conducted in artificial settings, or laboratories.
- The artificiality makes experiments well-suited for testing abstract theories about how the social world works.

Example:

- Cecilia Ridgeway used an experiment to test a theory about how status beliefs are formed.
- Her team created a highly artificial setting where participants different on level of pay but were otherwise equal, which allowed them to test their theory about status beliefs

Four Types of Experiments

Types of Experiments: Laboratory Experiments

- **Laboratory Experiments**: take palace in laboratories
    - Covers all the studies we have talked about in the chapter so far
- This setting gives researchers the maximum amount of control over the environment in which the experiment is conducted
- **A double-blind study** is a study in which neither the researcher nor the participant is aware of which condition the participant is in
    - Helps prevent experimenter effects
- **Experimenter effects** occurs when a researcher subtly or unconsciously affects the performance of a study participant

Strengths and Weaknesses of Laboratory Experiments

Strengths:

- High degree of **internal validity**
    - The extent in which a study establishes a causal effect of an independent variable on a dependent variable
    - Highly artificial setting allows researchers to assess causality and test abstract theories

Weaknesses:

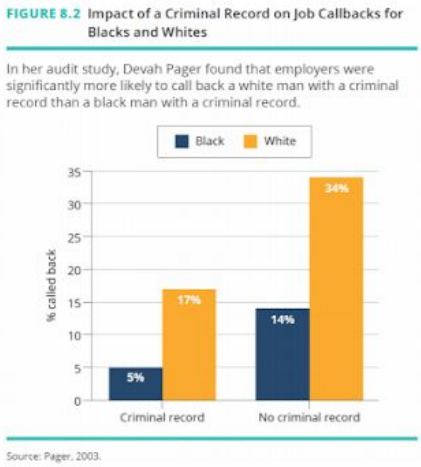
- Limited external validity
    - Potential for the findings to generalize to a larger context
    - Researchers cannot conclude that results obtained from a non-random sample in an artificial setting can be generalized to entire populations

Types of Experiments: Field Experiments

- A **field experiment** takes place in a natural or real world setting
- Field experiments are often used to evaluate the success of interventions improve educational and health outcomes'

Field Experiments

- An **audit study** is a type of field experiment used to assess whether characteristics such as gender, race, and sexual orientation lead to discrimination in real labor and housing markets.
    - Diva Pager: Criminal record (getting jobs black vs white people)
    - Findings of Pager's Audit Study



Strengths and Weaknesses of Field Experiments

Strengths:

- Findings more generalizable than those of laboratory experiments
- Excellent for answering applied research questions
    - Ex, such as whether or not social intervention was useful or not
- Useful for assessing whether an outcome occurs
    - In the real world

Weaknesses:

- Not suitable for assessing theoretical research questions
- Less suited for assessing why outcomes occur
- Less control over the setting and randomization for researchers
- Frequently rely on nonrandom samples

Types of Experiments: Population-Based Survey Experiments

- **Population=based survey experiments** reply on survey methods and are conducted on a representative sample of the population of interest
- In a survey experiment, participants often read a description of a scenario and then answer questions about how they would react to the given situation
    - Howard schuman, Lawrence bobo (interesting in whether whites would be more interested in japanese or black families move next door)
    - Survey experiments rely on self-reports, which do not always correspond to how people actually behave
        - What people say vs what people do

Types of Experiments: Population-Based Survey Experiments

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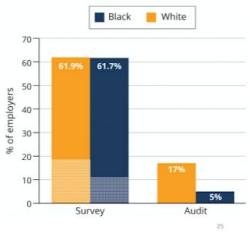

Strengths and Weaknesses of Survey Experiments

Strengths:

- Higher degree of external validity

Weaknesses:

- Lower internal validity
- Self-reports do not always match actual feelings or behaviour
- Researcher cannot ensure the independent variable was **salient (or noticable)** to all participants
- Researchers have less control over other factors influencing the outcome

Types of Experiments: Natural Experiments

- In a **natural experiment**, the independent variable is manipulated by "nature," not by the experimenter
- Participants in natural experiments are assigned to conditions by natural forces, not by experimental procedures
- A natural experiment is more similar to an observation study than a true experiment

Example:

- Goldin and Rouse's study of gender discrimination is an example of natural experiment
- The switch to blind orchestra auditions represents a natural manipulation
    - Orchestra -hiring bias between men and women, naturally switched to blind auditions

Strengths and Weaknesses of Natural Experiments

Strengths:

- Occur unrealistic settings
- Useful for assessing whether an outcome occurs

Weaknesses:

- Cannot assess mechanism through which outcomes occur
- Participants not randomly assigned to groups
    - Less internal invalidity

Types of Experiments: Summary

- The four types of experiments differ in:
- Amount of control the researchers has over the setting
- Extent to which the researcher can cleanly manipulated the independent variable

- Ease with participants can be randomly assigned to condition
- Nature of the sample
- Extent to which the setting is artificial versus realistic

Designing a Laboratory Experiment: Creating the Setting

- Participants should be actively engaged in the experiment to ensure its success
- This requires giving participants sense or purpose and rationale for their participation
- To keep participants engaged without revealing the study's true purpose, researchers often create a **cover story**

Designing a Laboratory Experiment: Manipulating the Independent Variable

- The manipulation of the independent variable in a laboratory experiment needs to be salient (noticeable) to participants for the experiment to be successful
- However, the manipulation should not be so strong that participants can guess the study's hypothesis

- **Confederates** are individuals who are trained to pretend to be study participants
    - Helpers
    - Ex: Ash experiment (lines- pick the longest, wrong answer)
- Researchers may employ confederates to help with the manipulation of the independent variable

- In a **between-subject design**, participants are randomly assigned to different levels of the independent variable
    - Ex: viewing resumes for a male or female job applicant
- In a **within-subject design**, participants receive all levels of the independent variable
    - Ex: participants would view resumes for both male and female job applicants
    - Preferred methods require fewer participants. Give researcher more control over unrelated factors

Example:

- Motherhood penalty study used a combination of within-subject and between subject designs
    - Onegroup rated both
    - All parental status manipulation, half gender manipulation
    -

Designing a Laboratory Experiment: Measuring the Dependent Variable

- Researchers must develop a valid and reliable operationalization of the

dependent variable
    - Valid measures accurately measure the concept of interest
    - Reliable measures produce consistent values under the same circumstances when applied to the same object or the same person
- Three main types of dependent measures in experiments are: behavioural, attitudinal, and physiological

- **Behavioural measures** are measures collected by observing the overt and observable actions of participants
    - Ex. Galinsky, whether those in powerful positions are less likely to take the perspective of others
    - Dependant variable: taking the perspective of others
    - Drawing E on forehead- for others to read or yourself

- **Attitudinal measures** are self-reported responses of participants to questions about their attitudes, opinions, emotions, and beliefs
    - Ex. Black or Japanese neighbour reactions
- These measures are susceptible to **social desirability bias**
    - When participants response with the most socially valued response rather than giving truthful answers

- **Physiological measures** are biological response to stimuli
- These measures are helpful for understanding how and why behavioural measures occur
    - Ex: Women exposed to negative stereotype, increased emotional load
    - Behavioural measure different because the stereotype exposure changed the brain's ability to function efficiently
- It is difficult to control biological responses, so these measures are less susceptible to social desirability bias
    - Ex. heart rate, blood pressure, brain activation, hormones levels, vocal patterns

Designing a Laboratory Experiment: Wrapping up the Experiment
- Researchers will interview the participants to verify that experiment occurred as planned
    - Debrief the participants
- Participants will be asked:
    - If they have any questions
    - If they noticed any manipulation
        - Will adjust measures to make sure the participants notice the manipulation
    - If they had difficulty with any part of the study
        - Signal flaws in the design

- When participants have been given a false rationale for the student, it is important to **debrief** them, or, in other words, to tell them the true purpose of the study
- Several purposes of debriefing:
    - Explain to participants that the deception served a scientific purpose
    - Ensure that the participants understand the deception was not real
        - Especially if negative messages
    - Give the participants an opportunity to learn about the research

Ethical Issues in Experiments

- Many laboratory experiments involve deception, and researchers must consider whether the costs of deception are outweighed by potential benefits
    - Ethics review boards, get permission
- Sometimes participants in field experiment are unaware that they are participating in a study which means they have not given consent
    - Diva pagers works, race, criminal records, and hiring bias
    - Employers hiring not aware they are in study

Limitations of Experiments

- A key limitation of experiments is their low external validity
- To improve the validity, researchers can replicate the study with different samples
    - Shelly Carrel, shooter bias
    - Finding similar results across different samples

Other strategie to address the limitations of experiments:

- Replicating the study with a different experiment
- Evaluating the hypothesis with a different research method and **triangulating** the results of both methods
    - Triangulation is the process of comparing the results of studies on the same topic that use different methods to see if the the different approach lead to consistent findings
    - If findings are consistent actress different research methods it suggests that the findings are valid
    - Even with a specific research question you might want to use multiple methods in research